

# GINI and PPP adjusted per capita GDP of nations

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**Abstract:** Per capita gdp of nations varies significantly. However quality of life does not vary as much since prices also vary. Hence per capita gdp are compared on purchasing power parity(PPP) basis. However welfare is also dependent on equality. Hence an even better comparison of per capita incomes would involve Gini Coefficient. This paper proposes that per capita income on purchasing power parity be divided by Gini Coefficient to give better assessment of incomes

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## I. Introduction

Per capita incomes of nations vary so much. For instance United States of India has a per capita gdp of nearly 70000 dollars, whereas India has a per capita gdp of just 2200 dollars. However the differences in living standards are not as different as these differences in per capita gdp would cause us to believe.

This is because prices vary between India and USA considerably. Hence after adjusting for prices the per capita gdp of India on purchasing power parity is 7000 dollars. The idea of using purchasing power parity(PPP) is rather old and tried and an established practice.

This paper proposes something additional. This paper proposes that in addition to PPP, the Gini coefficient be used to compare per capita incomes between nations. The idea is that even if two nations have same per capita gdp on PPP basis a nation that is more equal will offer better living standard than a nation that is less equal.

Gini Coefficient measures inequality of income. High gini means more unequal and lower gini means more equal. Hence it is suggested that per capita gdp on PPP basis be divided by Gini Coefficient to give a better assessment of living standards of various nations of world.

### PPP adjusted per capita gdp

Prices for similar goods and services vary so much between nations, that comparing nations on basis on nominal per capita gdp would not give appropriate assessment of differences in living standards. Hence the adopted practice is to compare nations on basis of PPP(purchasing power parity) adjusted per capita gdp. The purchasing power parity adjusted per capita gdp gives a better idea of living standards in a nation. Here are some nations and their per capita gdp and per capita gdp adjusted for purchasing power parity.

Nation	Per Capita GDP (nominal) 2017	Per Capita GDP (PPP) 2017
Singapore	56000	94000
Kuwait	29000	72000
United Kingdom	39000	44000
Australia	53000	49000
India	2000	7100
China	8600	16800

Source: World O Meter

### Gini adjusted per capita gdp on PPP basis

However the level of welfare is as much dependent on equality of incomes as much as prices. Hence a better estimate of per capita income would be one that is adjusted for Gini coefficient. Gini coefficient is well known parameter for measurement of inequality

Hence it is proposed that per capita gdp adjusted for PPP be divided by Gini Coefficient.  
Per capita GDP adjusted for Gini and PPP = Per capita GDP adjusted for PPP/ Gini Coefficient  
Thus if the inequality is higher the Gini coefficient will be high and the per capita gdp adjusted for PPP and Gini coefficient will be lower and if the inequality is low then the Gini coefficient will be low and the per capita gdp adjusted for PPP and Gini coefficient will be higher.

Nation	Per Capita GDP (nominal) 2017	Per Capita GDP (PPP) 2017	Gini Coefficient	GNI and PPP adjusted per capita GDP
Singapore	56000	94000	0.459	200000
Kuwait	29000	72000	0.8	90000
United Kingdom	39000	44000	0.351	125000
Australia	53000	49000	0.343	140000
India	2000	7100	0.357	20000
China	8600	16800	0.382	44000
Source: World O Meter and Wikipedia				

## II. Conclusion

The Gini and PPP adjusted per capita gdp comparison will bring to forth the importance of equality in incomes. Hence it is suggested that more study be done on inclusion of Gini and PPP adjusted per capita gdp.

## References

- [1]. <https://www.worldometers.info/gdp/gdp-per-capita/>
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