



# Percentage of Labour Force in Agriculture as an Indicator of Development

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**Abstract:** There are many indicators of nation's development – chief being per capita GDP on purchasing power parity (PPP) basis and of course, human development index (HDI). This paper suggests a new indicator of development – percentage of labour force engaged in Agriculture. As a nation develops the percentage of population engaged in agriculture declines. Hence a lower percentage of population engaged in agriculture would indicate higher level of development.

## I. Introduction

As a nation develops the percentage of labour force engaged in agriculture decreases and percentage of labour force engaged in services and manufacturing increases. Indeed as might be guessed in more developed countries of world the percentage of labour force engaged in agriculture is very low – less than 5% and between 1 to 3%.

And on the other hand developing countries have a very large percentage of population engaged in agriculture – more than 50%. And as a

nation develops the percentage of labour force engaged in agriculture decreases.

Hence this paper suggests that percentage of population engaged in agriculture be used as an indicator of development in addition to per capita GDP on PPP(purchasing power parity) basis and human development index.

## Labour Force Engaged in Agriculture Percentage in India since Independence

As a nation develops the percentage of labour force engaged in agriculture declines as the labour moves to manufacturing and services. This is due to two reasons. As a nation develops agriculture gets mechanized requiring less labour force. Also as a nation gets developed manufacturing and services absorb more labour to enable greater output and production. Hence the percentage of labour force engaged in agriculture declines. The following table shows the percentage of labour force engaged in agriculture in India from 1951 to 2011[1]

Percentage of Labour Force Engaged in Agriculture in India			
Year	Labour force in Agriculture(millions)	Total Labour Force (millions)	Percentage of Labour Force Engaged in Agriculture
1951	97.2	139	69.7
1961	131	188	69.5
1971	125	180	69.7
1981	148	244	60.5
1991	185	314	59.0
2001	234	402	58.2
2011	263	480	54.6

Thus as can be seen from the table the percentage of labour force engaged in agriculture in India has decreased from 69.7% in 1951 to 54.6% in 2011. [1]. It is estimated that percentage of labour force engaged in agriculture in India in 2021 is merely 40%.

## Percentage of Labour Force in Agriculture and the Per Capita GDP

As a nation develops the percentage of labour force engaged in agriculture declines. So one must expect that nations that have high per capita gdp in PPP terms should have lesser percentage of labour force engaged in agriculture, whereas nations that have low per capita gdp in PP terms should have higher



percentage of labour force engaged in agriculture.[2][3].

Percentage of Labour Force Engaged in Agriculture in Low Developed Nations in 2019		
Nation	Percentage Labour Force in Agriculture	Per Capita GDP in Purchasing Power Parity(2022 – IMF)
Burundi	86	800
Somalia	80	1300
Malawi	76	1600
Chad	75	1700
Niger	72	1400
Uganda	70	3000
Mozambique	69	1450
Ethiopia	66	3400
Tanzania	66	3400

Percentage of Labour Force Engaged in Agriculture in Medium Developed Nations of World in 2019		
Nation	Percentage of Labour Force in Agriculture	Per Capita GDP on Purchasing Power Parity
India	42	8200
China	25	21000
Indonesia	28	14600
Pakistan	37	6600
Vietnam	37	13000
Egypt	20	16000
Iraq	18	12400
Iran	17	18600

Percentage of Labour Force Engaged in Agriculture in High Developed Nation of World in 2019		
Nation	Percentage of Labour Force in Agriculture	Per Capita GDP on Purchasing Power Parity
USA	1.4	75000
UK	1.05	55000
Japan	3.3	48000
Germany	1.2	64000
France	2.5	56000
Italy	3.9	51000
Spain	4.0	46500
Portugal	5.5	42000
Netherlands	2.0	69000

### Correlation Between Per Capita GDP (PPP) and Percentage of Labour Force in Agriculture

As the above table shows there is strong negative correlation between per capita GDP(PPP) and percentage of labour force in agriculture. It is observed that nations which have very high per capita GDP(PPP) have high percentage of labour force in agriculture and nations that have lower per capita GDP(PPP) have a lower percentage of labour force in agriculture.

Of course the negative correlation is not exactly linear. For instance you cannot draw a graph with percentage of labour force engaged in agriculture

on X axis and per capita GDP on PPP basis on Y axis and find that a line can be drawn through various points.

However by and large there is strong negative correlation between percentage of labour force engaged in agriculture and per capita GDP on PPP basis.

### II. Conclusion

There is strong negative correlation between percentage of labour force engaged in agriculture and per capita GDP on PPP basis. Hence it is suggested that percentage of labour



force engaged in agriculture be used as an indicator of development with higher percentage of labour force engaged in agriculture meaning lower per capita GDP on PPP basis and lower percentage of labour force engaged in agriculture meaning high per capita GDP on PPP basis.

#### **References**

- [1]. [https://agricoop.nic.in/sites/default/files/pocketbook\\_0.pdf](https://agricoop.nic.in/sites/default/files/pocketbook_0.pdf)
- [2]. [https://www.theglobaleconomy.com/rankings/employment\\_in\\_agriculture/#:~:text=The%20average%20for%202019%20based,countries%20where%20data%20are%20available](https://www.theglobaleconomy.com/rankings/employment_in_agriculture/#:~:text=The%20average%20for%202019%20based,countries%20where%20data%20are%20available)
- [3]. [https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_GDP\\_\(PPP\)\\_per\\_capita](https://en.wikipedia.org/wiki/List_of_countries_by_GDP_(PPP)_per_capita)