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Competitive Industrial Performance Report 2014

INCLUSIVE AND SUSTAINABLE INDUSTRIAL DEVELOPMENT

Competitive Industrial Performance Report 2014

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List of acronyms and abbreviations

BRICS	Brazil, Russian Federation, India, China, South Africa
CIP	Competitive Industrial Performance
EIE	Emerging Industrial Economies
EU	European Union
GDP	Gross Domestic Products
HDI	Human Development Index
IDR	Industrial Development Report
ImWMT	Impact on World Manufacturing Trade
ImWMVA	Impact on World Manufacturing Value Added
INDint	Industrialization Intensity
ISIC	International Standard Industrial Classification of all economic activities
LDC	Least Developed Countries
MHT	Medium- and High-Technology
MHVAsh	Medium- and High-tech manufacturing Value Added share in total manufacturing value added
MHXsh	Medium- and High-tech manufactured Exports share in total manufactured exports
MVA	Manufacturing Value Added
MVApc	Manufacturing Value Added per capita
MVAsh	Manufacturing Value Added share in total GDP
MXpc	Manufactured Exports per capita
MXQual	Manufactured Exports Quality
MXsh	Manufactured Exports share in total exports
OECD	Organisation for Economic Co-operation and Development
UNIDO	United Nations Industrial Development Organization
WEF	World Economic Forum
WMT	World Manufactured Exports
WMVA	World Manufacturing Value Added

1.   Introduction

This report on the Competitive Industrial Performance (CIP) of nations is an analytical publication of the UNIDO Statistics Unit based primarily on its own data sources. The CIP continues to grow in scope and coverage. The present CIP index's data coverage has increased from 137 economies in the preceding 2013 report to 147. The methodological part of the report, the construction of a composite CIP index for different indicators of industrial performance, is a major component of the report. The analysis focuses on the relative positions of countries' industrial performance as expressed in the CIP rank. A more detailed description of the indicators and rationale behind their selection are described in the CIP report released in 2013 (UNIDO, 2013). For this report, the component indicators and aggregation methods remain unchanged. The present publication provides updates to the earlier report and describes how the position of economies has changed between 2010 and 2012.

The CIP report has widely been used an advisory service offered by UNIDO in the area of policy and statistics. In a number of countries, national workshops have been organized for CIP compilation using locally available data. This allows decision makers understand the impact of key variables on their country's overall economic performance. Basic industrial statistics are not readily available in many countries and lack of data has been a serious impediment to evidence-based policymaking. In this respect, the CIP report is helpful in identifying those countries with a critical data gap and in formulating the policy and statistics component of the relevant technical assistance programme of UNIDO.

The CIP has attracted wide attention of international development partners who launch research activities on industrial development in cooperation with UNIDO. An earlier version of the CIP ranking and the related statistics was published for the World Economic Forum (WEF, 2014).

UNIDO has also carried out an analysis comparing the industrial performance of countries with their social achievements (Upadhyaya and Kepplinger, 2014). A strong correlation between the CIP and Human Development Index (HDI) ranking suggests that economies whose performance in industrial development is higher have better opportunities and resources to improve the overall quality of life of their population. This conclusion has increased the relevance of the CIP with respect to UNIDO's renewed mandate on Inclusive and Sustainable Industrial Development (ISID). Industry can effectively integrate the economic, social and environmental dimensions of sustainable development. The CIP, as an important policy tool, can be used to promote industrialization and help states align their development strategies towards ISID.

Statistics used in the CIP are compiled in a transparent manner, and the relevant data is available without charge on UNIDO's website. Users are encouraged to leave comments or provide feedback on the data and methodology applied in the compilation of results.

2.   The CIP index

Shifts in the relative position of industrialized and emerging industrial economies in terms of manufacturing value added and industrial exports are, to a significant extent, attributable to changes in individual countries' industrial competitiveness. UNIDO assesses and benchmarks industrial competitiveness through its Competitive Industrial Performance (CIP) index (see box below), building on a meso-concept of competitiveness which assigns particular emphasis to countries' manufacturing development. Industrial competitiveness is defined as the capacity of countries to increase their presence in international and domestic markets whilst simultaneously developing industrial sectors and activities with higher value added and technological content.[1]

Countries can learn from international markets and become more industrially competitive if they develop their technological capabilities, expand their production capacity and invest in their infrastructure. Hence, increasing industrial competitiveness requires selective policy interventions through which comparative advantages are exploited while new competitive advantages are created.

The CIP index is a performance (or 'outcome') indicator rather than a potential (or 'process') indicator. Thus, it consists of output indicators only. Given its focus on industrial competitiveness and structural economic variables, the CIP index provides country rankings that tend to remain relatively stable over short periods of time. The reason for this is that processes of technological learning are cumulative and take time. The effects of learning are only reflected in industrial statistics and structural economic variables in the medium-long term and can be captured through detailed longitudinal studies, in particular by tracking changes of key dimensions over time. In this respect, the CIP index in its current form allows us to observe not only the absolute level of key indicators at any particular point in time, but also their rate of change.

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[1] For a detailed account of the methodology and trends in UNIDO's CIP index, see UNIDO (2013), The Industrial Competitiveness of Nations: Looking back, forging ahead.

BOX 1 Global manufacturing indexes

In recent years, several indexes have been developed to assess the competitiveness of countries' manufacturing sector. Among the three most notable are:

- COMPETITIVE INDUSTRIAL PERFORMANCE INDEX (CIP) (A UNIDO index). It is composed of 8 indicators assessing industrial performance based on an economy's ability to competitively produce and export manufactured goods. Each indicator is weighted on a scale of 0 to 1. It is an objective index of the current competitiveness and manufacturing potential of 142 countries around the world for the year 2012.

- GLOBAL MANUFACTURING COMPETITIVENESS INDEX (GMCI). Based on a global survey of 550 CEOs, GMCI ranks the competitiveness on a scale of 1 to 10, of 40 individual components agglomerated in 10 categories. Each component is weighted according to the importance of the variable and the respondent. It is a subjective index based on managerial perception, and used to justify current practices.

- GLOBAL COMPETITIVENESS INDEX (A World Economic Forum index). Measures both the micro- and macroeconomic foundations of national competitiveness. It is a weighted average of components grouped into "12 pillars of competitiveness" on a scale of 1 to 7, and represents an extensive mix of objective and subjective criteria. It underlines that competitiveness is a proxy to economic, social, and technological development.

Figure 1   Components of the Competitive Industrial Performance index

First dimension: Capacity to produce & export manufactures

Indicator 1: MVApc
Manufacturing Value Added per Capita

Indicator 2: MXpc
Manufacturing Export per Capita

Second dimension: Technological deepening and upgrading

Composite (Indicators 3-4): Industrialization Intensity
INDint = [MHVAsh + MVAsh]/2

Composite (Indicators 5-6): Export Quality
MXQual = [MHXsh + MXsh]/2

Third dimension: World Impact

Indicator 7: ImWMVA
Impact of a country on World MVA

Indicator 8: ImWMT
Impact of a country on World Manufactured Exports

CIP Index = $\prod$

The CIP index today consists of eight sub-indicators grouped along three dimensions of industrial competitiveness. The first dimension relates to a country's capacity to produce and export manufactures, and is captured by their Manufacturing Value Added per capita (MVApc) and their Manufactured Exports per capita (MXpc). The second dimension covers a country's levels of technological deepening and upgrading. To proxy for this complex dimension, two composite sub-indicators—industrialization intensity and export quality—have been constructed. The degree of industrialization intensity is computed as a linear aggregation of Medium- and High-tech Manufacturing Value Added share in total manufacturing value added (MHVAsh) and Manufacturing Value Added share in total GDP (MVAsh). Country export quality is obtained as a linear aggregation of Medium- and High-tech manufactured Exports share in total manufactured exports (MHXsh) and Manufactured Exports share in total exports (MXsh). Finally, the third dimension of competitiveness entails country impact on world manufacturing, both in terms of the value added share in World Manufacturing Value Added (ImWMVA) and in World Manufacturing Trade (ImWMT). The CIP index is a composite index obtained through a geometric aggregation of these eight sub-indicators to which equal weights have been assigned. Figure 1 summarizes the configuration of the CIP index. The definitions and construction of each sub-indicator are presented in Section 4 of this report.

3.   Data preparation for CIP

The CIP index is represented as a composite index, obtained as an aggregation of equally weighted sub-indicators. In order to calculate the CIP, values for all eight sub-indicators must be available.

3.1 Sources

UNIDO uses three data sources to obtain the values of individual sub-indicators:

- **MVA - Manufacturing Value Added Database:** The MVA database is maintained by UNIDO[2], and contains country data for GDP, MVA and population for the period, starting with 1990 to the latest available year. GDP and MVA data are available at current and constant prices (2005) in United States dollars.

- **UN Comtrade Database:** The United Nations Commodity Trade Statistics Database (UN Comtrade) contains detailed import and export statistics as reported by statistical authorities of close to 200 countries or regions. It comprises annual trade data from 1962 to the most recent year.

- **UNIDO Industrial Statistics Database (INDSTAT):** The database contains disaggregated data on the manufacturing sector. The data is available at the 2- and 4-digit levels of the International Standard Industrial Classification of All Economic Activities (ISIC) Revision 3 relating to the manufacturing sector.

To calculate the indicators of Manufacturing Value Added per capita (MVApc), MVA share in total GDP (MVAsh) and the Impact of a country on World Manufacturing Value Added (ImWMVA), MVA and GDP are calculated at constant USD and population count based on the MVA database. The indicators on Manufactured Exports per capita (MXpc), share of Manufactured Exports share in total exports (MXsh), Medium- and High-tech manufactured Exports share in total manufactured exports (MHXsh) and the country's Impact on World Manufacturing Trade (ImWMT) are calculated using data from the UN Comtrade database. Finally, the Medium- and High-tech Manufacturing Value Added share in total manufacturing value added (MHVAsh) is computed with data from the UNIDO INDSTAT database. That is, all three source databases must contain all necessary values for a country over the years to compute the eight indicators.

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[2] MVA and GDP data are collected from national and international sources and supplemented by UNIDO estimates. Notable data sources include the United Nations Statistical Division (UNSD), World Bank: World Development Indicators (WDI), Organisation for Economic Co-operation and Development (OECD), regional banks and national sources.

3.2 Missing data

The three abovementioned data sources encompass missing values over the years. In addition, the latest year for which the data is available varies from one source to another.

UNIDO's MVA database has extensive country/year coverage. Data is available for many countries for the latest two years. INDSTAT data is only available up to the year 2011, covering only 45 countries in that year. However, while the MVA and export data are available for many countries in the year 2012, the CIP index cannot be compiled for any country in 2012 without imputing the missing values, as INDSTAT data is not available.

To compile the CIP index for the latest year possible and with reasonable coverage, applying imputation and Nowcasting methods becomes necessary. Thereby, the coverage as well as the reliability of the CIP can be highly increased. The next section describes the Nowcasting and imputation methods implemented by UNIDO during the CIP calculation process. The CIP index has been calculated for 142 countries for the years 2011 and 2012 using these methods.

3.3 Imputation methods used in the calculation of the CIP

Due to the lack of country data for some of the variables used to compile the CIP, it was necessary to run some missing data estimation procedures, i.e. imputation and Nowcasting methods. Data from UNIDO's MVA database has high country/year coverage. For many countries, data is available for the latest two years. Nowcasting is performed with an accredited and transparent method. When an indicator based on MVA or GDP is not available for a country for a particular year, the value of this indicator is imputed in a straightforward way. The missing value is replaced by the indicator value of the year closest to the missing year. If, for instance, the value for the indicator is available in the years 2004 and 2007, but not for the years 2005 and 2006, the value in 2004 will be carried forward to 2005, and the value of 2007 will be used for the year 2006. If no value for this indicator is available in the past or future 25 years, the value will not be imputed. Such imputation was only necessary for four countries for the year 2012 for which the CIP was computed (Bermuda, Cuba, the State of Palestine and the Syrian Arab Republic).

Manufactured exports are aggregated over resource-based, low-technology, medium-technology and high-technology exports (according to Lall's classification). If all of these four export values are unknown, Manufactured Exports per capita (MXpc) and manufactured Exports share in total exports (MXsh) are considered missing. This also applies to the two indicators dependent on this data (MHXsh and ImWMT). In case any of these indicators are missing, the

value is imputed in accordance with the MVA-based indicators with the nearest (in terms of years) available value.

The indicator with the greatest number of missing values is the Medium- and High-tech Manufacturing Value Added share in total manufacturing value added (MHVAsh). To calculate this share, the manufacturing sector's total value added as well as the value added for at least one of the eight industries that comprise medium- and high-tech manufacturing must be available. The fewer industries there are for which data is available, the less reliable the calculated share is. To mitigate this problem and improve the reliability of the computed values, a multi-step imputation method was applied. The first step entailed the imputation of missing and of Nowcast total output values by deflating known total output values with the Index of Industrial Production (IIP), the Consumer Price Index (CPI) and the Index of Manufacturing Value Added (IMVA). The total value added could then be estimated by using the share of total value added in total output from the nearest available year. Once the total value added was available, the industries' value added could be estimated. To do so, the share of each industry in total value added was imputed again with the nearest available share. Using these estimated values, the share of value added in medium- and high-tech manufacturing in total manufacturing could be computed. In case of further missing values, the share of output in medium- and high-tech manufacturing in total manufacturing is used as a proxy. To further increase coverage, the calculated share is finally imputed using the same method as for the other indicators, namely by taking the nearest value as a surrogate for the missing values.

3.4 Changes in imputation method compared to the previous CIP report

The imputation method used to calculate the CIP index for the present report differs in certain aspects from that used in the previous report, the Competitive Industrial Performance Report 2012/13 to increase its reliability. First, the actual nearest available observation is used as a donor. In previous versions, only past values were considered as donors, even if the following year's value was available. This reduces the time distance to the donor value and thus increases reliability. Second—the most drastic change to the previous imputation method, albeit with only a minor impact on the overall CIP index—the INDSTAT data is now imputed before the share of medium- and high-tech manufacturing in total manufacturing is computed. This not only increases the coverage of CIP, but also has a significant influence on the calculated share. The difference in share can be quite large, when previously only one out of eight divisions determined the share of medium- and high-tech manufacturing. Nevertheless, due to the weighting of the indicators, the overall impact on the CIP value is small for most countries. For example, in 2010, Ghana's share of medium- and high-tech manufacturing in total

manufacturing was more than 12 times higher with the new imputation method than it was with the previous imputation, but the CIP index increased by only seven percent. Overall, this new imputation method only negligibly changes the value of the CIP index for most countries, while the reliability of the CIP index increases for all countries. Another major change leading to discrepancies between the results of this report and the CIP published in the Competitive Industrial Performance Report 2012/13 is the change in MVA base year from 2000 to 2005.

