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# Comparison of Country/Economies at Stage of Development with Movement in Rankings of Countries on Global Competitiveness

## Comments

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# Comparison of Country/Economies at Stage of Development with Movement in Rankings of Countries on Global Competitiveness

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## Abstract

With close to 200 countries in the world today, these countries are at various stages of development from less developed to more developed; these stages are often labeled in a rising numerical sequence such as Stage 1 to 3. Countries in the world compete in a global economy to benefit their domestic firms and citizens. As countries move to a higher stage of economic development they offer more global competitiveness for global businesses seeking new markets for sales, offshore outsourcing, and investments.

“The World Economic Forum is the International Organization for Public-Private Cooperation. The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas. It was established in 1971 as a not-for-profit foundation and is headquartered in Geneva, Switzerland. It is independent, impartial and not tied to any special interests.” (www.weforum.org). Since 2004, The World Economic Forum annually releases a Global Competitiveness Report which includes the Global Competitiveness Index.

The Global Competitiveness Report places nations into five stages of development. In the 2009 report, the Global Competitiveness Report placed nations into one of five categories of stages of development from Stage 1 (lower) to Stage 3 (highest): Stage 1 with 38 countries, Transition from Stage 1 to Stage 2 with 18 countries, Stage 2 with 26 countries, Transition from Stage 2 to Stage 3 with 14 countries, and Stage 3 with 37 countries.

“The Global Competitiveness Index (GCI) tracks the performance of close to 140 countries on 12 pillars of competitiveness. It assesses the factors and institutions identified by empirical and theoretical research as determining improvements in productivity, which in turn is the main determinant of long-term growth and an essential factor in economic growth and prosperity. The Global Competitiveness Report hence seeks to help decision makers understand the complex and multifaceted nature of the development challenge; to design better policies, based on public-private collaboration; and to take action to restore confidence in the possibilities of continued economic progress.” (www.weforum.org) The GCI went through a major revision starting with the 2009 report and prior year rankings were excluded from this analysis due to these methodological changes.

This study presents an analysis of the rankings of 119 nations on the Global Competitiveness Index (GCI) from 2009 to 2018 that focuses upon five categories of nations for each stage of development: overall ranking significant gainer nations (defined as a gain of 20 or more in ranking), overall ranking moderate gainer nations (defined as a gain of 10 to 19 in ranking) those nations that are relatively stable in ranking (defined as a change in ranking from no change to a gain or loss of no more than 9), overall ranking moderate decliner nations (defined as a decline of 10 to 19 in rank), overall ranking significant decliner nations (defined as a decline of 20 or more in rank) the percentage in each category, and conclusions. This study incorporates an analysis of rank correlation for the rankings in 2009 and 2018 at each stage of development.

The study concludes that for the 119 countries analyzed despite a range of +37 to -55 in global competitiveness index ranking for particular countries, there is not much average movement change for the five stages of development. The lowest average change (-0.2000) was for Stage 1 countries and the highest average change was for Stage 2 countries (-2.2083) and the highest average change gains were for Transition 1 to 2 stage countries (+1.3750). Analysis of rank correlations by development stage also supported these conclusions. As leaders of nations seek to improve their nation's rankings on the Global Competitiveness Index, they will have to anticipate that it will not be easy to achieve over a short period of time.

**Keywords:** Global Business, Global Competitiveness Index, International Economics, Government Policy

## Introduction

Countries/economies in the world are at various stages of development from less developed to more developed. As countries move to a higher stage of development they offer more global competitiveness for businesses and investments. Given the effects of the global economic downturn that started fall, 2008 there has been an

interest over the last ten years by nations to recover global economic growth. Given the increased globalization of business over the past decade, country leaders desire to maintain and increase their nation's perceived global competitiveness to benefit their nation by attracting businesses and investments. Businesses seek global expansion to new globally competitive nations to increase profits from revenue gains with new sales and cost reductions from new offshore outsourcing.

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The Global Competitiveness Index (GCI) tracks the performance of close to 140 countries on 12 pillars of competitiveness. It assesses the factors and institutions identified by empirical and theoretical research as determining improvements in productivity, which in turn is the main determinant of long-term growth and an essential factor in economic growth and prosperity. The Global Competitiveness Report hence seeks to help decision makers understand the complex and multifaceted nature of the development challenge; to design better policies, based on public-private collaboration; and to take action to restore confidence in the possibilities of continued economic progress. The GCI went through a major revision starting with the 2009 report and prior year rankings were excluded from this analysis due to these methodological changes.

