

Impact of Degree of Industrialisation on Per Capita Income

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ABSTRACT

This paper looks at the relationship between the degree of industrialisation of a country and its per capita income. It takes the percentage of workforce in industry and services as a measure of the degree of industrialisation. It finds that there is a clear relationship between the two variables.

Keywords: *industrialisation, per capita income, degree of industrialisation*

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INTRODUCTION

The human species is 50,000 years old. Human society has experienced two great transformations in its history. The first was the agricultural revolution around 10,000 BC—when man invented agriculture and hunting—herding societies changed into agricultural societies. The second was the Industrial Revolution when man invented modern industry (machines and factories) and agricultural societies started changing into industrial societies. This second transformation led to a dramatic increase in the living standards of the people. This paper tries to establish an empirical relationship for this process. [1-3]

KEY CONCEPTS

Industrialisation/modernisation/development is the process of transformation of a society from an agricultural society into an industrial society. How do we measure the degree of this change? An economy has three major sectors: primary/agriculture, secondary/industry and tertiary/services. In an agricultural society, most of the people work in the primary/agricultural sector and

only a few works in the secondary/industrial and tertiary/services sectors. As the society industrialises/modernises/develops, people start moving from the primary/agricultural sector to the secondary/industrial and tertiary/services sectors. The primary/agricultural can be considered as the 'traditional' sector and the secondary/industrial and tertiary/services sectors can together be considered as the 'modern' sector. Thus the size of the modern sector in terms of employment, i.e., the percentage of the workforce that is in industry and services can be considered as a measure of the degree of industrialisation/modernisation of the society. Per capita income (in purchasing power parity terms) can be taken as the measure of standard of living (Table 1).

ANALYSIS

We take the degree of industrialisation (percentage of workforce in industry and services) on the X-axis and the per capita income (purchasing power parity) on the Y-axis. Then we get the graph shown in Figure 1.

Table 1. Degree of industrialisation (percentage of workforce in industry and services) and per capita income (purchasing power parity) of various countries of the world.

Country	Industrialisation	Per capita income PPP \$
Afghanistan	21%	1981
Albania	52%	12,021
Algeria	86%	15,275
Angola	15%	6389
Antigua and Barbuda	93%	23,594
Argentina	95%	20,787
Armenia	54%	9648
Australia	96%	47,047
Austria	95%	52,558
Azerbaijan	62%	17,398
Bahamas	95%	30,430
Bahrain	99%	47,527
Bangladesh	55%	3869
Barbados	90%	18,640
Belarus	86%	18,848
Belgium	98%	47,561
Bolivia	60%	7560
Bosnia and Herzegovina	82%	12,876
Brazil	80%	15,484
Brunei	96%	78,836
Bulgaria	93%	20,329
Burkina Faso	10%	1870
Burundi	6%	771
Cambodia	42%	4002
Cameroon	30%	3694
Canada	98%	46,378
Chad	20%	1941
Chile	87%	24,085
China	62%	16,807
Colombia	82%	14,552
Comoros	20%	1552
Costa Rica	86%	17,044
Croatia	95%	25,264
Cyprus	92%	34,504
Czech Republic	97%	36,916
Denmark	98%	50,541
Dominica	60%	10,620
Dominican Republic	85%	16,030
Ecuador	92%	11,617
Egypt	68%	11,583
El Salvador	81%	8006
Estonia	97%	31,638
Ethiopia	15%	1899
Fiji	30%	9555
Finland	95%	45,192
France	96%	42,779
Gabon	40%	18,183
Gambia	25%	1715
Georgia	44%	10,699
Germany	98%	50,715
Ghana	44%	4641
Greece	88%	27,809

Country	Industrialisation	Per capita income PPP \$
Grenada	76%	14,924
Guatemala	50%	8150
Guinea	24%	2285
Guinea-Bissau	18%	1700
Haiti	62%	1815
Honduras	61%	4986
Hong Kong	100%	61,540
Hungary	95%	28,375
Iceland	95%	53,518
India	48%	7056
Indonesia	62%	12,284
Iran	75%	20,950
Iraq	78%	17,197
Ireland	95%	76,305
Israel	98%	38,413
Italy	96%	39,817
Ivory Coast	32%	3953
Jamaica	83%	8995
Japan	96%	43,876
Jordan	97%	9153
Kazakhstan	72%	26,410
Kenya	25%	3286
Kiribati	97%	2175
Kyrgyzstan	52%	3726
Laos	25%	7023
Latvia	88%	27,598
Lesotho	14%	3130
Libya	83%	19,631
Lithuania	86%	32,093
Luxembourg	98%	103,662
Macau	100%	115,123
Macedonia	80%	15,231
Malawi	10%	1202
Malaysia	87%	29,432
Maldives	89%	16,669
Mali	20%	2211
Malta	99%	39,534
Marshall Islands	79%	4192
Mauritania	50%	3950
Mauritius	91%	22,279
Mexico	86%	18,149
Moldova	59%	5698
Mongolia	66%	13,000
Montenegro	98%	18,765
Morocco	55%	8218
Mozambique	19%	1247
Myanmar	30%	6139
Namibia	84%	10,476
Nepal	25%	2682
Netherlands	98%	52,941
New Zealand	93%	40,917
Nicaragua	72%	5842
Niger	10%	1017
Nigeria	30%	5861