Compared to the CIP ranking published by the World Economic Forum (WEF) (WEF, 2014), the sum of three subsectors (3011, 3012, 3315)[3] is used as a surrogate for a subdivision of subsector 351 in the calculation of the medium- and high-tech industry in this version of CIP for those countries/ years that values in ISIC revision 4 were available. In these countries/ years, the composition of sectors

(24 + 29 + 30 + 31 + 32 + 33 + 34 + 35)- 351

is replaced by

(24 + 29 + 30 + 31 + 32 + 33 + 34 + 35) - 3011(Rev. 4) - 3012(Rev. 4) - 3315(Rev. 4).

This results in a slight difference in ranking for some countries as compared to the former publication.

4.   Construction of indicators

The revised version of the CIP index (CIP.8) presented in UNIDO's earlier CIP publication encompasses three dimensions captured by four individual and two composite indicators (8 indicators in total). The construction method and description of the eight indicators are as follows:

Indicator 1: Manufacturing Value Added per capita (MVApc)

MVApc captures the level of a country's industrialization and is expressed in per capita to adjust for country size. MVApc is the relative value of total net manufacturing output to population size. Unlike gross output, MVA is free of double counting as the cost of intermediate consumption is excluded. Furthermore, it is measured at basic prices to avoid tax distortions.

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[3] 3011 - Building of ships and floating structures, 3012-Building of pleasure and sporting boats, 3315 - Repair of transport equipment, except motor vehicles.

Indicator 2: Manufactured Exports per capita (MXpc)

MXpc captures a country's ability to produce goods competitively and to implicitly keep up with technological changes. Like MVApc, MXpc is expressed in per capita to adjust for country size. Data on manufactured exports indicate prima facie international efficiency and reveal structural trends. However, data on the MXpc of large economies are biased due to the existence of large internal demand and incentives towards domestic markets. Moreover, data on re-exports are not available at regular intervals for all countries.

Indicator 3: Medium- and High-tech MVA share in total manufacturing value added (MHVAsh)

MHVAsh captures the technological complexity of manufacturing. The higher the share of MHVA in MVA, the more technologically complex the industrial structure of a given country and its overall industrial competitiveness is. Empirical analyses have shown that development generally entails a structural transition from resource-based and low-tech activities to medium- and high-tech ones. The more complex the production structures of a given country become, the higher the opportunities for learning and technological innovation at the sectoral and intersectoral levels.

Indicator 4: MVA share in total GDP (MVAsh)

This indicator captures manufacturing weight within an economy. In other words, MVAsh specifies the contribution of the manufacturing sector to total production.

Indicator 5: Medium- and High-tech manufactured Exports share in total manufactured exports (MHXsh)

MHXsh captures the technological content and complexity of exports. The share of medium- and high-tech products in total manufactured exports is considered jointly with the previous indicator, because MHXsh might under certain circumstances differ substantially from MHVAsh. For example, large import-substituting developing countries are characterized by a relatively more complex MVA structure than manufactured exports structure.

Indicator 6: Manufactured Exports share in total exports (MXsh)

This indicator captures manufacturing weight in export activity.

Indicator 7: Country's Impact on World Manufacturing Value Added (ImWMVA)

This indicator is measured by a country's share in world manufacturing value added, which indicates the country's relative performance and impact on overall manufacturing.

Indicator 8: Country's Impact on World Manufacturing Trade (ImWMT)

ImWMT is measured by a country's share in world manufactured exports. It signifies a country's competitive status relative to other countries in international markets. That is, gains in world market share reflect more competitiveness, while losses denote deterioration.

In the construction of the final composite index, three fundamental dimensions are considered:

- **First dimension: Capacity to produce and export manufactured goods**

    Indicator 1: Manufacturing Value Added per capita (MVApc)

    Indicator 2: Manufactured Exports per capita (MXpc).

- **Second dimension: Technological deepening and upgrading**

    Composite indicator: Industrialization intensity, INDint = [MHVAsh + MVAsh]/2

    Composite indicator: Manufactured Exports Quality, MXQual = [MHXsh + MXsh]/2.

- **Third dimension: World impact**

    Indicator 7: Country's Impact on World Manufacturing Value Added (ImWMVA)

    Indicator 8: Country's Impact on World Manufacturing Trade (ImWMT).

The composite index is then computed as the equal weighted geometric average of MVApc, MXpc, INDint, MXQual, ImWMVA and ImWMT.

5.   The state of Competitive Industrial Performance

Trends in industrial competitiveness over the last 22 years are presented in Table 1. Countries are listed according to the 2012 World Industrial Competitiveness ranking and subdivided into quintiles (by colour) for ease of reference to *Top*, *Upper Middle*, *Middle*, *Lower Middle* and *Low* competitive countries.

5.1   Competitive Industrial Performance ranking

In 2012, the most industrially competitive nations (top quintile) included a varied set of economies. The top five most industrially competitive countries were Germany, Japan, the United States, the Republic of Korea (ROK) and China. Each belongs to the most industrialized countries in the world, and jointly accounted for 58 percent of world MVA. Germany's ranking is attributable to its high level of industrial exports while Japan's industrial competitiveness is supported by its large manufacturing base, high-tech exports as well as enhanced manufacturing

per capita. The United States' industrial competitiveness arises from its large manufacturing base, although it is more aimed at the domestic market compared to Japan or any other developed country. The US alone accounts for nearly 20 percent of world MVA. The ROK has a competitive manufacturing sector based on a high share of medium- and high-tech industries.

China's position in the ranking is attributable to its high share in global trade; although low MVA per capita and exports indicate that manufacturing lags behind in terms of value added. Over the last 15 years, China has increased its share of manufacturing exports to 16 percent of global manufacturing trade, and is the largest exporter in the world today. China has also started positioning itself as a high-tech manufactures exporter. China's manufacturing industry has become the largest sector in the economy and accounted for more than one-third of GDP and more than 16 percent of global MVA in the year 2012, second only to the US.

The remaining top quintile includes Switzerland, Singapore and the Netherlands on account of their very high exports per capita in general and their high-tech exports, in particular. Other members of the top quintile consist mainly of European Union transition economies, such as the Czech Republic, Poland, Slovakia and Hungary—due to their export orientation—but are more focused on the European market. The list is completed by Mexico, Malaysia and Thailand whose competitiveness arises from their participation in global value chains. Altogether, countries in the top quintile account for nearly 83 percent of world MVA in the year 2012.

The upper middle quintile includes some of the most populated countries in the world, such as Turkey, the Russian Federation, Brazil, Indonesia, South Africa, India and the Philippines. The Philippines' and Indonesia's production of and export performance in high-tech products is strong, while the Russian Federation and South Africa have high MVAs per capita but low manufacturing exports due to their dependence on foreign sales of natural resources. India and Brazil each accounted for more than 1.6 percent of global MVA in 2012.

The middle quintile includes populated countries such as Iran, Egypt and Bangladesh, but also some less populated nations like Costa Rica, Oman, Iceland and Uruguay. Countries in the lower middle and bottom quintiles include less developed countries by income, and accounted for approximately 0.7 percent of world MVA in the year 2012. Their level of industrialization, on average, is less than one-third of that of countries positioned in the middle quintile.

Table 1 Competitive industrial performance (CIP index), 1990- 2012

2012 Ranking	CIP Index 2012	Country	2010	2005	2000	1995	1990
1	0.5539	Germany	1	1	2	2	1
2	0.4855	Japan	2	2	1	1	2
3	0.4374	United States of America	3	3	3	3	3
4	0.4144	Republic of Korea	4	6	12	13	17
5	0.3462	China	7	19	22	27	32
6	0.3395	Switzerland	5	9	9	7	7
7	0.3271	Singapore	6	10	10	11	12
8	0.3170	Netherlands	8	11	13	10	9
9	0.3040	Belgium	12	5	8	8	8
10	0.3038	Ireland	11	12	11	17	19
11	0.2998	China, Taiwan Province	13	13	14	12	13
12	0.2978	France	10	7	6	6	6
13	0.2961	Italy	9	4	4	4	4
14	0.2751	United Kingdom	14	8	5	5	5
15	0.2589	Austria	16	16	17	15	11
16	0.2584	Sweden	15	15	15	14	14
17	0.2267	Canada	17	14	7	9	10
18	0.2215	Czech Republic	19	22	24	28	25
19	0.2097	Spain	18	17	16	16	15
20	0.2017	Finland	20	18	18	19	18
21	0.1899	Mexico	22	21	19	21	31
22	0.1810	Denmark	21	20	20	18	16

2012 Ranking	CIP Index 2012	Country	2010	2005	2000	1995	1990
23	0.1806	Poland	24	28	33	37	51
24	0.1757	Malaysia	23	23	21	20	29
25	0.1707	Slovakia	27	33	41	43	37
26	0.1641	Thailand	25	25	26	26	38
27	0.1578	Hungary	26	24	27	36	36
28	0.1455	Australia	29	27	25	22	22
29	0.1434	Israel	28	26	23	23	23
30	0.1367	Turkey	31	30	34	33	39
31	0.1294	Norway	30	29	29	24	21
32	0.1211	Russian Federation	36	36	35	35	26
33	0.1164	Slovenia	32	31	31	32	28
34	0.1124	Romania	35	37	44	42	34
35	0.1116	Portugal	34	32	28	25	24
36	0.1095	Brazil	33	34	32	30	30
37	0.1083	Saudi Arabia	37	38	47	44	45
38	0.1008	Belarus	40	45	51	49	46
39	0.0892	Argentina	38	42	42	39	44
40	0.0859	Indonesia	41	41	39	41	52
41	0.0859	Lithuania	44	48	57	59	56
42	0.0839	South Africa	39	40	40	38	41
43	0.0834	Qatar	43	57	54	50	48
44	0.0780	India	45	56	56	54	64
45	0.0755	Luxembourg	42	35	30	31	27

2012 Ranking	CIP Index 2012	Country	2010	2005	2000	1995	1990
46	0.0752	Estonia	51	53	55	62	60
47	0.0744	New Zealand	46	39	37	34	35
48	0.0737	Bahrain	47	47	69	52	55
49	0.0704	Kuwait	50	50	49	63	71
50	0.0688	Greece	49	44	43	40	40
51	0.0686	Chile	48	49	53	48	57
52	0.0659	Philippines	56	46	38	51	50
53	0.0653	United Arab Emirates	52	43	45	65	83
54	0.0647	Ukraine	53	54	59	55	42
55	0.0629	Viet Nam	58	69	80	91	94
56	0.0580	Trinidad and Tobago	55	65	66	75	80
57	0.0552	Croatia	54	52	50	47	33
58	0.0547	Venezuela (Bolivarian Republic of)	57	51	48	46	59
59	0.0547	Bulgaria	59	61	63	53	43
60	0.0501	Malta	62	58	46	45	49
61	0.0478	Tunisia	61	62	58	56	63
62	0.0473	Peru	64	68	75	72	76
63	0.0462	Costa Rica	63	59	52	69	73
64	0.0455	Oman	68	86	74	89	103
65	0.0451	Latvia	66	66	68	71	58
66	0.0435	Kazakhstan	71	72	85	73	70

2012 Ranking	CIP Index 2012	Country	2010	2005	2000	1995	1990
67	0.0431	Iran (Islamic Republic of)	60	75	89	92	93
68	0.0410	Colombia	67	63	61	57	53
69	0.0398	Iceland	65	64	60	58	61
70	0.0397	Morocco	70	67	64	64	68
71	0.0354	Egypt	72	78	71	82	85
72	0.0333	El Salvador	73	70	83	85	81
73	0.0311	Pakistan	76	71	73	68	74
74	0.0307	Serbia	75	74	79	70	54
75	0.0304	Jordan	74	76	93	83	89
76	0.0299	Guatemala	77	73	77	76	79
77	0.0297	Bangladesh	79	87	90	95	102
78	0.0286	Uruguay	78	81	72	66	66
79	0.0276	Sri Lanka	81	77	67	77	92
80	0.0269	China, Hong Kong SAR	69	55	36	29	20
81	0.0245	The f. Yugosl. Rep of Macedonia	82	83	82	78	65
82	0.0245	Mauritius	83	79	65	61	62
83	0.0236	Bosnia and Herzegovina	85	89	96	94	95
84	0.0233	Ecuador	87	92	92	93	101
85	0.0231	Lebanon	80	82	91	84	91
86	0.0223	Algeria	84	91	84	88	78
87	0.0219	Brunei Darussalam	86	84	95	86	84

2012 Ranking	CIP Index 2012	Country	2010	2005	2000	1995	1990
88	0.0215	Botswana	90	95	76	87	86
89	0.0201	Swaziland	88	80	70	67	69
90	0.0183	Cambodia	94	97	103	119	121
91	0.0181	Honduras	92	98	100	114	114
92	0.0168	Cyprus	89	94	87	74	67
93	0.0162	Côte d'Ivoire	91	85	88	96	87
94	0.0156	Cuba	93	88	78	80	75
95	0.0151	Georgia	95	99	107	122	98
96	0.0150	Jamaica	96	93	86	79	72
97	0.0130	Nigeria	97	113	140	130	133
98	0.0126	Bolivia (Plurinational State of)	98	108	98	104	106
99	0.0122	Albania	100	123	118	123	112
100	0.0116	Armenia	106	96	112	109	100
101	0.0115	Congo	102	115	127	126	132
102	0.0115	Syrian Arab Republic	99	114	131	111	122
103	0.0114	Senegal	101	104	102	106	111
104	0.0111	Cameroon	105	107	113	108	97
105	0.0109	Fiji	107	101	97	98	96
106	0.0106	Barbados	103	100	94	90	90
107	0.0105	Suriname	109	122	126	99	88
108	0.0100	Kenya	104	105	110	102	107
109	0.0098	Gabon	108	109	108	113	117

2012 Ranking	CIP Index 2012	Country	2010	2005	2000	1995	1990
110	0.0095	Bahamas	111	106	99	131	130
111	0.0095	Paraguay	112	111	105	103	115
112	0.0092	Azerbaijan	113	103	111	97	77
113	0.0088	Republic of Moldova	118	110	115	105	99
114	0.0086	Zambia	115	121	117	124	125
115	0.0085	Papua New Guinea	114	120	104	107	109
116	0.0083	Mongolia	117	124	124	117	119
117	0.0081	Panama	119	116	101	100	105
118	0.0077	State of Palestine	121	112	106	101	110
119	0.0074	Ghana	124	118	121	118	118
120	0.0073	United Republic of Tanzania	120	132	132	136	135
121	0.0070	Belize	122	119	109	110	116
122	0.0069	Mozambique	134	129	135	138	137
123	0.0058	Uganda	131	138	141	139	145
124	0.0056	Kyrgyzstan	125	125	122	116	104
125	0.0054	Madagascar	123	128	119	129	127
126	0.0044	Tajikistan	127	126	123	120	113
127	0.0042	Yemen	126	130	137	134	134
128	0.0040	Nepal	128	127	120	121	129
129	0.0038	China, Macao SAR	129	90	62	60	47
130	0.0036	Malawi	133	139	134	133	131
131	0.0036	Saint Lucia	130	135	130	125	124

2012 Ranking	CIP Index 2012	Country	2010	2005	2000	1995	1990
132	0.0035	Niger	136	134	129	127	128
133	0.0030	Bermuda	132	131	138	137	139
134	0.0029	Haiti	135	133	128	135	108
135	0.0027	Rwanda	137	142	144	145	145
136	0.0016	Iraq	138	141	125	128	126
137	0.0014	Central African Republic	139	136	133	132	136
138	0.0011	Burundi	140	143	145	143	138
139	0.0008	Gambia	141	144	143	141	142
140	0.0000	Ethiopia	142	145	145	145	143
140	0.0000	Eritrea	142	145	142	144	144
140	0.0000	Tonga	142	145	145	145	145
NA		Lesotho	110	102	114	115	120
NA		Nicaragua	116	117	116	112	123
NA		Benin	NA	137	139	140	141
NA		Dominican Republic	NA	60	81	81	82
NA		Burkina Faso	NA	140	136	142	140

6.   CIP index by region

Increasingly, the concept of competitiveness is being extended to the regional level. A competitive region is one that attracts and maintains successful producers, and retains or increases the region's per capita wealth. Skilled labour and investment gravitate away from "uncompetitive" regions towards more competitive ones. Therefore, analysing the regional distribution of the CIP ranking is a useful tool for policymakers to benchmark local industrial competitiveness.

