Financing Digital Innovation for Sustainable Development

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INTRODUCTION

The United Nations' Sustainable Development Goals (SDG) 17 (SDG 17), supports "access to science, technology and innovation and enhance knowledge sharing … through improved coordination among existing mechanisms, at the United Nations level" (United Nations, ECOSOC, Metadata Statistics website). SDG 17 pursues capacity building through improved access to data (i.e. solid statistics), information and knowledge to support decision-making and oversight. SDG17 is also closely linked to Objective 6, which covers the provision of technical knowledge, quality and services. Such guidelines embrace the economic viability, replicability and sustainability attributes that innovation must have to be called such, in the field of promoting digital innovation. Those guidelines provide a clear path to streamline efforts in this area by directing support to three crucial areas: (i) developing a market for digital innovation products and services; (ii) supporting initiatives to bring about new and more efficient business models and processes; and (iii) providing focused support to the generation of innovative products and services. To achieve these ends, it is proposed to establish adequate mechanisms to provide technical and financial support in each one of those areas, utilizing partners and collaboration mechanisms.

In this context, the authors propose two different Digital Innovation Trust Funds financing innovation for sustainable development, reviewing other funds and funding sources with similar or complementary purposes that operate at international development agencies.

The specific nature and workings of the financial instruments is discussed in detail and defined further, presenting two proposed scenarios for the Inter-American Development Bank (IADB) and the Food and Agriculture Organization of the United Nations (FAO), two of the largest international organizations working for the development of emerging economies in general, and the achievement of the SDGs in particular.

BACKGROUND

Main observations from success and failure stories from other donors as well as lessons learned in the implementation of innovation funding in developing countries include (Piaggesi, 2017):

a. International development agencies are all consistently pursuing the overall goal of reducing poverty and promoting socio-economic growth, under the guidance of the UN's Sustainable Development

Goals. For that overarching goal, digital innovation, ICT for development and technology innovation are means to achieve those goals faster, more efficiently and more widely; while they do not appear as a sector or priority activity, they are present in practically each sectoral effort and project. It is possible to say that today, digital innovation has been mainstreamed into development financing.

b. Innovation funding tends to be directed towards financing: (i) applications of ICT to make more efficient and reach wider audiences for sector projects, with emphasis on education, health, transportation, environment, among others; (ii) applications of ICT to increase the amount, relevance and quality of information available to beneficiaries, in order to improve decision making; (ii) e-government and government capacity building; (iv) government digital strategy development; (v) knowledge acquisition, development, and management.

c. Financing for basic or applied research is less common; responsibility for this type of investment is left to government intervention, if any. In practice, research and development rest with large private corporations mostly in developed countries.

d. Financing in support of private sector investment is rare; some investment is present for private sector (mostly small & medium enterprises) capacity building, but risk capital or equity investment is extremely rare. Identified sources of development (concessionary) financing in development countries are limited to multi-lateral banks and a couple of bi-lateral financial institutions. Financing for initial stages of product or service development (start-ups) is even less frequent, with only a handful of sources available.

THE INTER-AMERICAN DEVELOPMENT BANK (IADB)

The Knowledge Economy (KE) is an interconnected, globalized economy where knowledge resources such as know-how, expertise and intellectual property are as critical as other economic resources such as land, natural resources, or even manpower (Piaggesi, 2009). Under this concept, Knowledge is recognized as a source of competitiveness, where value lies in innovative ideas, services and networks, using technology as an instrument, not as an end. The KE is not a subject per se, but rather a new development paradigm where education, information and communication technologies and infrastructure, innovation, social inclusion and intellectual property rights protection converge into a "virtuous" circle to transform the intangible nature of Knowledge into an asset with market value able to contribute substantially to economic growth.

While Asia has excelled in developing knowledge-based industries (OECD, 2000) and knowledge-rich products, Latin America and the Caribbean (LAC), in general, lag well behind other developing countries. The experience of Asia shows that the successful transition to a KE typically involves long-term investment in education, development of indigenous innovation capabilities, modernization of information sharing infrastructure, and creation of a market environment that is conducive to knowledge-based-transactions. It is estimated that the LAC region's performance for the education and ICT related indicators is somewhat below the average for all developing countries (Trucano, 2005); while indicators for institutional quality and innovation indicators are generally weaker.

International development organizations are striving to introduce Knowledge as an investment category to help countries find a suitable and viable niche in the international and national markets where Knowledge is a tradable asset. By establishing two closely related funding mechanisms to support this purpose, the Inter-American Development Bank (IADB), the largest development bank in the LAC region, would provide technical assistance for beneficiary countries to find such niche and then develop

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