**Evaluating the Attractiveness of a Country for Business Investment using Worlds Bank Indicators**

#### **Evaluation of a country’s attractiveness in Manufacturing**

**Table 1.** Factors for attractiveness in Manufacturing

| **Sl. No** | **Index** | **Short Description** | **Unit** | **Literature Support Notes** |
| --- | --- | --- | --- | --- |
| 1 | [Air\_freight\_million\_ton\_km](https://data.worldbank.org/indicator/IS.AIR.GOOD.MT.K1) | Air freight in million ton-km measured in metric tons times kilometer traveled. | Million ton-km | [Air transportation demand forecasts in emerging market economies- a case study of the Kyrgyz Republic in the former Soviet Union](https://drive.google.com/file/d/1UKidWrR8jj1vvgc_AaMNfSZJtsGRZrFb/view?usp=sharing) demonstrated that air traffic volumes can be linked to economic data at a sectoral level. It is based on the fact that passenger increase can be found erratically correlated to the aggregated GDP sector. |
| 2 | [Container\_port\_traffic\_TEU](https://data.worldbank.org/indicator/IS.SHP.GOOD.TU) | Container port traffic (TEU:20-foot equivalent units) is the shipment of containers from port; inbound and outbound. | Number of containers | [Using artificial neural networks to predict container flows between the major ports of Asia](https://drive.google.com/file/d/19wsy-YHffoZIqxH_gdIAIkElAAlXwVyR/view?usp=sharing) used GDP as a predictor to model container flows. |
| 3 | [Railways\_goods\_trans\_million\_ton-km](https://data.worldbank.org/indicator/IS.RRS.GOOD.MT.K6) | Goods transport by railways in million tons measured in metric tons times kilometer traveled. | Million ton-km | [Research on Railway Freight Volume Prediction Based on Neural Network](https://drive.google.com/file/d/19wsy-YHffoZIqxH_gdIAIkElAAlXwVyR/view?usp=sharing) claims that railway freight volume is an important indicator of the national economy, and also found 0.707 correlation with manufacturing value added in China from 1978 to 2018. |
| 4 | [Logistic\_performance](https://data.worldbank.org/indicator/LP.LPI.OVRL.XQ) | It is the quality of the logistic related infrastructure (1 being low and 5 being high). In this index, trade, and transport related infrastructure are evaluated - efficiency of customs clearance process, quality of trade- and transport-related infrastructure, ease of arranging competitively priced shipments, quality of logistics services, ability to track and trace consignments, and frequency with which shipments reach the consignee within the scheduled time. | Numeric index (1=lowest to 5=highest) | [The mediator effect was measured by using hierarchical regression analyses](https://drive.google.com/file/d/1Elg79ZHOl32bA1VrOWmBwII261XTmuIe/view?usp=sharing) studied the mediator effect of logistic performance index (LPI) on the relation between Global Competitiveness Index (GCI) and Gross Domestic Product (GDP), measured by using hierarchical regression analyses. |