The extension of the competitiveness concept to the regional level has a major influence on the direction of regional industrial development policy by providing information on inequalities across and within world regions.

East Asia, Europe and North America are the top regions with the most competitive industrial markets. Compared with other regions, industrial competitiveness in the Latin America region faces severe and persistent inequality. While it was the first region in the developing world to liberalize trade and investment policies over the past decades, it failed to rise to the challenge of reducing inequality between the different countries. Developing and emerging industrial countries have not participated equally in industrial competitiveness. The industrial competitiveness of markets from developing and emerging industrial countries is strongest in Asia, particularly East Asia, followed by Latin America. Different regions' competitiveness structures have witnessed varying degrees of change. However, in the majority of regions, a few countries dominate the industrial market over long periods.

6.1 Europe

In 2012, European economies accounted for 27.9 percent of world manufacturing value added, and 43.2 percent of world manufactured exports. The figures are slightly lower than in 2010, with developing and emerging industrial economies and China, in particular, maintaining their industrial impact on the world.

European economies' decline in manufacturing output is a long-term phenomenon resulting from the faster growth in Asian manufacturing, led by China (see Figure 2). Whereas Europe's share in world manufacturing output has been declining, the United States' has remained relatively stable. While economies such as Poland, Slovakia and Romania are expanding their manufacturing sector, their total figures reached the lowest level in 2012 over the entire period studied.

Figure 2Europe, China and US shares in world manufacturing value added, 1990 - 2012
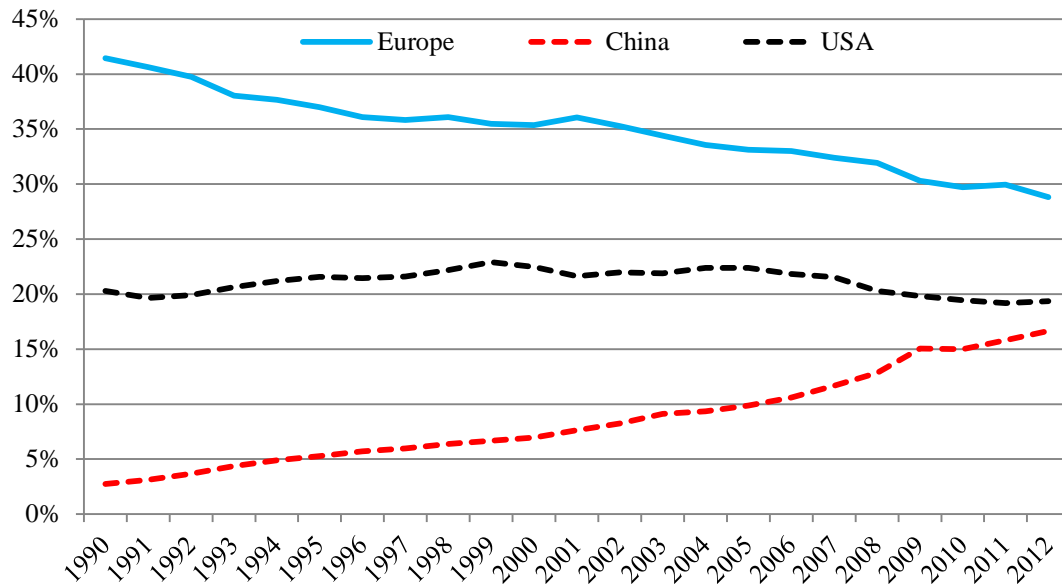
In terms of manufactured exports, European economies are losing their shares in global trade to developing countries, dominated by China. China now accounts for 16 percent of world manufacturing trade and has the largest share in world manufacturing trade, larger than any European country's or the US' (see Figure 3).

Figure 3Top three European economies in manufactured exports vs. China and US
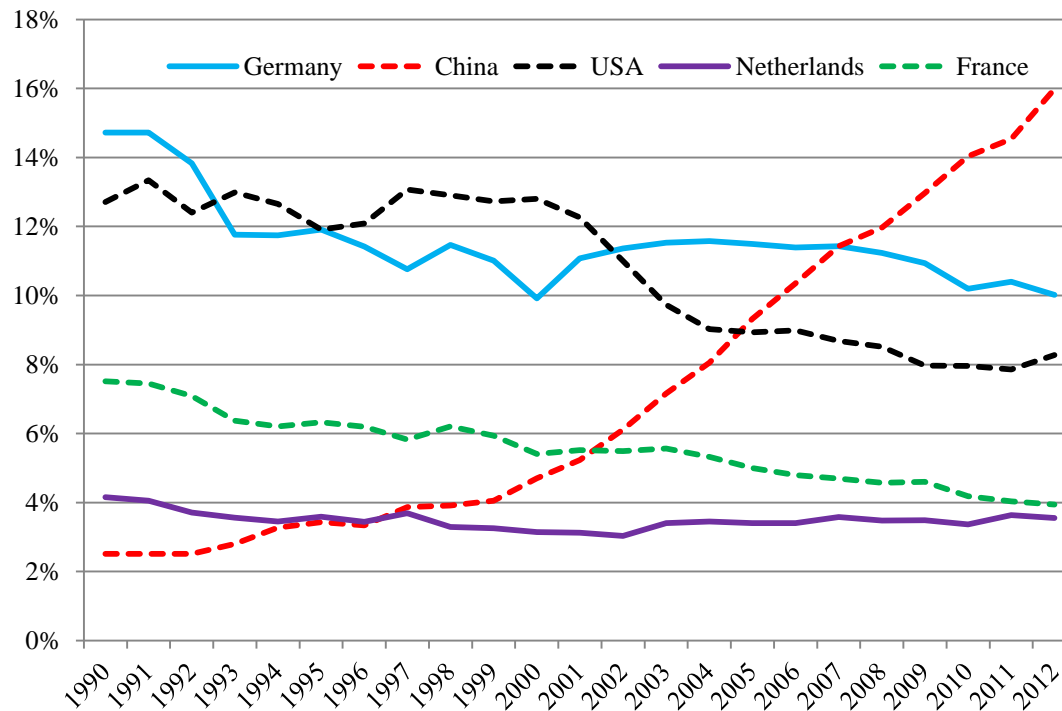
European countries have both high rates of per capita and of medium- and high-technology. The notable effect of the mentioned pillars of the composite index places many countries from this region among the most industrial competitive markets.

Among 41 European countries, 17 belong to the top quintile in the global CIP ranking, along with 12 economies from the upper middle quintile. Germany, Switzerland, Netherlands, Belgium and Ireland are positioned as the top five most competitive industrial markets in Europe. In 2010, Italy and France placed 4th and 5th, respectively, in the ranking; however, over time, they lost their market share to Germany, as the level of sophistication of their industrial production is lower than Germany's. The Russian Federation lies in the middle of the regional ranking, followed by emerging European economies such as Romania, Belarus, Greece, Croatia and Bulgaria.

Table 2 Regional industrial competitiveness in Europe and world ranking comparison

CIP Regional 2012	CIP World Ranking 2010	CIP World Ranking 2012	Country	CIP Regional 2012	CIP World Ranking 2010	CIP World Ranking 2012	Country
1	1	1	Germany	22	35	34	Romania
2	5	6	Switzerland	23	34	35	Portugal
3	8	8	Netherlands	24	40	38	Belarus
4	12	9	Belgium	25	44	41	Lithuania
5	11	10	Ireland	26	42	45	Luxembourg
6	10	12	France	27	51	46	Estonia
7	9	13	Italy	28	49	50	Greece
8	14	14	United Kingdom	29	53	54	Ukraine
9	16	15	Austria	30	54	57	Croatia
10	15	16	Sweden	31	59	59	Bulgaria
11	19	18	Czech Republic	32	62	60	Malta
12	18	19	Spain	33	66	65	Latvia
13	20	20	Finland	34	65	69	Iceland
14	21	22	Denmark	35	75	74	Serbia
15	24	23	Poland	36	82	81	The f. Yugosl. Rep. of Macedonia

CIP Regional 2012	CIP World Ranking 2010	CIP World Ranking 2012	Country	CIP Regional 2012	CIP World Ranking 2010	CIP World Ranking 2012	Country
16	27	25	Slovakia	37	85	83	Bosnia and Herzegovina
17	26	27	Hungary	38	89	92	Cyprus
18	31	30	Turkey	39	95	95	Georgia
19	30	31	Norway	40	100	99	Albania
20	36	32	Russian Federation	41	118	113	Republic of Moldova
21	32	33	Slovenia				

Red represents a fall in the CIP rankings from the year 2010, while green indicates an increase.

6.2   North America

In 2012, North America accounted for 20.9 percent of world manufacturing value added and for 10.4 percent of world manufactured exports. Considering the very small number of countries within this group, its impact on world manufacturing value added is remarkable. This is primarily attributable to the significant contribution of the United States as the world's third most competitive market. The strong competitive position of the US economy overall is tied to continued US global leadership in many knowledge and technology intensive industries, while the US has maintained a high MVA (see Figure 4). The US contributes 19.3 percent to world manufacturing value added.

Canada, however, has been facing a long-term decline in the CIP ranking since the beginning of the century, from 7th in 2000 to 17th in 2012. The Canadian dollar's remarkable rise since 2000 has resulted in lower value added, as a large share of exports is in US dollars. A cheaper currency is more attractive for companies in terms of investment or simply to remain in the market.

Figure 4 Construction of the composite index, US and Canada, 2012
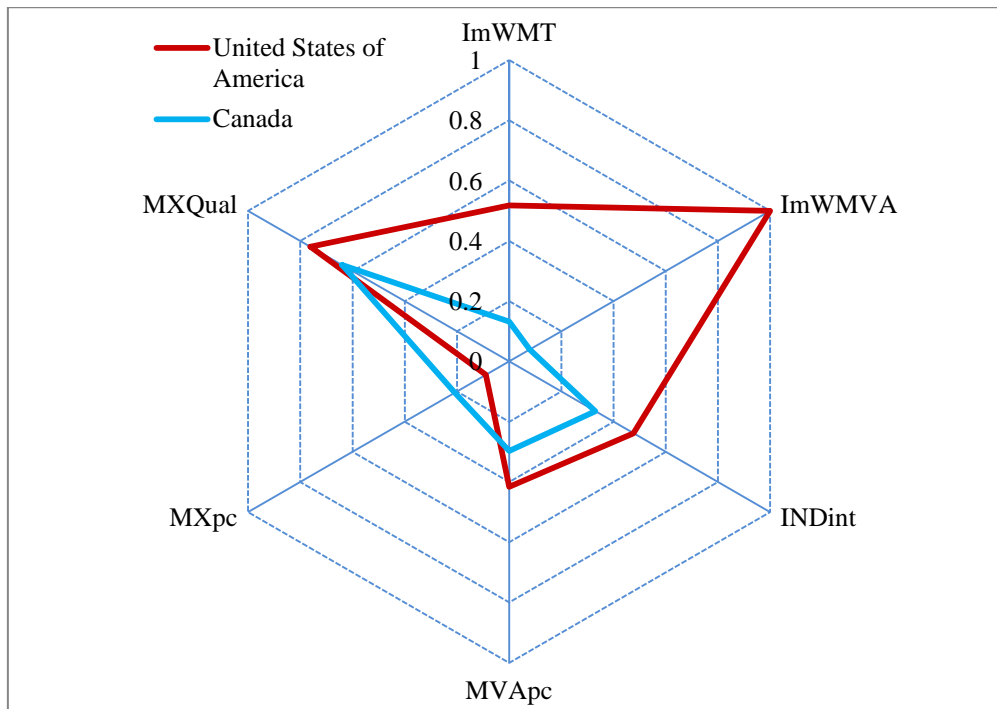
Table 3 Regional industrial competitiveness in North America and world ranking comparison

NORTH AMERICA, 2012		
CIP Regional	**CIP World Ranking**	**Country**
1	3	United States of America
2	17	Canada
3	133	Bermuda

6.3 Latin America

The region contributes up to 5.7 percent to world manufacturing value added, and up to 5.2 percent to world manufacturing trade. Nearly three-quarters of the region's MVA is covered by three countries only (Mexico, Brazil and Argentina), which indicates a high concentration of industrialization, as well as notable inequality in the region. Mexico is clearly in a different category in comparison to the other countries in the region, and the region's industrial competitiveness may have been considerably shakier without Mexico.

Figure 5 provides deeper insights into the long-term inequality between the countries in the region. Half of the countries had CIP values below 0.02 in 2012, while Mexico's CIP value was nearly 8 times this value. The CIP value declined in ten out of 25 countries in 2012 compared to 1990. However, the CIP values increased significantly for Mexico, Argentina and Trinidad and Tobago.

In the Latin America region, Mexico is the most industrially competitive market and belongs to the top quintile of the global CIP ranking. The advantages the country enjoys are heavily dependent on NAFTA support. As such, these benefits can be considered vulnerable.

Brazil and Argentina are the next largest emerging industrial economies in the region after Mexico, but their world rank diverges considerably. Mexico's MVA per capita is nearly two times higher than Brazil's; however, it is not significantly higher than Argentina's MVA per capita. The gap between the three countries becomes more and more significant when taking into account the quality of the manufacturing export and the per capita export, as Mexico over takes other countries in the region and becomes the incomparable industrial leader of the region.