Improving the determinants of competitiveness, as identified in the 12 pillars of the GCI, requires the coordinated action of the state, the business community, and civil society [2].

The GCI examines many different components, each measuring a different aspect of competitiveness. The components are grouped into 12 categories, the pillars of competitiveness:

- 1<sup>st</sup> pillar: Institutions
- 2<sup>nd</sup> pillar: Infrastructure
- 3<sup>rd</sup> pillar: Macroeconomic environment
- 4<sup>th</sup> pillar: Health and primary education
- 5<sup>th</sup> pillar: Higher education and training
- 6<sup>th</sup> pillar: Goods market efficiency
- 7<sup>th</sup> pillar: Labor market efficiency
- 8<sup>th</sup> pillar: Financial market development
- 9<sup>th</sup> pillar: Technological readiness
- 10<sup>th</sup> pillar: Market size
- 11<sup>th</sup> pillar: Business sophistication
- 12<sup>th</sup> pillar: Innovation (World Economic Forum, The Global Competitiveness Report 2017-2018)”.

This study presents an analysis of the rankings of 119 nations on the Global Competitiveness Index (GCI) from 2009 to 2018 that focuses upon five categories of nations for each stage of development: overall ranking significant gainer nations (defined as a gain of 20 or more in ranking), overall ranking moderate gainer nations (defined as a gain of 10 to 19 in ranking) those nations that are relatively stable in ranking (defined as a change in ranking from no change to a gain or loss of no more than 9), overall ranking moderate decliner nations (defined as a

decline of 10 to 19 in rank), overall ranking significant decliner nations (defined as a decline of 20 or more in rank) the percentage in each category, and conclusions.

## Methodology

This study incorporates a methodological analysis approach displayed in quotes below used by the authors in prior published articles and presentations on traction and movement of state ranking on the United States Small Business Survival Index [3-5]. Unlike these prior studies the focus and scope of this study is on country global competitiveness as contrasted with the prior scope and focus on state rankings as to small business survival within the United States.

Table 1 displays the 2009 Global Competitiveness Report countries/economies by stages of development. In 2009 the Global Competitiveness Report placed nations into one of five categories of stages of development from Stage 1 (lower) to Stage 3 (highest): Stage 1 with 38 countries, Transition from Stage 1 to Stage 2 with 18 countries, Stage 2 with 26 countries, Transition from Stage 2 to Stage 3 with 14 countries, and Stage 3 with 37 countries. There are more countries identified as Stage 1, Stage 2, or Stage 3 and fewer countries are in the transitory labels of Transition from 1 to 2 and Transition from 2 to 3. Stage 3 primarily consists of Western developed nations of Europe and North America. Many of the African continent countries are at less than Stage 3 in Table 1, with many of these countries listed as Stage 1. Only those countries that were ranked for both 2009/10 and 2017/18 were included in this analysis [4].

## Countries/Economies by Stage of Development

Table 2 shows a listing of the 119 nations sorted on their overall change in GCI rank from 2009 to 2018 and also shows the rank for each nation in the base year (2009/10) and year 9 (2017/2018). Table 2 displays a range in overall ranking change from +37 for Nepal to -55 for Tunisia. Only two countries in Stage 1 showed ranking gains of over 30: Nepal +37 and Philippines +31. Three countries in Stage 1 showed ranking gains of over 20 but less than 30: Nicaragua +22, Kyrgyz Republic +21, and Vietnam +20. Only two countries in Stage 1 showed ranking gains from 10 to 19: Cambodia +16 and Ethiopia +10. With only seven countries out of 30 countries in Stage 1 showing a rank gain of +10 or more over 9 years, Table 2 shows the difficulty of Stage 1 countries in moving up in country global competitiveness rankings.

## Chi-square Analysis of Changes in Country Rankings by Stage of Development

**A Chi-square analysis was calculated for Table 3 data which calculated the following results:**

Chi-square: 19.89, df of 16, a P value of 0.2252. This Chi-square analysis shows that there is not a significant difference in ranking changes for countries based on their Stage of development at a .05 level of confidence.

## Rank Correlation Analysis of Different Time Durations

A rank correlation analysis was performed on the GCI nation rankings with various durations of time periods. The following rank correlation analysis displayed in Table 4 supports the conclusion that there is a high level of traction with little mobility in ranking over the time period of nine years for Stage 3 countries (.929 rank correlation) and more movement with countries in the Transition 2 to 3 stage of development (.602 rank correlation). All of the rank correlations range from 0.602 to 0.929. The data indicates that little change in rank is possible during one national leader term [3-5] (Table 4).