Country	Industrialisation	Per capita income PPP \$
Norway	97%	60,978
Pakistan	57%	5527
Palau	80%	14,536
Panama	82%	24,446
Papua New Guinea	15%	4197
Paraguay	74%	9691
Peru	99%	13,434
Philippines	67%	8342
Poland	83%	29,291
Portugal	88%	32,199
Romania	70%	25,841
Russia	90%	25,533
Rwanda	10%	2036
Saint Lucia	78%	14,219
St Vincent & Grenadines	74%	11,777
San Marino	100%	62,425
Saudi Arabia	93%	53,845
Senegal	23%	2712
Serbia	76%	15,090
Seychelles	97%	28,964
Singapore	100%	93,905
Slovakia	97%	32,111
Slovenia	98%	34,802
Solomon Islands	25%	2422
South Africa	91%	13,498
South Korea	93%	38,260
Spain	96%	38,091
Sri Lanka	67%	12,811
Sudan	20%	4904
Suriname	92%	15,114
Swaziland	30%	8496
Sweden	99%	50,070
Switzerland	97%	65,006
Tajikistan	50%	3,180
Tanzania	20%	2946
Thailand	58%	17,871
Togo	35%	1570
Tonga	35%	5957
Trinidad & Tobago	96%	31,578
Tunisia	75%	11,911
Turkey	75%	27,916
Turkmenistan	52%	17,993
Uganda	18%	1864
Ukraine	84%	8667
United Arab Emirates	93%	73,879
United Kingdom	99%	43,877
United States	99%	59,532
Uruguay	87%	22,563
Uzbekistan	56%	6865
Vanuatu	35%	3208
Vietnam	46%	6775
West Bank and Gaza	84%	4885
Zambia	15%	4050
Zimbabwe	34%	2086

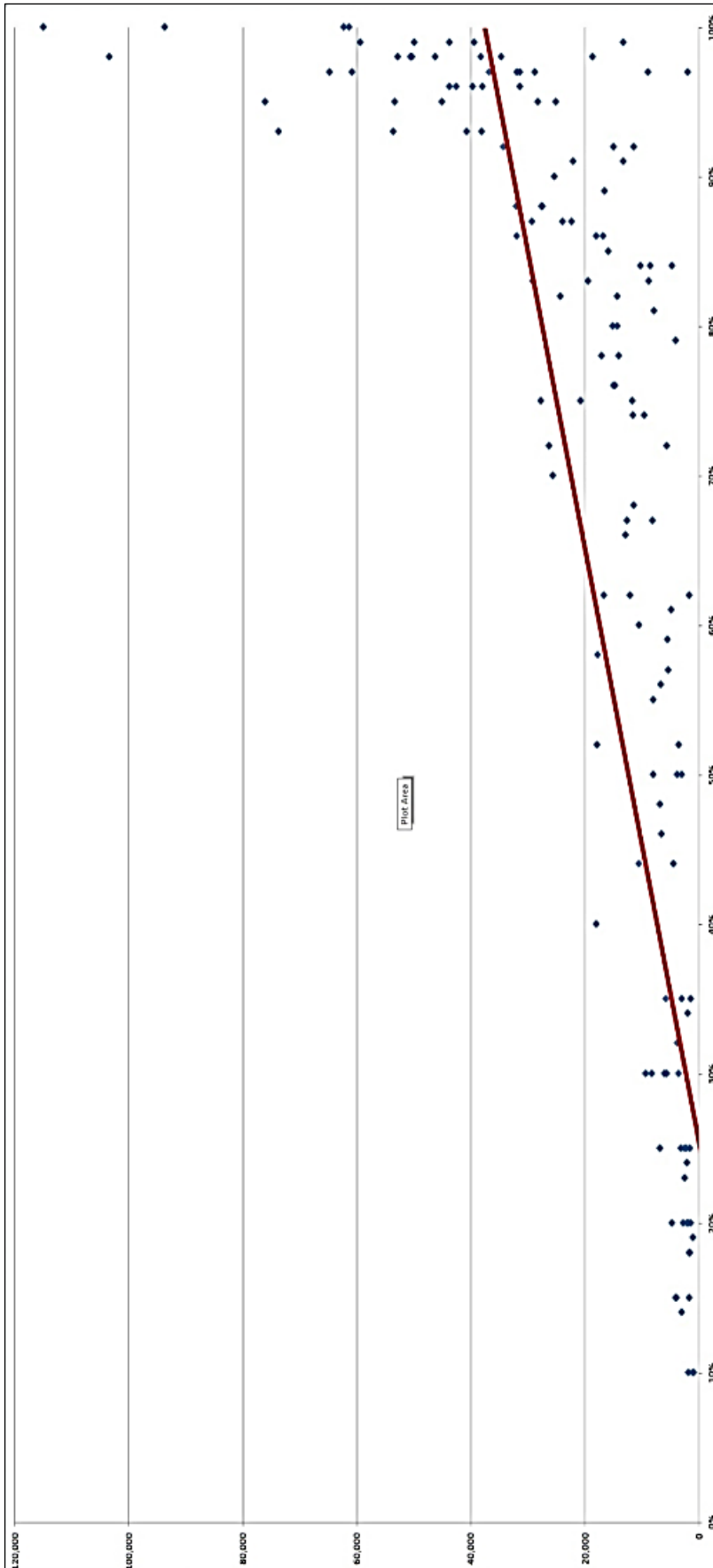


Fig. 1. Per capita income (purchasing power parity) vs. degree of industrialisation (percentage of workforce in industry and services).

We see that there is a clear relationship between the two variables considered. The two variables have a correlation coefficient of 0.68 – indicating a high degree of correlation. Linear regression analysis gives us the equation of the straight line as $P = 49549.19 - 12322.2I$

where P is the per capita income (purchasing power parity) and I is the degree of industrialisation (percentage of workforce in industry and services).

CONCLUSION

This empirically confirms the common sense belief that as a country industrialises, its standard of living increases. We can explore this relationship in greater detail. For example, here we have considered all countries which are at different stages of industrialisation at the same time. Another approach would be to look at this

relationship for each country at different points of time.

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