

## The Non-Linear Impact of Fintech on Poverty: The Case of Sub Saharan African Countries

**Noha Emara**

Associate Professor, Rutgers University and SIPA, Columbia University, USA

### **Abstract:**

In this study, we analyze the effect of Financial Technology (FinTech) on the achievability of Sustainable Development Goals (SDGs) by 2030, in regard to extreme poverty. The study uses system General Method of Moments (GMM) on annual data for 127 countries including the Sub-Saharan Africa (SSA) region, from 2004 to 2018. The likelihood of FinTech adoption is characterized using three measures: the number of mobile cellular subscriptions, the number of fixed broadband subscriptions, and the percentage of the population who use the internet. We also create a composite index for FinTech for all economies in our sample, which incorporates the principle component analysis on the three measures of FinTech. In conclusion, we find that the effect of wider access to Fintech – measured either by the three sub-indices or the composite index – on poverty alleviation is statistically significant. The outcomes of the study reveal the relationship between the improvement of FinTech measures and poverty alleviation is statistically significant and nonlinear with an exact threshold level. More precisely, our results signify that improvement in FinTech may decrease the rate of extreme poverty initially, which leads to a decline in total poverty as a percent of the population. Nonetheless, when the FinTech index reaches its threshold, additional improvement to FinTech leads to a decrease when penetration increases, leading to an increase in the rate of poverty. So, before the threshold level, the marginal effect of FinTech penetration is larger. For countries where the level of FinTech is below the average of our sample, like the SSA, policymakers should create more aggressive and comprehensive policies directed at recouping the maximum gains of a digital ecosystem. Thus, the policy implications of our study are aimed at increasing investments in FinTech services. These policies include creating greater access to mobile cellular and fixed broadband subscriptions and increasing the internet speed. Policies should also encourage the use and access of electronic banking by consumers, producers, and governments, especially in light of its renewed utility due to the recent pandemic.

### **Keywords:**

Financial Technology, Extreme Poverty, SSA, SDGs, Projection, Gap Approach.