Figure 5CIP values in Latin American countries, 1990-2012
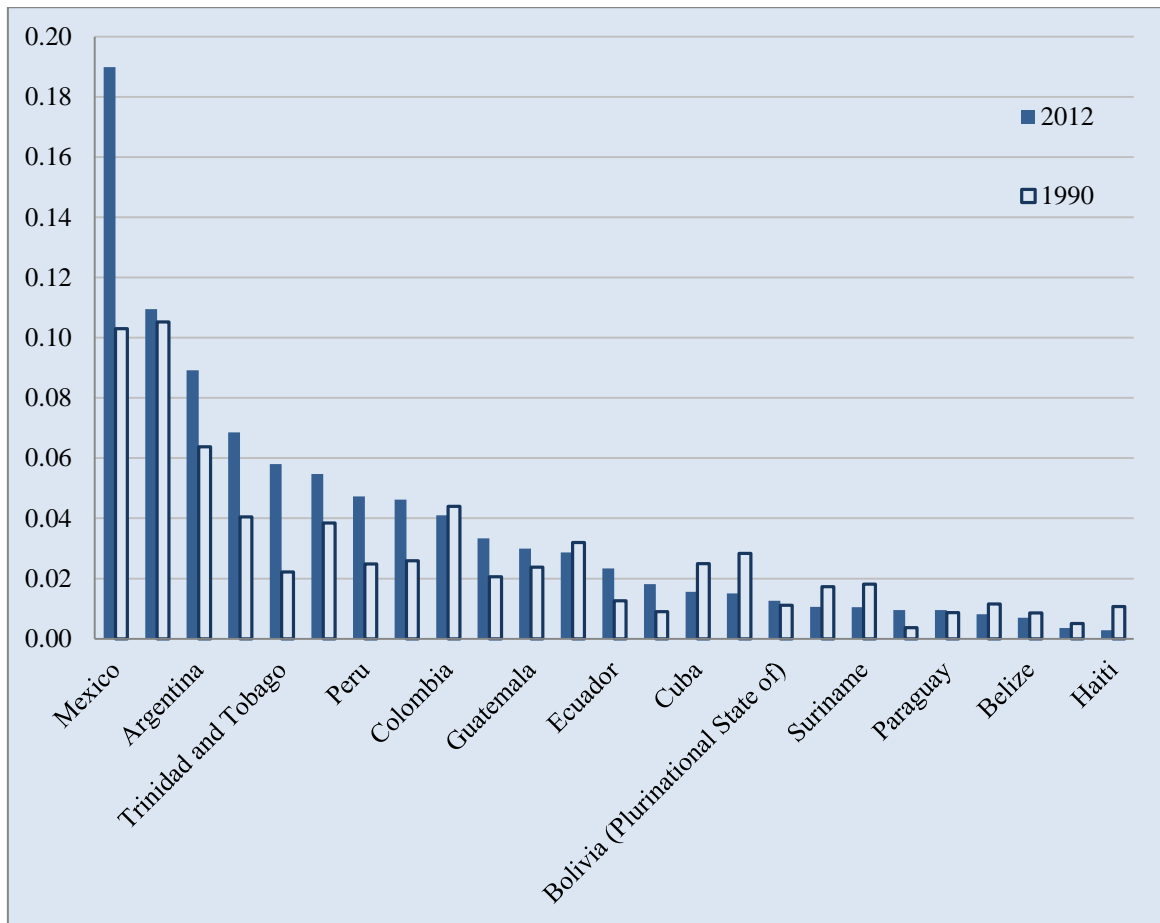
Table 4 Regional industrial competitiveness in Latin America and world ranking comparison

CIP Regional 2012	CIP World Ranking 2010	World Ranking 2012	Country	CIP Regional 2012	World Ranking 2010	World Ranking 2012	Country
1	22	21	Mexico	14	92	91	Honduras
2	33	36	Brazil	15	93	94	Cuba
3	38	39	Argentina	16	96	96	Jamaica
4	48	51	Chile	17	98	98	Bolivia (Pluri-national State of)
5	55	56	Trinidad and Tobago	18	103	106	Barbados
6	57	58	Venezuela (Bolivarian Rep. of)	19	109	107	Suriname
7	64	62	Peru	20	111	110	Bahamas
8	63	63	Costa Rica	21	112	111	Paraguay
9	67	68	Colombia	22	119	117	Panama
10	73	72	El Salvador	23	122	121	Belize
11	77	76	Guatemala	24	130	131	Saint Lucia
12	78	78	Uruguay	25	135	134	Haiti
13	87	84	Ecuador				

Red represents a fall in the rankings from the year 2010, while green indicates an increase.

6.4   East Asia (industrialized economies including China)

The region accounts for 34.0 percent of global manufacturing value added, and 31.5 percent of world manufacturing trade. Apart from two countries, the rest of the countries in this region are among the most industrially competitive nations in the world. Moreover, the region's four top countries, namely Japan, the Republic of Korea, China and Singapore, are among the world's top ten industrially competitive markets. The entire region is growing strongly, but China has

been expanding much faster since 2000. China's success has had an influential effect on the region's competitiveness, prompting many Asian economies to redirect their exports from the US and Europe to other emerging markets. The countries' manufacturing products and manufactured exports do not only dominate the region but the whole world. Since 2008, China has continually had the highest share in world manufactured exports.

China alone contributes to almost 17 percent of global manufacturing value added and 16 percent of overall manufactured exports. Most of the countries in the region are the world's leading markets in medium and high-tech manufactured products.

Table 5   Regional industrial competitiveness in East Asia (industrialized economies incl. China) and world ranking comparison

EAST ASIA, 2012		
CIP Regional	**World Ranking**	**Country**
1	2	Japan
2	4	Republic of Korea
3	5	China
4	7	Singapore
5	11	China, Taiwan Province
6	24	Malaysia
7	80	China, Hong Kong SAR
8	129	China, Macao SAR

6.5   South and South East Asia

The overall contribution of the South and South East Asia region in world manufacturing value added is 5.6 percent; its share in world manufacturing trade is 6.0 percent.

The industrial competitiveness of the countries in this region is varied. Thailand is positioned at the top of the region's ranking due primarily to its increasing share of high-tech exports in total manufactured exports over time. Other countries' share of high-tech exports in 2012 was higher as well. These indicators show that these Asian economies are moving in a desirable direction.

Table 6 Regional industrial competitiveness in South and South East Asia and world ranking comparison

SOUTH AND SOUTH EAST ASIA, 2012					
CIP Regional	**World Ranking**	**Country**	**CIP Regional**	**World Ranking**	**Country**
2	26	Thailand	8	73	Pakistan
3	40	Indonesia	9	77	Bangladesh
4	44	India	10	79	Sri Lanka
5	52	Philippines	11	87	Brunei Darussalam
6	55	Viet Nam	12	90	Cambodia
7	67	Iran (Islamic Republic of)	13	128	Nepal

6.6   North Africa

The North Africa region is suffering from poor contribution to overall manufacturing value added (0.5 percent contribution to world MVA), and only 0.5 percent of total manufactured exports in the world.

Tunisia has the highest manufacturing value added per capita and manufactured exports per capita in the region, which are around three times higher than Algeria's. However, Egypt has the highest impact on world manufacturing both in terms of value added and trade. Egypt's prospects look promising, with a strong presence of investors in most Egyptian industry, including pharmaceuticals. However, the industrial sector has struggled since the revolution of 2012 and as a result of the political instability, hundreds of factories have closed or reduced production.

Table 7 Regional industrial competitiveness in North Africa and world ranking comparison

NORTH AFRICA, 2012		
CIP Regional	**World Ranking**	**Country**
1	61	Tunisia
2	70	Morocco
3	71	Egypt
4	86	Algeria

7.   CIP index by stage of development

Instead of focusing on regional industrial competitiveness—which denotes a country's rank within the region and might include countries at different stages of development—countries may be interested in comparing their stage of industrial performance with other countries that have the same or similar levels of industrialization. Grouping countries based on their stage of industrial development might, of course, entail countries within or outside the regional borders.

The figure depicts the average CIP values relative to the year 1990 as the base year for groups of industrialized and emerging industrial economies. Taken as a whole, the growth trend in emerging industrial economies shows a significant enhancement in competitiveness among those countries in recent years, especially compared to the group of industrialized economies. This indicates that emerging markets are increasingly becoming the growth driver of the global economy. The level of competitiveness of emerging industrial economies is rising in both their home markets and, more importantly, in the global market. This is largely attributable to enterprises in emerging industrial economies, which are increasingly focusing on knowledge intensive processes and innovation.

Figure 6   Average value of CIP growth in industrialized and emerging industrial economies, 1990 - 2012
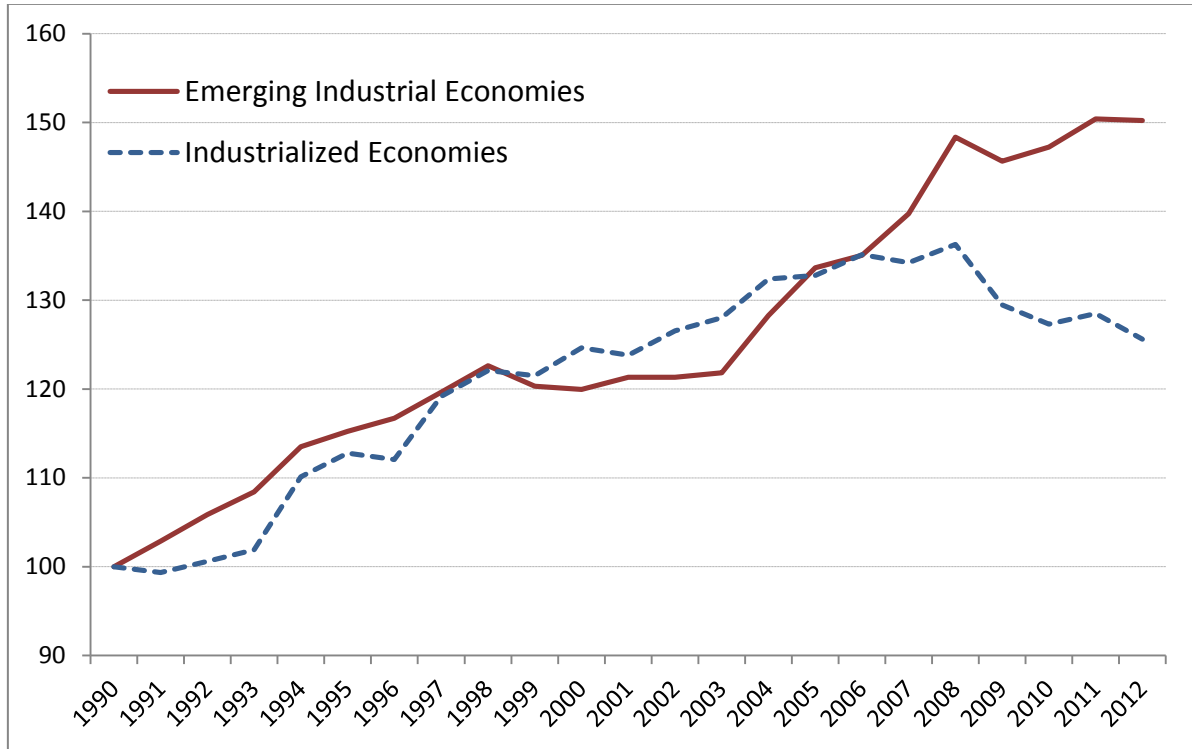
Table 8 CIP ranking in industrialized economies by group and world ranking comparison

Group ranking 2012	World ranking 2010	World ranking 2012	Country	MVApc 2012	MXpc 2012	ImWMVA in %, 2012	ImWMT in %, 2012
1	1	1	Germany	7303.993	15123.728	6.783	10.018
2	2	2	Japan	7955.767	5833.941	11.393	5.959
3	3	3	United States of America	5409.545	3243.122	19.348	8.274
4	4	4	Republic of Korea	6372.732	10913.202	3.507	4.284
5	5	6	Switzerland	10392.812	26000.824	0.910	1.625
6	6	7	Singapore	9007.056	32241.426	0.536	1.515
7	8	8	Netherlands	5092.829	26305.814	0.964	3.552
8	12	9	Belgium	5040.187	36223.518	0.616	3.157
9	11	10	Ireland	12981.278	24058.482	0.673	0.890

Group ranking 2012	World ranking 2010	World ranking 2012	Country	MVApc 2012	MXpc 2012	ImWMVA in %, 2012	ImWMT in %, 2012
10	13	11	China, Taiwan Province	4859.006	11644.966	1.283	2.194
11	10	12	France	3630.089	7688.922	2.609	3.942
12	9	13	Italy	3987.149	7181.587	2.753	3.537
13	14	14	United Kingdom	4014.936	5764.454	2.856	2.925
14	16	15	Austria	7615.519	16389.060	0.727	1.116
15	15	16	Sweden	7217.793	16175.515	0.776	1.241
16	17	17	Canada	3860.800	7558.446	1.516	2.117
17	19	18	Czech Republic	3879.579	13728.783	0.464	1.172
18	18	19	Spain	2983.654	4954.189	1.581	1.872
19	20	20	Finland	7644.684	12173.613	0.468	0.531
20	21	22	Denmark	5487.720	13794.319	0.348	0.623
21	23	24	Malaysia	1710.200	6314.025	0.568	1.496
22	27	25	Slovakia	3445.765	13545.733	0.214	0.600
23	26	27	Hungary	2343.153	8964.207	0.264	0.721
24	29	28	Australia	3245.405	5212.868	0.842	0.965
25	28	29	Israel	3070.792	7863.029	0.268	0.489
26	30	31	Norway	5311.798	8277.982	0.298	0.332
27	36	32	Russian Federation	955.156	1481.751	1.544	1.708
28	32	33	Slovenia	3726.545	12005.394	0.086	0.198
29	34	35	Portugal	2142.991	5031.542	0.260	0.435
30	44	41	Lithuania	1849.889	7672.791	0.069	0.204
31	43	43	Qatar	4318.580	10221.711	0.095	0.160
32	42	45	Luxembourg	4809.720	22470.725	0.028	0.095
33	51	46	Estonia	2033.612	11742.241	0.031	0.127
34	46	47	New Zealand	3259.316	3691.200	0.165	0.133
35	47	48	Bahrain	2037.329	14885.352	0.031	0.157
36	50	49	Kuwait	2235.245	7783.387	0.073	0.231

Group ranking 2012	World ranking 2010	World ranking 2012	Country	MVApc 2012	MXpc 2012	ImWMVA in %, 2012	ImWMT in %, 2012
37	52	53	United Arab Emirates	2880.008	2617.336	0.264	0.164
38	62	60	Malta	1894.751	12771.924	0.009	0.043
39	65	69	Iceland	5613.389	4463.718	0.021	0.012
40	69	80	China, Hong Kong SAR	589.105	928.665	0.048	0.054
41	129	129	China, Macao SAR	395.056	137.725	0.003	0.001
42	132	133	Bermuda	1000.298	144.536	0.001	0.000

Red represents a fall in the rankings from the year 2010, while green is a rise.

