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Score: Evaluations Are Incomplete

Topic: The first 1000 days, infant feeding, and early childhood development

Title: Childhood stunting in 'Africa Rising' context - a system dynamics model (2013-2050)

Introduction

This paper models the economic burden of children suffering from stunting in Africa and measures the results against the unabashed optimism of the 'Africa Rising' narrative. While there have been multiple attempts to model the economic burden of stunting, the unique contribution of this paper is three-fold. First, we make use of System Dynamics Modelling, which examines system behaviour, allowing the generation of scenarios based on actor behaviour and interaction, instead of less adaptive traditional linear modelling. Second, we focus on Africa and the insufficient response to combating childhood stunting. Stunting in Africa has seen little reduction in prevalence since 1990, despite other developing regions with consistent GDP growth showing higher reduction rates. Third, we challenge popular African development discourse by broadening the present agenda to include nutrition within the underlying modernisation hypothesis.

Methods

The method follows System Dynamics processes to conceptualise the population-stunting-economy nexus using Vensim® software for the model. Scenarios were completed to assess the effects of intervention investment on stunting prevalence.

Results

Preliminary modelling outcomes indicate that investments in nutrition decrease the stunting prevalence. With cumulative delayed benefits over time, the proportion of economically productive adults with stunting decreases and the GDP rises accordingly.

Conclusion

Failure to account for child stunting in projections of Africa's development trajectory, as done within the 'Africa Rising' discourse, results in significant overestimations of its growth potential. However, timely investments targeted at the window of

opportunity to combat stunting will have major and long-lasting positive impact on Africa's economic growth potential.

Presentation Type: Oral

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