

## Modern Agriculture and Employment Generation in Nigeria: A Recursive Model Approach

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**Abstract :** Several policies and programs initiated to address the challenge of unemployment in Nigeria seem to be inadequate. The desired structural transformation which is expected to absorb the excess labour in the economy is yet to be achieved. The agricultural sector accounts for almost half of the labour force with very low productivity. This could partly explain why the much anticipated structural transformation has not been achieved. A major reason for the low productivity is the fact that the production process is predominantly based on the use of traditional tools. In view of the underdeveloped nature of the agricultural sector, Nigeria still has huge potentials for productivity enhancement through modern technology. Aside from productivity enhancement, modern agriculture also stimulates both backward and forward linkages that promote investment and thus generate employment. Contrary to the apprehension usually expressed by many stake-holders about the adoption of modern technology by labour-abundant less-developed countries, this study showed that though there will be job loss initially, the reverse will be the case in the long-run. The outcome of this study will enhance the understanding of all stakeholders in the sector and also encourage them to adopt modern techniques of farming. It will also aid policy formulation at both sectoral and national levels. The recursive model and analysis adopted in the study is useful because it exhibits a unilateral cause-and-effect relationship which most simultaneous equation models do not. It enables the structural equations to be ordered in such a way that the first equation includes only predetermined variables on the right-hand side, while the solution for the final endogenous variable is completely determined by all equations of the system. The study examines the transmission channels and effect of modern agriculture on agricultural productivity and employment growth in Nigeria, via its forward and backward linkages. Using time series data spanning 1980 to 2014, the result of the analyses shows that: (i) a significant and positive relationship between agricultural productivity growth and modern agriculture; (ii) a significant and negative relationship between export price index and agricultural productivity growth; (iii) a significant and positive relationship between export and investment; and (iv) a significant and positive relationship between investment and employment growth. The unbalanced growth theory will be a good strategy to adopt by developing countries such as Nigeria.

**Keywords :** employment, modern agriculture, productivity, recursive model

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