3ie-IFPRI Joint Seminar: Transportation Revolutions and Urban Path Dependence in Africa
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Remi Jedwab, Assistant Professor at George Washington University, presented his research on the impact of transportation infrastructure on economic change in Africa at the 3ie-IFPRI joint seminar series in Washington D.C. on September 11th. Jedwab and coauthor Adam Storeygard use new data on railroads and urban population between 1890 and 2010 for 39 African countries to study the impact of railroads on population sizes in cities, using urbanization as a proxy for economic development.

The authors find significant positive impacts of railroads on urban growth before independence (1960) by exploiting various estimation strategies to establish causal effects, including an instrumental variable (IV) approach. The IV for railroads applied by the authors is based on a Euclidean minimum spanning tree, a geographical approach that minimizes the connecting distances between cities. Jedwab also explained that although railroads fell out of use in the 1970s, colonial railroads had a persistent impact on African urbanization in the post-independence period, measured using data from 2010.

Jedwab concluded that this evidence suggests railroad cities persisted because their early emergence served as a mechanism to coordinate contemporary investments for each subsequent period. This suggests that shocks to economic geography can trigger an equilibrium in which cities will emerge to facilitate the accumulation of factors, and thus have long-term effects on economic growth.

Clifford Winston, Senior Fellow of Economic Studies at the Brookings Institute and discussant for this seminar, pointed out that this work-in-progress may be strengthened by delving into the core literature on transportation economics. Winston also discussed the importance of explaining the underlying benefits of railroads in Africa, and the reasons for their decay in the 1970s, as well as their usage and efficiency. Methodologically, Winston expressed concerns regarding the instrumental variable identification strategy applied by the author, and explained the endogeneity of railroad building decisions. Feedback regarding the importance of controlling for the endogenous endpoints of the railroads was also raised by the seminar participants, while other participant comments highlighted the need to identify whether railroads were used for transporting freight or people, and the possibility of comparing the impact of rail with roads on urbanization and population growth going forward.