**Table 1:** Countries/Economies by Stage of Development (2009 Global Competitiveness Report).

Stage 1	Transition from 1 to 2	Stage 2	Transition from 2 to 3	Stage 3
Bangladesh	Algeria	Albania	Bahrain	Australia
Benin	Azerbaijan	Argentina	Barbados	Austria
Bolivia	Botswana	Armenia	Chile	Belgium
Burkina Faso	Brunei Darussalam	Bosnia and Herzegovina	Croatia	Canada
Burundi	Egypt	Brazil	Hungary	Cyprus
Cambodia	Georgia	Bulgaria	Latvia	Czech Republic
Cameroon	Guatemala	China	Lithuania	Denmark
Chad	Indonesia	Colombia	Mexico	Estonia
Côte d'Ivoire	Jamaica	Costa Rica	Oman	Finland
Ethiopia	Kazakhstan	Dominican Republic	Poland	France
Gambia, The	Kuwait	Ecuador	Romania	Germany
Ghana	Libya	El Salvador	Russian Federation	Greece
Guyana	Morocco	Jordan	Turkey	Hong Kong SAR
Honduras	Paraguay	Macedonia, FYR	Uruguay	Iceland
India	Qatar	Malaysia		Ireland
Kenya	Saudi Arabia	Mauritius		Israel
Kyrgyz Republic	Syria	Montenegro		Italy
Lesotho	Venezuela	Namibia		Japan
Madagascar		Panama		Korea, Rep.
Malawi		Peru		Luxembourg
Mali		Serbia		Malta
Mauritania		South Africa		Netherlands
Mongolia		Suriname		New Zealand
Mozambique		Thailand		Norway
Nepal		Tunisia		Portugal
Nicaragua		Ukraine		Puerto Rico
Nigeria				Singapore
Pakistan				Slovak Republic
Philippines				Slovenia
Senegal				Spain
Sri Lanka				Sweden
Tajikistan				Switzerland
Tanzania				Taiwan, China
Timor-Leste				Trinidad and Tobago
Uganda				United Arab Emirates
Vietnam				United Kingdom
Zambia				United States
Zimbabwe				

**Table 2:** Global Competitiveness Index Rank Changes in Rankings 2009/10 to 2017/18.

Country	2017-18 Rank	2009-10 Rank	Overall Change 09/10 to 17/18	Stage	
Nepal	88	125	37	1	
Philippines	56	87	31	1	
Nicaragua	93	115	22	1	
Kyrgyz Republic	102	123	21	1	
Vietnam	55	75	20	1	
Cambodia	94	110	16	1	
Ethiopia	108	118	10	1	
India	40	49	9	1	
Zimbabwe	124	132	8	1	
Bangladesh	99	106	7	1	
Kenya	91	98	7	1	
Mali	123	130	7	1	
Ghana	111	114	3	1	
Madagascar	121	121	0	1	
Chad	135	131	-4	1	
Cameroon	116	111	-5	1	
Mauritania	133	127	-6	1	
Sri Lanka	85	79	-6	1	
Uganda	114	108	-6	1	
Zambia	118	112	-6	1	
Honduras	96	89	-7	1	
Mozambique	136	129	-7	1	
Malawi	132	119	-13	1	
Tanzania	113	100	-13	1	
Pakistan	115	101	-14	1	
Senegal	106	92	-14	1	
Benin	120	103	-17	1	
Lesotho	131	107	-24	1	
Nigeria	125	99	-26	1	
Gambia, The	117	81	-36	1	
Georgia	67	90	23	1.5	
Jamaica	70	91	21	1.5	
Indonesia	36	54	18	1.5	
Azerbaijan	35	51	16	1.5	
Paraguay	112	124	12	1.5	
Kazakhstan	57	67	10	1.5	
Botswana	63	66	3	1.5	
Morocco	71	73	2	1.5	
Saudi Arabia	30	28	-2	1.5	
Algeria	86	83	-3	1.5	
Qatar	25	22	-3	1.5	
Guatemala	84	80	-4	1.5	
Kuwait	52	39	-13	1.5	
Brunei Darussalam	46	32	-14	1.5	
Venezuela	127	113	-14	1.5	
Egypt	100	70	-30	1.5	
Armenia	73	97	24	2	
Albania	75	96	21	2	
Mongolia	101	117	16	2	
Serbia	78	93	15	2	
Mauritius	45	57	12	2	
Panama	50	59	9	2	
Costa Rica	47	55	8	2	
Ecuador	97	105	8	2	
Bosnia and Herzegovina	103	109	6	2	
Peru	72	78	6	2	
Thailand	32	36	4	2	
Colombia	66	69	3	2	