7.1 Industrialized economies

Grouping countries by stage of development closely relates to their per capita manufacturing value added and their share in total MVA. These are two key factors (MVApc, ImWMVA) in constructing the composite indicator. Thus, (except for China), the CIP ranking also reflects the country's stage of development. The figures indicate that the CIP ranking of the countries within this particular group and the overall CIP ranking do not differ considerably. Industrialized countries account for 65.3 percent of world manufacturing value added and nearly 69 percent of world manufacturing trade.

The CIP ranking for 2012 as compared to the 2010 ranking shows that the majority of industrialized countries have lost ground. Italy has lost its dominant position and has been surpassed by Belgium, Ireland and China, Taiwan Province in the last two years. Germany, Japan, the United States and the Republic of Korea, although not among the winners, have very stable and sustainable industrial competitiveness models that rely on long-term advantages such as high-technology, education and advanced infrastructure.

Table 9 Industrial competitiveness ranking in the group of emerging industrial economies and world ranking comparison

Group ranking 2012	World ranking 2010	World ranking 2012	Country	MVApc 2012	MXpc 2012	ImWMVA in %, 2012	ImWMT in %, 2012
1	7	5	China	1085.851	1461.757	16.647	15.986
2	22	21	Mexico	1484.511	2499.456	1.953	2.345
3	24	23	Poland	2343.020	4076.945	1.017	1.262
4	25	26	Thailand	1137.180	2822.093	0.900	1.594
5	31	30	Turkey	1510.733	1676.670	1.275	1.009
6	35	34	Romania	1578.653	2407.070	0.382	0.416
7	33	36	Brazil	745.257	760.857	1.674	1.219
8	37	37	Saudi Arabia	1979.833	2528.436	0.644	0.586
9	40	38	Belarus	1456.833	4221.653	0.157	0.325
10	38	39	Argentina	1419.590	987.866	0.661	0.328
11	41	40	Indonesia	441.727	448.450	1.225	0.887
12	39	42	South Africa	925.627	1076.234	0.532	0.441
13	45	44	India	158.451	193.471	2.258	1.967
14	49	50	Greece	1354.088	2473.396	0.175	0.228
15	48	51	Chile	1146.516	2225.281	0.226	0.313
16	53	54	Ukraine	386.657	1211.891	0.197	0.440
17	54	57	Croatia	1393.242	2467.634	0.069	0.087
18	57	58	Venezuela (Bolivarian Rep of)	815.871	1018.141	0.276	0.239
19	59	59	Bulgaria	731.505	2611.210	0.061	0.156
20	61	61	Tunisia	615.898	1336.822	0.075	0.116
21	63	63	Costa Rica	1013.122	1734.963	0.055	0.067
22	68	64	Oman	1481.005	3188.826	0.049	0.075

Group ranking 2012	World ranking 2010	World ranking 2012	Country	MVApc 2012	MXpc 2012	ImWMVA in %, 2012	ImWMT in %, 2012
23	66	65	Latvia	911.755	4393.502	0.023	0.079
24	71	66	Kazakhstan	586.194	1325.217	0.109	0.175
25	67	68	Colombia	529.963	348.144	0.285	0.134
26	75	74	Serbia	319.070	917.828	0.036	0.073
27	78	78	Uruguay	970.753	978.547	0.037	0.027
28	82	81	The f. Yugosl. Rep of Macedonia	397.976	1746.856	0.009	0.029
29	83	82	Mauritius	948.423	1359.189	0.014	0.014
30	86	87	Brunei Darussalam	2723.129	1282.911	0.013	0.004
31	89	92	Cyprus	1025.372	501.664	0.013	0.005
32	109	107	Suriname	647.777	626.203	0.004	0.003

Red represents a fall in the rankings from the year 2010, while green indicates an increase.

7.2   Emerging industrial economies

Emerging industrial economies account for 31.1 percent of world manufacturing value added and 30.6 percent of world manufacturing trade. These figures have risen in the last few years due to China's growing market.

More emerging economies have become global players. China (5), Mexico (21), Poland (23), Thailand (26) and Turkey (30) are the top 5 industrial competitive performers among emerging industrial economies, with China and Poland being the biggest winners since the beginning of the century.

When comparing the 2012 CIP ranking with that of 2010, Mexico's competitiveness is slightly higher. Chile, Argentina and Venezuela are all losing ground and are being challenged by the emerging Asian countries. The emerging BRICS economies indicate mixed patterns. China and India have climbed in the rankings, while Brazil's and South Africa's rankings have dropped.

Table 10   **Industrial competitiveness ranking in other developing countries**

Group ranking 2012	World ranking 2010	World ranking 2012	Country	Group ranking 2012	World ranking 2010	World ranking 2012	Country
1	55	52	Philippines	26	99	99	Albania
2	56	55	Viet Nam	27	100	100	Armenia
3	58	56	Trinidad and Tobago	28	102	101	Congo
4	60	62	Peru	29	103	102	Syrian Arab Republic
5	64	67	Iran (Islamic Republic of)	30	104	104	Cameroon
6	70	70	Morocco	31	105	105	Fiji
7	72	71	Egypt	32	106	106	Barbados
8	73	72	El Salvador	33	107	108	Kenya
9	74	73	Pakistan	34	108	109	Gabon
10	76	75	Jordan	35	111	110	Bahamas
11	77	76	Guatemala	36	112	111	Paraguay
12	80	79	Sri Lanka	37	113	112	Azerbaijan
13	81	83	Bosnia and Herzegovina	38	114	113	Republic of Moldova
14	84	84	Ecuador	39	117	115	Papua New Guinea
15	85	85	Lebanon	40	118	116	Mongolia
16	87	86	Algeria	41	119	117	Panama
17	88	88	Botswana	42	121	118	State of Palestine
18	90	89	Swaziland	43	122	119	Ghana
19	91	91	Honduras	44	124	121	Belize
20	92	93	Côte d'Ivoire	45	125	124	Kyrgyzstan

21	93	94	Cuba	46	127	126	Tajikistan
22	95	95	Georgia	47	130	131	Saint Lucia
23	96	96	Jamaica	48	138	136	Iraq
24	97	97	Nigeria	49	142	140	Tonga
25	98	98	Bolivia (Plurinational State of)				

Red represents a fall in the rankings from the year 2010, while green indicates an increase.

Figure 7 Average value of CIP growth in other developing and least developed countries, 1990 - 2012
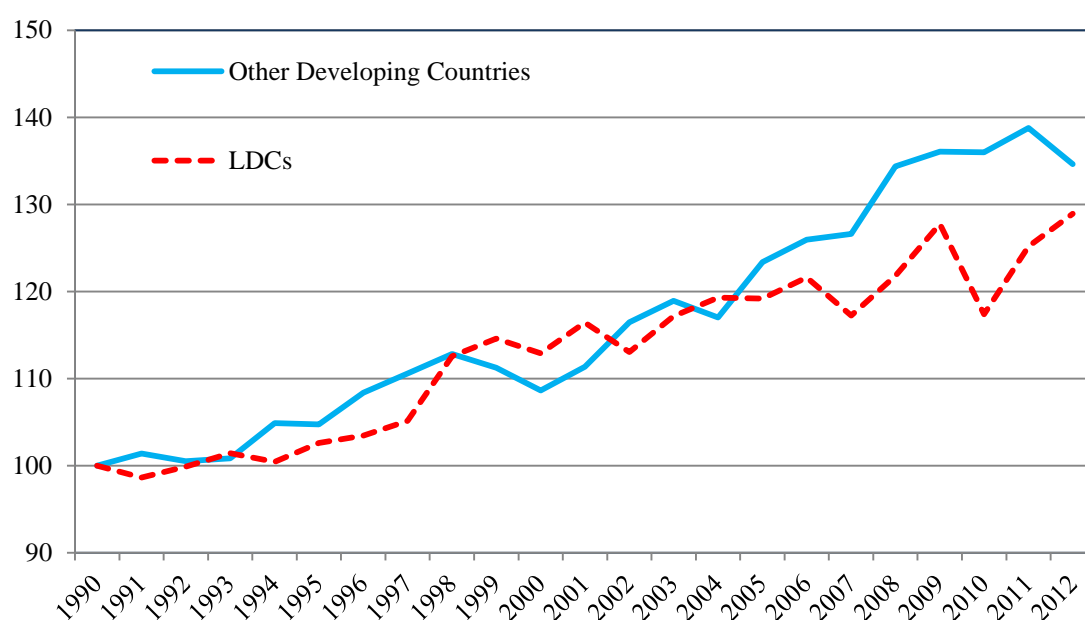
7.3 Other developing countries

Among other developing countries (excluding LDCs), the majority of countries maintained their position in 2012 compared to 2010. The Philippines, Viet Nam, Trinidad and Tobago, Peru and Iran are the top six most competitive nations among this group of countries. The Philippines has advanced in all pillars of industrial competitiveness, though the country's medium- and high-tech industry has witnessed a minor declined over the past two years. The Philippines leaped 4 notches to rank 52nd among 142 countries in 2012. Viet Nam also improved its position by 3 notches compared to 2010. The country's growth is being supported by manufactured exports, mainly from foreign companies and its industries are being technologically upgraded. This is a

result of the government's policy to overhaul the financial system and encourage foreign investment.

Iran has lost 6 positions in the 2012 ranking compared to 2010, mainly due to its decline in the share of world manufactured exports as the effects of the sanctions are intensifying due to the EU's embargo on Iran in January 2012.

Figure 7 depicts the average CIP values relative to the year 1990 as the base year for groups of other developing countries and LDCs. The graph illustrates an overall positive growing trend in CIP value in other developing countries as a group however a slowdown in growth trend has been observed starting at 2008 as an effect of global crisis.

7.4   Least developed countries

Table 11   **Industrial competitiveness ranking in LDCs**

Group ranking 2012	World ranking 2010	World ranking 2012	Country	Group ranking 2012	World ranking 2010	World ranking 2012	Country
1	79	77	Bangladesh	11	133	130	Malawi
2	94	90	Cambodia	12	136	132	Niger
3	101	103	Senegal	13	135	134	Haiti
4	115	114	Zambia	14	137	135	Rwanda
5	120	120	United Republic of Tanzania	15	139	137	Central African Republic
6	134	122	Mozambique	16	140	138	Burundi
7	131	123	Uganda	17	141	139	Gambia
8	123	125	Madagascar	18	142	140	Ethiopia
9	126	127	Yemen	18	142	140	Eritrea
10	128	128	Nepal				

Red represents a fall in the rankings from the year 2010, while green indicates an increase.

The contribution of least developed countries (LDCs) to world manufacturing value added and world manufactured exports is very weak and the group's total values, albeit marginal, are mainly dominated by a few countries such as Bangladesh. In most but not all industrial competitive markets, export promotion plays a critical role in long-term competitiveness by

promoting investments and technology. Most of these economies have transitioned from dependence on primary products to becoming important exporters of manufactured goods.

As Figures 6 and 7 reveal, the CIP growth level in LDCs falls mostly below the level of other developing countries and far below that of industrialized and developing and emerging industrial economies on the whole. The country group shows a very slow trend in advancing its industrial competitiveness and is lagging behind other developing countries in terms of industrial competitiveness.

8.   Ranking by indicators

In this chapter, the rankings will be individually analysed based on the underlying indicators. The focus should be on CIP component indicators, which provide more specific measures of key aspects of industrial performance. This structure provides deeper insights into a country's strengths and weaknesses, and identifies the industrial aspects with the greatest potential for improvement.

8.1   Capacity to produce and export

8.1.1   *Manufacturing value added per capita*

The table below provides a global ranking based on countries' manufacturing value added per capita, as well as the country's CIP ranking. MVA is the basic indicator of a country's level of industrialization, and is deflated by population to adjust for country size. However, MVA does not capture the competitiveness of manufacturing activity, the role of manufacturing activity in the national economy or its technological structure. These need to be taken into account elsewhere in the index. This indicator also discloses country capacity to produce manufactured goods and can therefore be considered a key indicator for measuring a country's level of industrialization.

Table 12   **Ranking by indicator: MVA per capita (MVApc) - 2012**

Ranking by Indicator	Country	CIP Ranking	MVApc	Ranking by Indicator	Country	CIP Ranking	MVApc
1	Ireland	10	12981.28	72	Kazakhstan	66	586.19
2	Switzerland	6	10392.81	73	Lebanon	85	554.06
3	Singapore	7	9007.06	74	Colombia	68	529.96
4	Japan	2	7955.77	75	Barbados	106	480.85
5	Finland	20	7644.68	76	Jordan	75	458.15
6	Austria	15	7615.52	77	Ecuador	84	455.76
7	Germany	1	7303.99	78	Fiji	105	442.47
8	Sweden	16	7217.79	79	Indonesia	40	441.73
9	Republic of Korea	4	6372.73	80	Belize	121	430.92
10	Iceland	69	5613.39	81	The f. Yugosl. Rep. of Macedonia	81	397.98
11	Denmark	22	5487.72	82	Cuba	94	397.24
12	United States of America	3	5409.55	83	China, Macao SAR	129	395.06
13	Norway	31	5311.80	84	Guatemala	76	393.67
14	Netherlands	8	5092.83	85	Ukraine	54	386.66
15	Belgium	9	5040.19	86	Panama	117	369.06
16	China, Taiwan Province	11	4859.01	87	Iran (Islamic Republic of)	67	360.26
17	Luxembourg	45	4809.72	88	Philippines	52	341.89
18	Qatar	43	4318.58	89	Sri Lanka	79	339.52
19	United Kingdom	14	4014.94	90	Bosnia and Herzegovina	83	321.53

Ranking by Indicator	Country	CIP Ranking	MVApc	Ranking by Indicator	Country	CIP Ranking	MVApc
20	Italy	13	3987.15	91	Morocco	70	319.47
21	Czech Republic	18	3879.58	92	Serbia	74	319.07
22	Canada	17	3860.80	93	Gabon	109	303.12
23	Slovenia	33	3726.54	94	Jamaica	96	278.24
24	France	12	3630.09	95	Honduras	91	276.72
25	Slovakia	25	3445.77	96	Saint Lucia	131	274.03
26	New Zealand	47	3259.32	97	Armenia	100	265.77
27	Australia	28	3245.41	98	Georgia	95	260.86
28	Israel	29	3070.79	99	Botswana	88	256.07
29	Spain	19	2983.65	100	Egypt	71	234.45
30	United Arab Emirates	53	2880.01	101	Albania	99	228.21
31	Brunei Darussalam	87	2723.13	102	Viet Nam	55	219.35
32	Hungary	27	2343.15	103	Tonga	140	174.47
33	Poland	23	2343.02	104	Algeria	86	169.90
34	Kuwait	49	2235.24	105	Paraguay	111	165.47
35	Portugal	35	2142.99	106	Côte d'Ivoire	93	160.44
36	Trinidad and Tobago	56	2115.00	107	India	44	158.45
37	Bahrain	48	2037.33	108	Cameroon	104	155.14
38	Estonia	46	2033.61	109	Bolivia (Plurinational State of)	98	150.20
39	Saudi Arabia	37	1979.83	110	Cambodia	90	147.55

