**The Relationship between Employment in the Agricultural Sector and Gross Domestic Product**

Author: Vidhur Potluri  
Vidhur.potluri@tamu.edu

**Abstract**

Reallocation of a country’s resources to increase industrial production or improve its service sector is generally accompanied by economic development. This paper attempts to analyze the effects of the changes in employment in the agriculture sector (as a percentage of total employment) on the gross domestic product of a country. This study analyzes data from the past 25 years and has been sourced from every country in the world where this data is available. It attempts to verify the hypothesis that there exists a negative correlation between employment in the agricultural sector and the GDP per capita of a country.

**Introduction**

Efficient allocation of resources is necessary for economic development. A nation’s scarce resources coupled with its citizens’ constantly changing needs and wants define how its resources are allocated. In the past, a country’s agricultural produce and work force were the most significant contributors to its gross domestic product. But the changing needs of people and the advancement of technology gave way to a large manufacturing and even larger service sector. Countries are allocating their resources accordingly by withdrawing investments in the most primitive of these sectors. The most valuable of these investments is labor. With the expansion of Research and Development (R&D) programs and increasing demand for new technology, many people are unwilling or unable to sustain a livelihood working in the agricultural sector despite the increase in population.

The agricultural sector’s contribution to the GDP (as a percentage) is decreasing with the expansion of the other two sectors. This decline and its relation with GDP (not discussed in this paper) are obvious causes of the decline in employment in that sector. Since agricultural products have a low income elasticity of demand, the demand for these products have not grown proportional to the substantial growth of gross nation income per capita of most countries. However, these agricultural products still have a high demand since they are essential to every human being. Moreover, the agricultural sector still provides a livelihood to a significant percentage of the world’s population. Better technology might be able to replace those dependent on agriculture (decrease in employment) and produce a higher yield but this would also increase unemployment, which is deterrent to economic development.

This paper explores the relationship between employment in the agricultural sector (as a percentage of total employment) and the Gross Domestic Product per capita, PPP (constant 2011 international $). Characterizing the GDP by PPP (Purchasing Power Parities) and using constant 2011 international dollars help account for inflation and the different purchasing powers in different countries since the data comes from many countries and over a time-span of 25 years. My hypothesis is that a decline of human resources allocated to the field of agriculture or a reallocation of these resources to different sectors causes a higher GDP of a country and economic development.