



How can new technologies developed abroad be transformed into inclusive innovation?

The IREK project is developing a new theoretical understanding of how new technologies developed abroad can be transformed into inclusive innovation in Kenya. This involves developing new theory and new concepts by combining the national innovation system perspective with a global value chain approach and through combining the innovation studies perspective with the science, technology and society perspective. At the IREK reference group workshop held in Copenhagen May 2016 key international scholars in the field was invited as scientific advisors to review the IREK work to develop the new approach and contribute with ideas to this endeavour.

In May 2016, seven scientific advisors (see names and affiliations at the end of this note) with different types of expertise within the theoretical field that the IREK project is employing were asked to review the new interdisciplinary analytical understanding of how value chain analysis can be linked to the formation and improved functioning of national and local innovation systems. What are the important aspects to include?

The following are some of the key points drawn from the input of the advisors that the IREK researchers will seek to include in the project:

- A research gap in local competence building is clear as defined by the project. It is good that a huge amount of empirical work will be done in this area through the project; there is a clear lack of evidence in the field.
- What kind of originality does IREK have? First IREK has empirical primary evidence in Global Value Chain (GVC) and National Innovation

Systems (NIS) interaction – a field where very little research has been done. Second, some of the originality from the empirical results you will find are likely to be in terms of project focus (GVC, NIS, projects), role of donors, NGOs, etc. and the role of new actor in GVC and maybe even NIS.

- The choice of technology versus the element of financing is important to investigate.
- If anything can be said about project financing on different scales from the results found, these would be important for the project and stakeholders. Referring to UNFCCC and green climate fund, it was argued that funds available are too big when compared to the small projects required for African countries. Hence if IREK can come up with results in this area grounded in reality, it will be really useful and might contribute to this debate more generally.

- Lead-firms will play a key role in the analysis of GVCs. The Lead firm notion is very complicated because of the relationships with many people including financiers.
- Diffusion has to be considered. Capabilities as an enabler and a prerequisite for up-take of new technologies shape the diffusion process.
- Conceptualization of user- producer and buyer vs. consumer is important. Based on knowledge from Kenya; the question of users and producers is very complex in terms of the origin of the project, the size of the project and target group/end users.
- Complexity, price and size of projects are major issues to think about under IREK but there is an opportunity to also look more at business models (soft capabilities).
- IREK asks important questions about GVC/NIS linkages and whether the two can be brought together and whether it is useful to do so; or are they just different lenses for analysing topics?
- Reality is complex, and therefore it doesn't help to have just one focus. Consequently, a project-focused approach as a neat entry point for analysis may help integrate the many dimensions included when studying e.g. renewable energy in Kenya.
- The project adopts a two-way process; the user-producer interaction. It is expected that

the producers learn from engaging with the Kenyan market and actors on the one hand, while users learn from interaction with actors and technologies coming from outside.

- In the structuration process, it is important to critically think about interaction between diffusion, technological and system building.
- It is important to also recognize and allow for feed-back from empirical work to the conceptual frameworks and thinking. There is expectation that the project will develop exciting theoretical insights towards the end of the project period.

The IREK team thanks the scientific advisors, Rob Byrne (Sussex University), Bengt-Åke Lundvall (Aalborg University), Roberta Rabellotti (Università di Pavia), Mathilde Brix (DTU, Technical University of Denmark), Edward Mungai (Kenya Climate Innovation Centre) and Feng Zhao (FTI Consulting) for their invaluable comments and time. Review at the developing stage of the IREK project by key scholars in the field is invaluable in order to achieve the aim of developing new theoretical approaches that successfully links global division of labour to the development of innovative capabilities at the local and national level in the field of renewable energies.

To find out more about the new theoretical approach employed by the IREK project, see IREK working paper No. 4

A detailed internal workshop report was prepared and can be made available upon request.

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Read more about the IREK project at

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