Ranking by Indicator	Country	CIP Ranking	MVApc	Ranking by Indicator	Country	CIP Ranking	MVApc
40	Malta	60	1894.75	111	Pakistan	73	145.51
41	Lithuania	41	1849.89	112	State of Palestine	118	135.20
42	Malaysia	24	1710.20	113	Azerbaijan	112	111.18
43	Romania	34	1578.65	114	Bangladesh	77	109.56
44	Turkey	30	1510.73	115	Senegal	103	107.00
45	Mexico	21	1484.51	116	Republic of Moldova	113	99.78
46	Oman	64	1481.01	117	Congo	101	91.50
47	Belarus	38	1456.83	118	Mongolia	116	84.30
48	Argentina	39	1419.59	119	Tajikistan	126	74.12
49	Croatia	57	1393.24	120	Zambia	114	72.43
50	Greece	50	1354.09	121	Papua New Guinea	115	67.50
51	Chile	51	1146.52	122	Kyrgyzstan	124	64.39
52	Thailand	26	1137.18	123	Kenya	108	61.45
53	China	5	1085.85	124	Yemen	127	53.02
54	Cyprus	92	1025.37	125	Syrian Arab Republic	102	52.28
55	Costa Rica	63	1013.12	126	Mozambique	122	49.93
56	Bermuda	133	1000.30	127	Ghana	119	49.56
57	Uruguay	78	970.75	128	Haiti	134	45.02
58	Russian Federation	32	955.16	129	United Republic of Tanzania	120	41.66
59	Mauritius	82	948.42	130	Madagascar	125	37.42
60	South Africa	42	925.63	131	Iraq	136	36.87

Ranking by Indicator	Country	CIP Ranking	MVApc	Ranking by Indicator	Country	CIP Ranking	MVApc
61	Latvia	65	911.76	132	Nigeria	97	32.62
62	Bahamas	110	844.26	133	Central African Republic	137	28.97
63	Venezuela (Bolivarian Republic of)	58	815.87	134	Uganda	123	28.53
64	Brazil	36	745.26	135	Rwanda	135	24.86
65	Bulgaria	59	731.51	136	Malawi	130	23.97
66	El Salvador	72	650.35	137	Nepal	128	22.92
67	Suriname	107	647.78	138	Gambia	139	22.86
68	Tunisia	61	615.90	139	Burundi	138	15.37
69	Peru	62	615.20	140	Niger	132	13.99
70	Swaziland	89	602.49	141	Eritrea	140	12.49
71	China, Hong Kong SAR	80	589.10	142	Ethiopia	140	11.44

8.1.2   Manufacturing export per capita

Manufactured export capacity indicates the ability of a country to produce manufactured goods competitively. Export values cannot, however, capture the extent of local value added and might give a misleading picture of local manufacturing capacities when this varies between the countries. There is no straightforward way to adjust to this, but can be taken into account when analysing the CIP index since the identity of countries engaged in low value-added assembly is drawn from other evidence. The table below provides information on country ranking based on manufacturing export per capita as well as overall ranking comparison.

Table 13   Ranking by indicator: Manufacturing export per capita (MXpc) - 2012

Ranking by Indicator	Country	CIP Ranking	MXpc	Ranking by Indicator	Country	CIP Ranking	MXpc
1	Belgium	9	36223.52	72	Barbados	106	888.01
2	Singapore	7	32241.43	73	Peru	62	807.67
3	Netherlands	8	26305.81	74	Jordan	75	768.99
4	Switzerland	6	26000.82	75	El Salvador	72	762.30
5	Ireland	10	24058.48	76	Brazil	36	760.86
6	Luxembourg	45	22470.72	77	Mongolia	116	668.59
7	Austria	15	16389.06	78	Gabon	109	660.58
8	Sweden	16	16175.52	79	Bahamas	110	659.08
9	Germany	1	15123.73	80	Lebanon	85	629.79
10	Bahrain	48	14885.35	81	Suriname	107	626.20
11	Denmark	22	13794.32	82	Congo	101	597.25
12	Czech Republic	18	13728.78	83	Jamaica	96	548.34
13	Slovakia	25	13545.73	84	Morocco	70	516.68
14	Malta	60	12771.92	85	Cyprus	92	501.66
15	Finland	20	12173.61	86	Philippines	52	490.57
16	Slovenia	33	12005.39	87	Fiji	105	476.47
17	Estonia	46	11742.24	88	Belize	121	463.28
18	China, Taiwan Province	11	11644.97	89	Algeria	86	453.33
19	Republic of Korea	4	10913.20	90	Indonesia	40	448.45

Ranking by Indicator	Country	CIP Ranking	MXpc	Ranking by Indicator	Country	CIP Ranking	MXpc
20	Qatar	43	10221.71	91	Guatemala	76	445.20
21	Hungary	27	8964.21	92	Albania	99	408.20
22	Norway	31	8277.98	93	Cambodia	90	357.80
23	Israel	29	7863.03	94	Colombia	68	348.14
24	Kuwait	49	7783.39	95	Iran (Islamic Republic of)	67	343.56
25	France	12	7688.92	96	Ecuador	84	340.53
26	Lithuania	41	7672.79	97	Papua New Guinea	115	323.83
27	Canada	17	7558.45	98	Sri Lanka	79	318.37
28	Italy	13	7181.59	99	Bolivia (Pluri-national State of)	98	312.23
29	Malaysia	24	6314.02	100	Honduras	91	302.23
30	Japan	2	5833.94	101	Georgia	95	282.46
31	United Kingdom	14	5764.45	102	Republic of Moldova	113	282.32
32	Trinidad and Tobago	56	5510.41	103	Armenia	100	271.15
33	Australia	28	5212.87	104	Azerbaijan	112	259.08
34	Portugal	35	5031.54	105	Saint Lucia	131	247.11
35	Spain	19	4954.19	106	Syrian Arab Republic	102	244.00
36	Iceland	69	4463.72	107	Egypt	71	218.73
37	Latvia	65	4393.50	108	India	44	193.47

Ranking by Indicator	Country	CIP Ranking	MXpc	Ranking by Indicator	Country	CIP Ranking	MXpc
38	Belarus	38	4221.65	109	Côte d'Ivoire	93	182.46
39	Poland	23	4076.95	110	Paraguay	111	170.91
40	New Zealand	47	3691.20	111	Bangladesh	77	154.52
41	United States of America	3	3243.12	112	Bermuda	133	144.54
42	Oman	64	3188.83	113	China, Macao SAR	129	137.72
43	Thailand	26	2822.09	114	Zambia	114	129.64
44	Botswana	88	2791.54	115	Senegal	103	126.40
45	United Arab Emirates	53	2617.34	116	Nigeria	97	121.32
46	Bulgaria	59	2611.21	117	State of Palestine	118	111.98
47	Saudi Arabia	37	2528.44	118	Pakistan	73	110.66
48	Mexico	21	2499.46	119	Kyrgyzstan	124	102.63
49	Greece	50	2473.40	120	Panama	117	95.62
50	Croatia	57	2467.63	121	Ghana	119	90.56
51	Romania	34	2407.07	122	Cuba	94	87.09
52	Chile	51	2225.28	123	Cameroon	104	68.99
53	The f. Yugosl. Rep of Macedonia	81	1746.86	124	Kenya	108	62.32
54	Costa Rica	63	1734.96	125	Niger	132	58.33

Ranking by Indicator	Country	CIP Ranking	MXpc	Ranking by Indicator	Country	CIP Ranking	MXpc
55	Turkey	30	1676.67	126	United Republic of Tanzania	120	43.35
56	Russian Federation	32	1481.75	127	Mozambique	122	42.10
57	China	5	1461.76	128	Uganda	123	36.49
58	Mauritius	82	1359.19	129	Madagascar	125	35.46
59	Tunisia	61	1336.82	130	Malawi	130	32.83
60	Kazakhstan	66	1325.22	131	Yemen	127	24.78
61	Brunei Darussalam	87	1282.91	132	Nepal	128	23.70
62	Ukraine	54	1211.89	133	Rwanda	135	19.60
63	Bosnia and Herzegovina	83	1100.36	134	Tajikistan	126	15.50
64	South Africa	42	1076.23	135	Tonga	140	14.92
65	Venezuela (Bolivarian Republic of)	58	1018.14	136	Central African Republic	137	7.04
66	Argentina	39	987.87	137	Gambia	139	6.66
67	Uruguay	78	978.55	138	Haiti	134	6.15
68	Viet Nam	55	936.22	139	Burundi	138	4.51
69	China, Hong Kong SAR	80	928.67	140	Iraq	136	3.63
70	Serbia	74	917.83	141	Ethiopia	140	3.26
71	Swaziland	89	890.35	142	Eritrea	140	0.47

8.2 Technological upgrading and deepening

Evidence suggests that technology intensive structures are less vulnerable to entry by competitors and therefore enjoy higher and more sustainable margins.

8.2.1 *Industrial intensity*

This composite indicator—the average of MHVAsh and MVAsh—captures the role of manufacturing as well as the technological complexity of manufacturing in a country. A more complex structure denotes industrial maturity, flexibility and the ability to move to faster growing activities. The following table presents the country rankings based on the composite index: Industrial intensity (INDint) compared to the ranking of the complete composite CIP index. While some emerging countries like China or Poland achieved technological sophistication relatively quickly, the real challenge for some industrialized markets is to maintain or upgrade the technological sophistication of its industries. Countries like the United States or Germany show a declining trend in technological sophistication.

Table 14   Ranking by indicator: Industrial intensity (INDint) - 2012

Ranking by Indicator	Country	CIP Ranking	INDint	Ranking by Indicator	Country	CIP Ranking	INDint
1	Singapore	7	0.866	72	Australia	28	0.284
2	Thailand	26	0.781	73	Honduras	91	0.281
3	Ireland	10	0.778	74	Croatia	57	0.277
4	Republic of Korea	4	0.768	75	Peru	62	0.277
5	China, Taiwan Province	11	0.730	76	Cameroon	104	0.268
6	Belarus	38	0.710	77	Suriname	107	0.267
7	China	5	0.709	78	New Zealand	47	0.262
8	Slovakia	25	0.689	79	Chile	51	0.262
9	Czech Republic	18	0.675	80	Uruguay	78	0.258
10	Hungary	27	0.638	81	Serbia	74	0.257

Ranking by Indicator	Country	CIP Ranking	INDint	Ranking by Indicator	Country	CIP Ranking	INDint
11	Japan	2	0.637	82	Qatar	43	0.253
12	Germany	1	0.635	83	Oman	64	0.247
13	Romania	34	0.628	84	The f. Yugosl. Rep of Macedonia	81	0.244
14	Switzerland	6	0.626	85	Iceland	69	0.244
15	Malaysia	24	0.612	86	Belize	121	0.238
16	Indonesia	40	0.583	87	Mauritius	82	0.238
17	Finland	20	0.573	88	Algeria	86	0.226
18	Slovenia	33	0.573	89	Zambia	114	0.221
19	Philippines	52	0.569	90	Mozambique	122	0.221
20	Poland	23	0.534	91	Lebanon	85	0.219
21	Austria	15	0.534	92	Ecuador	84	0.214
22	Israel	29	0.493	93	Greece	50	0.214
23	Sweden	16	0.489	94	Kuwait	49	0.210
24	Viet Nam	55	0.482	95	Tajikistan	126	0.210
25	United States of America	3	0.477	96	Niger	132	0.207
26	Mexico	21	0.463	97	Fiji	105	0.207
27	Denmark	22	0.459	98	Madagascar	125	0.207
28	Netherlands	8	0.453	99	Nigeria	97	0.206
29	Trinidad and Tobago	56	0.451	100	Paraguay	111	0.206
30	Argentina	39	0.450	101	Jamaica	96	0.202
31	Italy	13	0.450	102	Cuba	94	0.200

Ranking by Indicator	Country	CIP Ranking	INDint	Ranking by Indicator	Country	CIP Ranking	INDint
32	Lithuania	41	0.446	103	United Arab Emirates	53	0.193
33	Turkey	30	0.445	104	Armenia	100	0.193
34	India	44	0.433	105	Malawi	130	0.191
35	Iran (Islamic Republic of)	67	0.426	106	Kazakhstan	66	0.188
36	United Kingdom	14	0.425	107	Bolivia (Plurinational State of)	98	0.187
37	Belgium	9	0.425	108	State of Palestine	118	0.182
38	France	12	0.422	109	Kenya	108	0.176
39	El Salvador	72	0.422	110	Brunei Darussalam	87	0.168
40	Saudi Arabia	37	0.404	111	Kyrgyzstan	124	0.167
41	Ukraine	54	0.402	112	Republic of Moldova	113	0.167
42	Brazil	36	0.402	113	Cyprus	92	0.165
43	Pakistan	73	0.400	114	Syrian Arab Republic	102	0.163
44	Estonia	46	0.399	115	Haiti	134	0.163
45	Norway	31	0.395	116	Central African Republic	137	0.162
46	Jordan	75	0.387	117	Uganda	123	0.157
47	Spain	19	0.383	118	Albania	99	0.150
48	Venezuela (Bolivarian Republic of)	58	0.380	119	Botswana	88	0.150
49	Bulgaria	59	0.377	120	Ghana	119	0.148

Ranking by Indicator	Country	CIP Ranking	INDint	Ranking by Indicator	Country	CIP Ranking	INDint
50	Bangladesh	77	0.374	121	Luxembourg	45	0.139
51	South Africa	42	0.369	122	United Republic of Tanzania	120	0.135
52	Russian Federation	32	0.359	123	Burundi	138	0.134
53	Guatemala	76	0.358	124	Rwanda	135	0.119
54	Swaziland	89	0.356	125	Eritrea	140	0.114
55	Tunisia	61	0.354	126	Congo	101	0.111
56	Egypt	71	0.354	127	Panama	117	0.107
57	Malta	60	0.348	128	Ethiopia	140	0.106
58	Morocco	70	0.343	129	Yemen	127	0.105
59	Bahrain	48	0.334	130	Mongolia	116	0.102
60	Canada	17	0.330	131	Papua New Guinea	115	0.101
61	Portugal	35	0.328	132	China, Hong Kong SAR	80	0.101
62	Sri Lanka	79	0.324	133	Azerbaijan	112	0.100
63	Côte d'Ivoire	93	0.320	134	Nepal	128	0.092
64	Costa Rica	63	0.301	135	Tonga	140	0.092
65	Bosnia and Herzegovina	83	0.300	136	Gambia	139	0.082
66	Cambodia	90	0.298	137	Gabon	109	0.080
67	Georgia	95	0.295	138	Saint Lucia	131	0.079
68	Colombia	68	0.294	139	Iraq	136	0.063
69	Senegal	103	0.292	140	Bahamas	110	0.046

Ranking by Indicator	Country	CIP Ranking	INDint	Ranking by Indicator	Country	CIP Ranking	INDint
70	Latvia	65	0.284	141	China, Macao SAR	129	0.039
71	Barbados	106	0.284	142	Bermuda	133	0.029

8.2.2 *Manufactured export quality*

This composite indicator—average of MHXsh and MXsh—captures the role of manufacturing in a country's export activity, manufacturing's technological complexity, the ability of a country to produce more technologically sophisticated products and to move into more dynamic areas of export growth. The country's ability to quickly shift its production and export structure to meet global manufacturing demand can be assessed by its performance in the high-tech industry captured by the MHXsh indicator and the weight of manufacturing in the country's total export activity via MXsh.