| 5 | [Industry\_value\_added\_current\_USD](https://data.worldbank.org/indicator/NV.IND.TOTL.CD) | Total output in manufacturing, industry, construction, power, water, mining etc. in USD. It is the net output of a sector after adding up all outputs minus intermediate inputs and assets depreciation. | USD | Manufacturing refers to industries belonging to International Standard Industrial Classification(ISIC) divisions 15-37. And industry corresponds to ISIC divisions 05-43 and includes manufacturing (ISIC divisions 10-33). Details about ISIC: [International Standard Industrial Classification of All Economic Activities (ISIC), Rev.4](https://drive.google.com/file/d/1LxTdYQmlgSch3lntovwmVC35L_lmT1Cg/view?usp=sharing) |
| 6 | [GDP\_per\_capita\_current\_USD](https://data.worldbank.org/indicator/NY.GDP.PCAP.CD) | It is the GDP divided by the total midyear population of a particular country. | USD | [Manufacturing in Structural Change in Africa](https://drive.google.com/file/d/1EwbF57Ds1iPmLcucpMd9uOprsVTEfdwo/view?usp=sharing): there is a weak semblance between the shares of manufacturing output in GDP and GDP per capita. And the researchers predicted manufacturing shares (constant prices) as a function of GDP per capita (in 2011 dollars). |
| 7 | [Final\_consumption](https://data.worldbank.org/indicator/NE.CON.TOTL.CD) | Final consumption or total consumption expenditure is the expenditure for household final consumption plus the government final consumption. | USD | [Analysis of the Correlation between GDP and the Final Consumption](https://drive.google.com/file/d/1uX5uxTHvgDCFhlt3-e7fteE0mH4gXI0Y/view?usp=sharing) examined the evolution of the GDP value and the value of final consumption, in Romania, between 1990 and 2009. Researchers found that an increase by one monetary unit of the final consumption will lead to an increase by 1.21 monetary units of the GDP value. And they draw the conclusion that Romania’s GDP is influenced, mainly, by the evolution of public and private consumption. |
| 8 | [Access\_finance](https://data.worldbank.org/indicator/IC.FRM.BNKS.ZS) | Access to finance is the percentage of firms that use banks to finance investments. | Percentage of firms using bank | [Informality and Access to Finance- Evidence from India](https://drive.google.com/file/d/1UBR7fUwRSqUFdj-5LLeXOqMjcLIeyhO4/view?usp=sharing) gauged the effect of financial accessibility from the Indian manufacturing sector. It can reduce the entry barrier to the formal sector and increase productivity of formal firms. |
| 9 | [New\_business\_density](https://data.worldbank.org/indicator/IC.BUS.NDNS.ZS) | The number of new limited liability companies registered in a year per 1000 people (ages between 15-64). | Number of business entity per 1000 people per year | According to the world bank details for this data, entrepreneurship is a critical part of economic development and growth and important for the continued dynamism of the modern economy. This variable helps us understand the trends in new firm creation across regions and income groups. |
|  | **Target Variable** |  |  |  |
| 1 | [Manufacturing\_value added\_%\_of\_GDP](https://data.worldbank.org/indicator/NV.IND.MANF.ZS) | Manufacturing value added is the net output of a sector after adding up all outputs minus intermediate inputs. It also ignores the depreciation of goods. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3. Note: For VAB countries, gross value added at factor cost is used as the denominator. | Percentage of GDP in USD |  |

