Innovation for Sustainable Development in Poor Countries—Lessons from Ethiopia

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Innovation is generally considered as knowledge creation (e.g., patents), R&D activities, and technological advancement. It typically benefits highly-developed regions, increasing their gaps with poorer regions. The integration of innovation in poorer countries can thus significantly contribute to their integration in the global economy. However, the common innovation policy concepts are inappropriate for poor countries.

We devise a conceptual approach for innovation in poor countries, design and test a simplified methodology for its implementation, and employ the case of Ethiopia for its demonstration. Our approach is summarized in four steps:

- Innovation is not a goal in itself, but rather an instrument for the achievement of distinct national development goals (e.g., economic growth, employment, improved wellbeing).
- Distinct types of innovation contribute to different development goals.
- The national innovation ecosystem factors should be adapted to the specific innovation needs and conditions of poor countries.
- Innovation priorities should be adapted to the country’s exogenous macro-economic conditions (development level, economic regime, economic structure, and development priorities).

The methodology employed to test the innovation needs and priorities of Ethiopia was as follows: key-informant interviews, focus group discussions, and questionnaires involving all ecosystem actors: government, academic and research institutions, business leaders (n=56). Seven main ecosystem factors were tested (finance, human capital, infrastructures, information, academy, government, culture) and evaluated through a total of 91 variables. Two aspects were evaluated for each variable, on a 1-5 scale: the variable’s perceived importance for the advance of innovation, and the variable’s current availability in the Ethiopian reality. The gap between the two scores indicates respondents’ “frustration” level. The robustness of the findings is further corroborated by specific questionnaires for students (n=55), researchers (n=67), unemployed (n=53), and small enterprises (n=71). Secondary data on the national economy and the innovation situation in the country (drawing on the Global Innovation Index) complemented our primary data.

Findings indicate a gloomy economic situation and low innovation level, but at the same time high potential for growth based on a growing market, and considerable government commitment and efforts. The ecosystem analysis reveals frustration with the low availability of each of the factors, as well as their weak interaction within the ecosystem: lack of coordination between government, industry and academy; lack of coordination within government departments; and lack of interaction among businesses.

Several directions for innovation policy guidelines are derived from the analysis.

- *Adaptation.* At given exogenous conditions, innovation efforts should focus on a broad-base adaptation of existing technologies to more traditional activities.
- *Impact innovation.* Priority should be given to innovation types that can have major economic impacts and boost productivity and employment—e.g., in agriculture, industrialization, and SMEs.
- *Focus on market needs.* Rather than encouraging technology push, the innovation policy should focus on the market pull, respond to people’s unmet needs, and support privatization.
- *A governmental coordination platform* is needed to set up the development priorities of innovation activities, strengthen coordination and collaboration among all ecosystem factors, and provide appropriate services and infrastructures.