Table 15   Ranking by indicator: Export Quality (MXQual) - 2012

Ranking by Indicator	Country	CIP Ranking	MXQual	Ranking by Indicator	Country	CIP Ranking	MXQual
1	Germany	1	0.882	72	El Salvador	72	0.545
2	Japan	2	0.950	73	Pakistan	73	0.468
3	United States of America	3	0.761	74	Serbia	74	0.652
4	Republic of Korea	4	0.919	75	Jordan	75	0.642
5	China	5	0.844	76	Guatemala	76	0.466
6	Switzerland	6	0.880	77	Bangladesh	77	0.500
7	Singapore	7	0.873	78	Uruguay	78	0.333
8	Netherlands	8	0.710	79	Sri Lanka	79	0.428
9	Belgium	9	0.763	80	China, Hong Kong SAR	80	0.399
10	Ireland	10	0.785	81	The f. Yugosl. Rep of Macedonia	81	0.719

Ranking by Indicator	Country	CIP Ranking	MXQual	Ranking by Indicator	Country	CIP Ranking	MXQual
11	China, Taiwan Province	11	0.910	82	Mauritius	82	0.515
12	France	12	0.838	83	Bosnia and Herzegovina	83	0.543
13	Italy	13	0.784	84	Ecuador	84	0.232
14	United Kingdom	14	0.768	85	Lebanon	85	0.509
15	Austria	15	0.810	86	Algeria	86	0.118
16	Sweden	16	0.788	87	Brunei Darussalam	87	0.516
17	Canada	17	0.640	88	Botswana	88	0.522
18	Czech Republic	18	0.880	89	Swaziland	89	0.648
19	Spain	19	0.740	90	Cambodia	90	0.381
20	Finland	20	0.739	91	Honduras	91	0.479
21	Mexico	21	0.872	92	Cyprus	92	0.652
22	Denmark	22	0.680	93	Côte d'Ivoire	93	0.268
23	Poland	23	0.774	94	Cuba	94	0.549
24	Malaysia	24	0.767	95	Georgia	95	0.666
25	Slovakia	25	0.874	96	Jamaica	96	0.548
26	Thailand	26	0.797	97	Nigeria	97	0.134
27	Hungary	27	0.885	98	Bolivia (Pluri-national State of)	98	0.159
28	Australia	28	0.354	99	Albania	99	0.428
29	Israel	29	0.815	100	Armenia	100	0.436
30	Turkey	30	0.660	101	Congo	101	0.678
31	Norway	31	0.398	102	Syrian Arab Republic	102	0.358
32	Russian Federation	32	0.346	103	Senegal	103	0.430

Ranking by Indicator	Country	CIP Ranking	MXQual	Ranking by Indicator	Country	CIP Ranking	MXQual
33	Slovenia	33	0.832	104	Cameroon	104	0.252
34	Romania	34	0.778	105	Fiji	105	0.403
35	Portugal	35	0.707	106	Barbados	106	0.671
36	Brazil	36	0.548	107	Suriname	107	0.184
37	Saudi Arabia	37	0.309	108	Kenya	108	0.397
38	Belarus	38	0.689	109	Gabon	109	0.151
39	Argentina	39	0.538	110	Bahamas	110	0.751
40	Indonesia	40	0.478	111	Paraguay	111	0.172
41	Lithuania	41	0.660	112	Azerbaijan	112	0.138
42	South Africa	42	0.593	113	Republic of Moldova	113	0.526
43	Qatar	43	0.289	114	Zambia	114	0.212
44	India	44	0.597	115	Papua New Guinea	115	0.309
45	Luxembourg	45	0.669	116	Mongolia	116	0.251
46	Estonia	46	0.709	117	Panama	117	0.273
47	New Zealand	47	0.358	118	State of Palestine	118	0.486
48	Bahrain	48	0.474	119	Ghana	119	0.180
49	Kuwait	49	0.287	120	United Republic of Tanzania	120	0.326
50	Greece	50	0.545	121	Belize	121	0.225
51	Chile	51	0.323	122	Mozam-bique	122	0.377
52	Philippines	52	0.904	123	Uganda	123	0.478
53	United Arab Emirates	53	0.178	124	Kyrgyzstan	124	0.284
54	Ukraine	54	0.674	125	Madagascar	125	0.352
55	Viet Nam	55	0.635	126	Tajikistan	126	0.467
56	Trinidad and Tobago	56	0.483	127	Yemen	127	0.102

Ranking by Indicator	Country	CIP Ranking	MXQual	Ranking by Indicator	Country	CIP Ranking	MXQual
57	Croatia	57	0.719	128	Nepal	128	0.523
58	Venezuela (Bolivarian Republic of)	58	0.191	129	China, Macao SAR	129	0.152
59	Bulgaria	59	0.577	130	Malawi	130	0.268
60	Malta	60	0.725	131	Saint Lucia	131	0.493
61	Tunisia	61	0.701	132	Niger	132	0.428
62	Peru	62	0.299	133	Bermuda	133	0.760
63	Costa Rica	63	0.735	134	Haiti	134	0.445
64	Oman	64	0.306	135	Rwanda	135	0.338
65	Latvia	65	0.603	136	Iraq	136	0.029
66	Kazakhstan	66	0.359	137	Central African Republic	137	0.232
67	Iran (Islamic Republic of)	67	0.288	138	Burundi	138	0.237
68	Colombia	68	0.343	139	Gambia	139	0.342
69	Iceland	69	0.390	140	Ethiopia	140	0.154
70	Morocco	70	0.656	141	Eritrea	140	0.262
71	Egypt	71	0.501	142	Tonga	140	0.352

8.3   Impact on the world

The third dimension of competitiveness entails countries' impact on world manufacturing, both in terms of their value added share in World Manufacturing Value Added (ImWMVA) and the country's share in World Manufacturing Trade (ImWMT).

8.3.1   Impact on World MVA (ImWMVA)

A country's Impact on World Manufacturing Value Added (ImWMVA) is measured by a country's share in world MVA, which indicates a country's relative performance and impact in manufacturing. The table below presents countries' positions according to this indicator. As expected, the United States, China and Japan have the highest share of global MVA.

Table 16   Ranking by indicator: Impact on World MVA (ImWMVA) - 2012

Ranking by Indicator	Country	CIP Ranking	ImWMVA %	Ranking by Indicator	Country	CIP Ranking	ImWMVA %
1	United States of America	3	19.348	72	Oman	64	0.049
2	China	5	16.647	73	China, Hong Kong SAR	80	0.048
3	Japan	2	11.393	74	El Salvador	72	0.046
4	Germany	1	6.783	75	Côte d'Ivoire	93	0.037
5	Republic of Korea	4	3.507	76	Uruguay	78	0.037
6	United Kingdom	14	2.856	77	Cameroon	104	0.036
7	Italy	13	2.753	78	Serbia	74	0.036
8	France	12	2.609	79	Jordan	75	0.034
9	India	44	2.258	80	Trinidad and Tobago	56	0.032
10	Mexico	21	1.953	81	Bahrain	48	0.031
11	Brazil	36	1.674	82	Estonia	46	0.031
12	Spain	19	1.581	83	Kenya	108	0.030
13	Russian Federation	32	1.544	84	Luxembourg	45	0.028
14	Canada	17	1.516	85	Lebanon	85	0.027
15	China, Taiwan Province	11	1.283	86	Honduras	91	0.025
16	Turkey	30	1.275	87	Cambodia	90	0.024

Ranking by Indicator	Country	CIP Ranking	ImWMVA %	Ranking by Indicator	Country	CIP Ranking	ImWMVA %
17	Indonesia	40	1.225	88	Latvia	65	0.023
18	Poland	23	1.017	89	United Republic of Tanzania	120	0.022
19	Netherlands	8	0.964	90	Iceland	69	0.021
20	Switzerland	6	0.910	91	Bolivia (Pluri-national State of)	98	0.017
21	Thailand	26	0.900	92	Senegal	103	0.016
22	Australia	28	0.842	93	Yemen	127	0.015
23	Sweden	16	0.776	94	Panama	117	0.015
24	Austria	15	0.727	95	Ghana	119	0.014
25	Ireland	10	0.673	96	Mauritius	82	0.014
26	Argentina	39	0.661	97	Iraq	136	0.014
27	Saudi Arabia	37	0.644	98	Mozam-bique	122	0.014
28	Belgium	9	0.616	99	Bosnia and Herzego-vina	83	0.014
29	Malaysia	24	0.568	100	Cyprus	92	0.013
30	Singapore	7	0.536	101	Brunei Darus-salam	87	0.013
31	South Africa	42	0.532	102	Georgia	95	0.013
32	Finland	20	0.468	103	Syrian Arab Republic	102	0.013

Ranking by Indicator	Country	CIP Ranking	ImWMVA %	Ranking by Indicator	Country	CIP Ranking	ImWMVA %
33	Czech Republic	18	0.464	104	Paraguay	111	0.013
34	Romania	34	0.382	105	Azerbai-jan	112	0.012
35	Philippines	52	0.374	106	Uganda	123	0.012
36	Denmark	22	0.348	107	Zambia	114	0.011
37	Iran (Islamic Republic of)	67	0.309	108	Ethiopia	140	0.011
38	Norway	31	0.298	109	Armenia	100	0.009
39	Pakistan	73	0.297	110	The f. Yugosl. Rep. of Macedonia	81	0.009
40	Colombia	68	0.285	111	Mada-gascar	125	0.009
41	Venezuela (Bolivarian Republic of)	58	0.276	112	Malta	60	0.009
42	Israel	29	0.268	113	Jamaica	96	0.009
43	United Arab Emirates	53	0.264	114	Albania	99	0.008
44	Hungary	27	0.264	115	Swazi-land	89	0.008
45	Portugal	35	0.260	116	Nepal	128	0.008
46	Chile	51	0.226	117	State of Palestine	118	0.007
47	Egypt	71	0.223	118	Botswana	88	0.006
48	Viet Nam	55	0.223	119	Tajikistan	126	0.006

Ranking by Indicator	Country	CIP Ranking	ImWMVA %	Ranking by Indicator	Country	CIP Ranking	ImWMVA %
49	Slovakia	25	0.214	120	Papua New Guinea	115	0.005
50	Peru	62	0.207	121	Gabon	109	0.005
51	Ukraine	54	0.197	122	Haiti	134	0.005
52	Bangladesh	77	0.189	123	Fiji	105	0.004
53	Greece	50	0.175	124	Congo	101	0.004
54	New Zealand	47	0.165	125	Malawi	130	0.004
55	Belarus	38	0.157	126	Republic of Moldova	113	0.004
56	Morocco	70	0.118	127	Kyrgyzstan	124	0.004
57	Kazakhstan	66	0.109	128	Suriname	107	0.004
58	Qatar	43	0.095	129	Bahamas	110	0.003
59	Slovenia	33	0.086	130	Rwanda	135	0.003
60	Sri Lanka	79	0.082	131	Mongolia	116	0.003
61	Ecuador	84	0.077	132	Niger	132	0.003
62	Tunisia	61	0.075	133	China, Macao SAR	129	0.003
63	Kuwait	49	0.073	134	Belize	121	0.002
64	Algeria	86	0.070	135	Burundi	138	0.002
65	Croatia	57	0.069	136	Central African Republic	137	0.002
66	Lithuania	41	0.069	137	Barbados	106	0.001
67	Guatemala	76	0.067	138	Eritrea	140	0.001

Ranking by Indicator	Country	CIP Ranking	ImWMVA %	Ranking by Indicator	Country	CIP Ranking	ImWMVA %
68	Nigeria	97	0.062	139	Bermuda	133	0.001
69	Bulgaria	59	0.061	140	Saint Lucia	131	0.001
70	Costa Rica	63	0.055	141	Gambia	139	0.000
71	Cuba	94	0.052	142	Tonga	140	0.000

8.3.2 *Impact on World Manufacturing Trade (ImWMT)*

A country's impact on world manufacturing trade is measured by a country's share in world manufactured exports. This indicates a country's competitive position relative to others in international markets. That is, gains in world market share reflect more competitiveness and losses denote deterioration.

As the figures show, China is the world's largest exporter of manufactured goods and plays a crucial role in international manufacturing trade. Germany is the largest exporter of manufactured goods in Europe and the second largest exporter in the world.