#### Evaluation of a country’s attractiveness in Service

**Table 2.** Factors for attractiveness in Service

| **Sl. No** | **Index** | **Short Description** | **Unit** | **Literature Support Notes** |
| --- | --- | --- | --- | --- |
| 1 | [Access\_electricity](https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS) | Percentage of population with access to electricity. | Percentage of a country's population | [Access to Electricity in Small Island Developing States of the Pacific - Issues and Challenges](https://drive.google.com/file/d/1ZZVEu8-zW7E1fRghglIR6_xVdWL7Y0mq/view?usp=sharing) analyzed the statistically significant relationship between log GDP per capita and access to electricity. |
| 2 | [Industry\_value\_added\_current\_USD](https://data.worldbank.org/indicator/NV.IND.TOTL.CD) | Total output in manufacturing, industry, construction, power, water, mining etc. in USD. It is the net output of a sector after adding up all outputs minus intermediate inputs and assets depreciation. | USD | - |
| 3 | [Employment\_in\_industry\_%\_of\_total\_employment](https://data.worldbank.org/indicator/SL.IND.EMPL.ZS) | It is the person’s occupation in an industry to produce goods or services for an earning. The industry sector includes mining and quarrying, manufacturing, construction, and public utilities. | Percentage of total employment | - |
| 4 | [GDP\_per\_capita\_current\_USD](https://data.worldbank.org/indicator/NY.GDP.PCAP.CD) | It is the GDP divided by the total midyear population of a particular country. | USD | [Analysis of value added services on GDP Growth Rate using Data Mining Techniques](https://drive.google.com/file/d/1gMhT0RaZJa3bwreY4xmj2S9IpQo42UWI/view?usp=sharing) adopted regression technique was to find out the influence of Agriculture, Service and Manufacturing on the performance of gross domestic product (GDP). |
| 5 | [Final\_consumption](https://data.worldbank.org/indicator/NE.CON.TOTL.CD) | Final consumption or total consumption expenditure is the expenditure for household final consumption plus the government final consumption. | USD | [Analysis of the Correlation between GDP and the Final Consumption](https://drive.google.com/file/d/1uX5uxTHvgDCFhlt3-e7fteE0mH4gXI0Y/view?usp=sharing) examined the evolution of the GDP value and the value of final consumption, in Romania, between 1990 and 2009. Researchers found that an increase by one monetary unit of the final consumption will lead to an increase by 1.21 monetary units of the GDP value. And they draw the conclusion that Romania’s GDP is influenced, mainly, by the evolution of public and private consumption. |
| 6 | [Primary\_completion\_rate](https://data.worldbank.org/indicator/SE.PRM.CMPT.ZS) | The number of enrollments minus the number of people who are repeating in the last grade of the primary school, divided by the population at the last grade. | Percentage | According to world bank details for this data, it is increasingly used as a core indicator of an education system's performance, it reflects an education system's coverage and the educational attainment of students. And education, on the other hand, is intuitively related to the service value added. |
| 7 | [Educational\_attainment](https://data.worldbank.org/indicator/SE.SEC.CUAT.LO.ZS) | The percentage of people ages 25 and above who completed education in post-secondary non-tertiary level. | Percentage | [Relationship between education and GDP growth- a mutivariate causality analysis for Bangladesh](https://drive.google.com/file/d/1SojNDNDKuXmsZe4dOLtX5U4F4ifLuu7N/view?usp=sharing): The empirical results show evidence of bidirectional causality between education and growth in Bangladesh. |
| 8 | [Individuals\_using\_the\_Internet\_%\_of\_population](https://data.worldbank.org/indicator/IT.NET.USER.ZS) | Internet users are individuals who have accessed the internet recently using a computer, cell phone, or by any device. | Percentage of population | [A quantitative relationship between per capita GDP and scientometric criteria](https://drive.google.com/file/d/1SojNDNDKuXmsZe4dOLtX5U4F4ifLuu7N/view?usp=sharing) found IUPI (Internet users per 10,000 inhabitants) an important indicator for the economy measured by GDP. |
| 9 | [Poverty\_headcount\_ratio](https://data.worldbank.org/indicator/SI.POV.DDAY) | It is the percentage of the population who are earning less than $1.90 per day at 2011 international price. | Percentage of population | [An Empirical Study on the Nexus of Poverty, GDP Growth, Dependency Ratio and Employment in Developing Countries](https://drive.google.com/file/d/1qQxd1dEHx8lPMkZALrhLcBo-JVF4h9bn/view?usp=sharing) discovered association between variables such as poverty, economic growth, agricultural and industrial employment and dependency ratio. |
| 10 | [Access\_finance](https://data.worldbank.org/indicator/IC.FRM.BNKS.ZS) | Access to finance is the percentage of firms those use banks to finance investments. | Percentage of firms using bank | [Informality and Access to Finance- Evidence from India](https://drive.google.com/file/d/1UBR7fUwRSqUFdj-5LLeXOqMjcLIeyhO4/view?usp=sharing) gauged the effect of financial accessibility from the Indian manufacturing sector. It can reduce the entry barrier to the formal sector and increase productivity of formal firms. |
| 11 | [New\_business\_density](https://data.worldbank.org/indicator/IC.BUS.NDNS.ZS) | The number of new limited liability companies registered in a year per 1000 people (ages between 15-64). | Number of business entity per 1000 people per year | According to the world bank details for this data, entrepreneurship is a critical part of economic development and growth and important for the continued dynamism of the modern economy. This variable helps us understand the trends in new firm creation across regions and income groups. |
|  | **Target Variable** |  |  |  |
| 1 | [Services\_value\_added\_%\_of\_GDP](https://data.worldbank.org/indicator/NV.SRV.TOTL.ZS) | It is the value added in wholesale and retail service. Service value added is the net output of a sector after adding up all outputs minus intermediate inputs. | Percentage of GDP in USD |  |