Rank Correlation Stage 1	0.7197325
Cumulative Overall Stage 1 Changes	-6
Rank Correlation Stage 1 to 2	0.8750333
Cumulative Overall Stage 1 to 2 Changes	22

China	27	29	2	2	
Malaysia	23	24	1	2	
Ukraine	81	82	1	2	
Argentina	92	85	-7	2	
Dominican Republic	104	95	-9	2	Rank
Jordan	65	50	-15	2	Correlation
Montenegro	77	62	-15	2	Stage 2
Namibia	90	74	-16	2	0.7490138
South Africa	61	45	-16	2	Cumulative
Brazil	80	56	-24	2	Overall
El Salvador	109	77	-32	2	Stage 2
Tunisia	95	40	-55	2	Changes
Russian Federation	38	63	25	2.5	-53
Latvia	54	68	14	2.5	
Lithuania	41	53	12	2.5	
Mexico	51	60	9	2.5	
Turkey	53	61	8	2.5	Rank
Poland	39	46	7	2.5	Correlation
Croatia	74	72	-2	2.5	Stage 2 to 3
Hungary	60	58	-2	2.5	0.6023468
Chile	33	30	-3	2.5	Cumulative
Romania	68	64	-4	2.5	Overall
Bahrain	44	38	-6	2.5	Stage 2 to 3
Uruguay	76	65	-11	2.5	Changes
Oman	62	41	-21	2.5	26
Malta	37	52	15	3	
Israel	16	27	11	3	
New Zealand	13	20	7	3	
Estonia	29	35	6	3	
Netherlands	4	10	6	3	
United Arab Emirates	17	23	6	3	
Hong Kong SAR	6	11	5	3	
Italy	43	48	5	3	
United Kingdom	8	13	5	3	
Norway	11	14	3	3	
Trinidad and Tobago	83	86	3	3	
Germany	5	7	2	3	
Luxembourg	19	21	2	3	
Ireland	24	25	1	3	
Portugal	42	43	1	3	
Czech Republic	31	31	0	3	
Singapore	3	3	0	3	
Switzerland	1	1	0	3	
United States	2	2	0	3	
Austria	18	17	-1	3	
Japan	9	8	-1	3	
Spain	34	33	-1	3	
Belgium	20	18	-2	3	
Iceland	28	26	-2	3	
Sweden	7	4	-3	3	
Taiwan, China	15	12	-3	3	
Finland	10	6	-4	3	
Canada	14	9	-5	3	Rank
Australia	21	15	-6	3	Correlation
France	22	16	-6	3	Stage 3
Denmark	12	5	-7	3	0.929263
Korea, Rep.	26	19	-7	3	Cumulative
Slovenia	48	37	-11	3	Overall
Slovak Republic	59	47	-12	3	Stage 3
Greece	87	71	-16	3	Changes
Cyprus	64	34	-30	3	-39

**Table 3:** Cumulative and Average Changes in Country Ranking by Stage of Development.

Stage	#	Cumulative Changes	Average Change	Significant Gainers	Moderate Gainers	No Major Change	Moderate Decliners	Significant Decliners
1	30	-6	-0.2	5	2	15	5	3
1 to 2	16	22	1.375	2	4	6	3	1
2	24	-53	-2.2083	2	3	12	4	3
2 to 3	13	26	-2	1	2	8	1	1
3	36	-39	-1.083	0	2	30	3	1

**Table 4:** Rank Correlation Analysis of GCI Nation Rankings 2009/10 and 2017/18 By Stage of Development.

Stage	Rank Correlation
1	0.7197
1 to 2	0.875
2	0.749
2 to 3	0.6023
3	0.9292
Overall all Stages	0.9333

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## Conclusions

The study concludes that for the 119 countries analyzed despite a range of +37 to -55 in global competitiveness index ranking for particular countries, there is not much average movement change for the five stages of development. The lowest average change (-0.2000) was for Stage 1 countries and the highest average change was for Stage 2 countries (-2.2083) and the highest average change gains were for Transition 1 to 2 stage countries (+1.3750). Analysis of rank correlations by development stage also supported these conclusions. As leaders of nations seek to improve their nation's rankings on the Global Competitiveness Index, they will have to anticipate that it will not be easy to achieve over a short period of time.