Table 17   **Ranking by indicator: Impact on World Manufacturing Trade (ImWMT) - 2012**

Ranking by Indicator	Country	CIP Ranking	ImWMT %	Ranking by Indicator	Country	CIP Ranking	ImWMT %
1	China	5	15.986	72	Serbia	74	0.073
2	Germany	1	10.018	73	Trinidad and Tobago	56	0.068
3	United States of America	3	8.274	74	Costa Rica	63	0.067
4	Japan	2	5.959	75	Sri Lanka	79	0.055
5	Republic of Korea	4	4.284	76	Guatemala	76	0.054
6	France	12	3.942	77	China, Hong Kong SAR	80	0.054

Ranking by Indicator	Country	CIP Ranking	ImWMT %	Ranking by Indicator	Country	CIP Ranking	ImWMT %
7	Netherlands	8	3.552	78	Botswana	88	0.046
8	Italy	13	3.537	79	Syrian Arab Republic	102	0.046
9	Belgium	9	3.157	80	Malta	60	0.043
10	United Kingdom	14	2.925	81	Cambodia	90	0.042
11	Mexico	21	2.345	82	Ecuador	84	0.041
12	China, Taiwan Province	11	2.194	83	Jordan	75	0.040
13	Canada	17	2.117	84	El Salvador	72	0.039
14	India	44	1.967	85	Bosnia and Herzegovina	83	0.033
15	Spain	19	1.872	86	Côte d'Ivoire	93	0.030
16	Russian Federation	32	1.708	87	The f. Yugosl. Rep of Macedonia	81	0.029
17	Switzerland	6	1.625	88	Uruguay	78	0.027
18	Thailand	26	1.594	89	Bolivia (Pluri-national State of)	98	0.026
19	Singapore	7	1.515	90	Kenya	108	0.023
20	Malaysia	24	1.496	91	Congo	101	0.022
21	Poland	23	1.262	92	Lebanon	85	0.022
22	Sweden	16	1.241	93	Azerbaijan	112	0.020
23	Brazil	36	1.219	94	Honduras	91	0.019

Ranking by Indicator	Country	CIP Ranking	ImWMT %	Ranking by Indicator	Country	CIP Ranking	ImWMT %
24	Czech Republic	18	1.172	95	Papua New Guinea	115	0.019
25	Austria	15	1.116	96	Ghana	119	0.019
26	Turkey	30	1.009	97	United Republic of Tanzania	120	0.017
27	Australia	28	0.965	98	Mongolia	116	0.015
28	Ireland	10	0.890	99	Zambia	114	0.015
29	Indonesia	40	0.887	100	Mauritius	82	0.014
30	Hungary	27	0.721	101	Senegal	103	0.013
31	Viet Nam	55	0.679	102	Jamaica	96	0.012
32	Denmark	22	0.623	103	Iceland	69	0.012
33	Slovakia	25	0.600	104	Cameroon	104	0.011
34	Saudi Arabia	37	0.586	105	Cuba	94	0.011
35	Finland	20	0.531	106	Gabon	109	0.011
36	Israel	29	0.489	107	Albania	99	0.011
37	South Africa	42	0.441	108	Uganda	123	0.011
38	Ukraine	54	0.440	109	Swaziland	89	0.010
39	Portugal	35	0.435	110	Georgia	95	0.010
40	Romania	34	0.416	111	Paraguay	111	0.009
41	Philippines	52	0.382	112	Mozambique	122	0.008
42	Norway	31	0.332	113	Republic of Moldova	113	0.008
43	Argentina	39	0.328	114	Niger	132	0.008
44	Belarus	38	0.325	115	Armenia	100	0.007

Ranking by Indicator	Country	CIP Ranking	ImWMT %	Ranking by Indicator	Country	CIP Ranking	ImWMT %
45	Chile	51	0.313	116	Madagascar	125	0.006
46	Venezuela (Bolivarian Republic of)	58	0.239	117	Nepal	128	0.006
47	Kuwait	49	0.231	118	Yemen	127	0.005
48	Greece	50	0.228	119	Cyprus	92	0.005
49	Iran (Islamic Republic of)	67	0.205	120	Kyrgyzstan	124	0.005
50	Lithuania	41	0.204	121	Brunei Darussalam	87	0.004
51	Slovenia	33	0.198	122	Malawi	130	0.004
52	Peru	62	0.194	123	State of Palestine	118	0.004
53	Bangladesh	77	0.185	124	Fiji	105	0.003
54	Kazakhstan	66	0.175	125	Panama	117	0.003
55	United Arab Emirates	53	0.164	126	Suriname	107	0.003
56	Nigeria	97	0.163	127	Ethiopia	140	0.002
57	Pakistan	73	0.161	128	Barbados	106	0.002
58	Qatar	43	0.160	129	Tajikistan	126	0.002
59	Bahrain	48	0.157	130	Bahamas	110	0.002
60	Bulgaria	59	0.156	131	Rwanda	135	0.002
61	Egypt	71	0.148	132	Iraq	136	0.001
62	Morocco	70	0.136	133	Belize	121	0.001
63	Colombia	68	0.134	134	Haiti	134	0.001

Ranking by Indicator	Country	CIP Ranking	ImWMT %	Ranking by Indicator	Country	CIP Ranking	ImWMT %
64	Algeria	86	0.134	135	China, Macao SAR	129	0.001
65	New Zealand	47	0.133	136	Saint Lucia	131	0.000
66	Estonia	46	0.127	137	Burundi	138	0.000
67	Tunisia	61	0.116	138	Central African Republic	137	0.000
68	Luxembourg	45	0.095	139	Gambia	139	0.000
69	Croatia	57	0.087	140	Bermuda	133	0.000
70	Latvia	65	0.079	141	Eritrea	140	0.000
71	Oman	64	0.075	142	Tonga	140	0.000

9.   Industrial competitiveness over 22 years

This chapter presents a long-term analysis of world industrial competitiveness over the last 22 years, from 1990 to 2012. Applying new methods to imputate missing values, the data is now available for 142 countries for the entire period. This allows the identification of winners and losers in terms of industrial competitiveness. The figures are presented in the following tables, with a more detailed analysis for the countries in the top quintile.

9.1   Structural changes in industrial competitiveness

Long-term changes in industrial competitiveness are presented for the countries in the top quantile of the 2012 CIP ranking table. The figures suggest that a rapid and cumulative process of increasing industrial competitiveness was already underway in countries such as Poland, China and the Republic of Korea before the turn of the century.

The most impressive change in competitiveness among the countries in the top quintile of the CIP ranking was experienced by Poland, which has improved its rank by 28 positions since 1990, and ranked 23rd most industrial competitive country in the world in 2012. Second to Poland was China's advancement, which climbed 27 positions over the same period, and leads the BRICS countries in terms of global competitiveness. Indeed, the gap in competitiveness

between China and the other BRICS countries has widened by a significant margin in this period, with China surpassing the Russian Federation and establishing a 27 position difference between them. The Republic of Korea and Thailand registered notable jumps of 13 and 12 places in the ranking, respectively, and major long-term changes in the competitiveness ranking were also observed in European Union countries such as the Czech Republic, Ireland and Hungary.

While the countries mentioned gained positions over time, others dropped significantly in the industrial competitiveness ranking; most notably Austria, Denmark and Sweden. Amongst these, Denmark declined the most in terms of competitiveness, dropping 6 positions, mainly due to losing export market shares.

Overall, despite the significant gains and losses over time in country rankings, the three top positions in industrial competitiveness have not changed significantly since the early 1990s, and have intermittently been shared by the three major industrial powerhouses, Germany, Japan and the United States.

For countries outside the top quintile, significant long-term reductions in industrial competitiveness were identified in Macao SAR, Hong Kong SAR and Luxembourg due to acute processes of de-industrialization and the shift to services. Portugal also experienced a decline in industrial competitiveness as its manufacturing exports fell. The Russian Federation lost six positions to reach 32nd place, reflecting reductions in its capacity to innovate. By contrast, Turkey has witnessed an improvement in its competitive performance by 9 positions, owing to an increasing share of manufacturing exports. By 2012, Turkey placed 30th out of 142 countries in the ranking.

Economies whose industrial competitiveness only improved since the turn of the century include Slovakia, which has gained 16 positions in the world ranking since 2000. Slovakia's improvement in terms of industrial competitiveness is attributable to an increase in per capita exports, benefitting from its entry into the European Union. Switzerland, one of the most competitive nations in 2012 (6th), improved 3 places between 2000 and 2012, recovering significantly from lost ground in the previous decade thanks to a major drive to promote industrial exports. The Netherlands jumped from 13th to 8th in the rank of most industrial competitive economies due to a growing share of high-tech industries.

Figure 8   Changes in the Competitive Industrial Performance ranking for countries in the top quintile, 1990-2012, 2000-2012
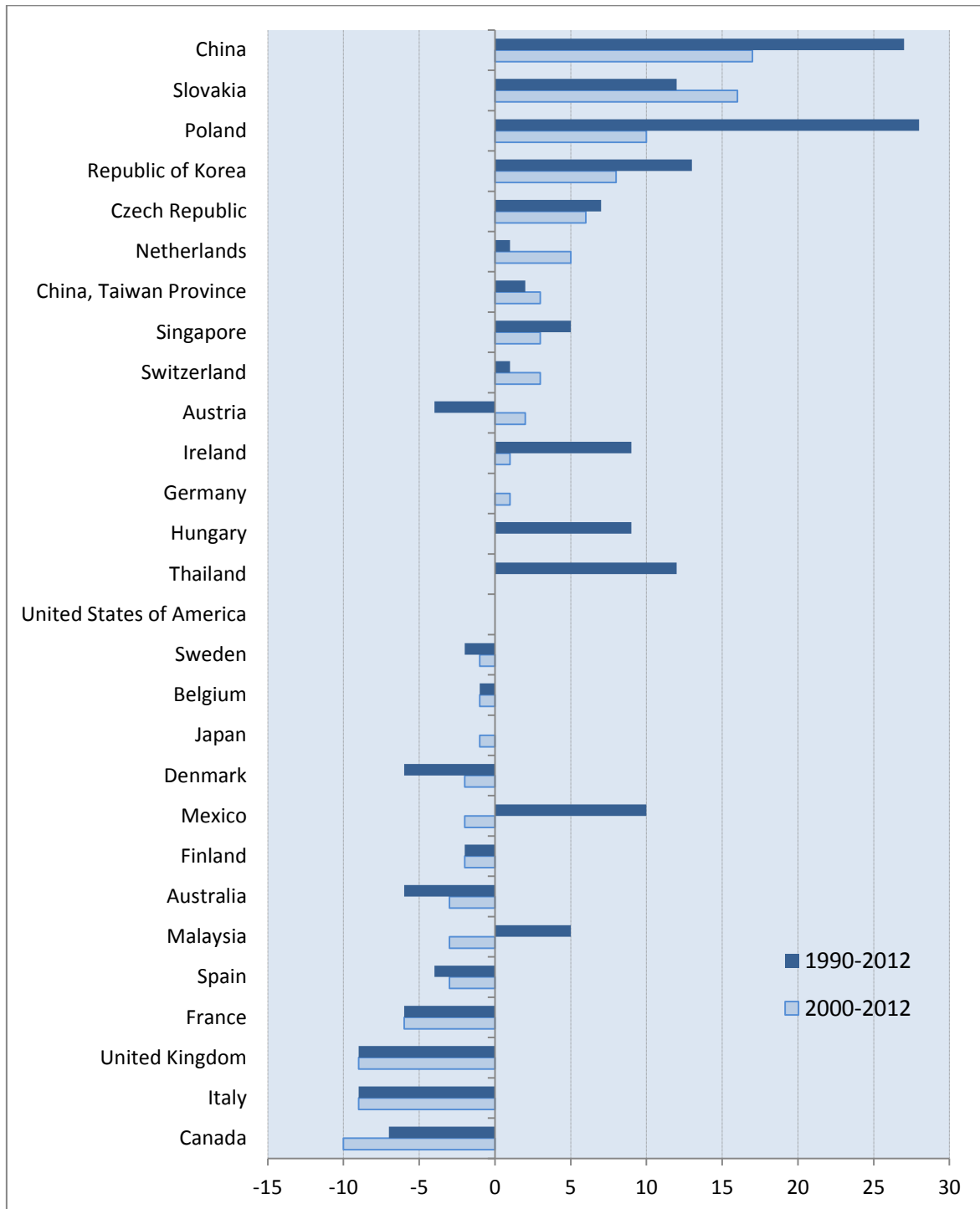
A decrease in their industrial competitiveness since 2000 was observed in Canada, the United Kingdom, Italy and France, which lost between 10 and 7 positions. Among the largest emerging industrial economies, Mexico was unsuccessful in enhancing the value added of its exports and dropped slightly in the industrial competitiveness ranking to 21st position. Malaysia also fell

from 21st to 24th position, reflecting a lack of progress in entering knowledge-based industries, which is beginning to undermine its industrial competitiveness.

Other countries that considerably improved their industrial competitiveness between 2000 and 2012, but were not among the top quintile performers, are Nigeria, Iran and Viet Nam, which climbed by 43, 22 and 25 places, respectively (see Table 16). Nigeria's improvement in industrial competitiveness was based on the country's structural change towards more advanced industries and an increase in manufactured exports, while Iran's and Viet Nam's improvement was linked to shifts towards high-tech industries. An increase in competitiveness was also observed in Kazakhstan, Albania, Peru and Lithuania, which climbed 19, 19, 13 and 16 places, respectively. Lithuania's improved competitiveness is attributable to a rise in manufactured exports as well as advancements in high-tech manufacturing industries. Improvements in Kazakhstan, Albania and Peru involved the expansion of their industrial activity.

Long- term changes in the CIP ranking from 1990 to 2012 are presented in Table 18. Countries are arranged based on the 2012 CIP ranking.

Table 18　　　　**Ranking of Competitive Industrial Performance, 1990- 2012**

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Germany	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	2	1	1	1
Japan	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	1	1	1	1	1	2	2	2
United States of America	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Republic of Korea	4	4	4	4	4	4	4	6	7	10	11	11	12	14	15	13	13	13	13	14	16	16	17
China	5	8	7	11	13	16	17	19	19	20	21	22	22	23	23	24	26	27	28	30	33	33	32
Switzerland	6	5	5	5	6	8	9	9	9	8	10	10	9	9	8	7	8	7	7	7	7	7	7
Singapore	7	6	6	12	10	10	10	10	12	14	14	13	10	12	12	11	11	11	11	11	12	12	12
Netherlands	8	7	8	10	9	9	11	11	11	12	12	12	13	10	10	10	10	10	10	10	9	9	9
Belgium	9	10	12	6	7	6	6	5	6	6	6	7	8	8	7	8	7	8	9	8	8	8	8
Ireland	10	11	11	8	12	12	13	12	10	9	8	9	11	11	11	15	17	17	18	18	18	18	19
China, Taiwan Province	11	13	13	13	15	13	12	13	13	13	13	14	14	13	13	12	12	12	12	12	11	11	13
France	12	12	10	9	8	7	7	7	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6
Italy	13	9	9	7	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
United Kingdom	14	14	14	14	11	11	8	8	8	7	7	6	5	5	5	5	5	5	5	5	5	5	5
Austria	15	16	16	15	16	15	16	16	16	16	16	17	17	17	17	17	16	15	15	13	13	13	11
Sweden	16	15	15	16	14	14	14	15	15	15	15	15	15	15	14	14	14	14	14	16	15	14	14
Canada	17	18	17	17	18	17	15	14	14	11	9	8	7	7	9	9	9	9	8	9	10	10	10
Czech Republic	18	17	19	20	20	20	21	22	23	23	23	23	24	24	24	27	27	28	31	31	28	28	25
Spain	19	19	18	18	19	19	19	17	17	17	17	16	16	16	16	16	16	15	16	16	15	14	15	15
Finland	20	20	20	19	17	18	18	18	18	18	18	18	18	18	18	19	18	19	19	19	19	19	18
Mexico	21	22	22	22	22	22	22	21	21	21	20	19	19	20	20	20	21	21	20	20	21	26	31
Denmark	22	21	21	21	21	21	20	20	20	19	19	20	20	19	19	18	19	18	17	17	17	17	16
Poland	23	23	24	23	23	25	26	28	28	31	32	32	33	34	34	36	36	37	38	41	48	54	51
Malaysia	24	24	23	24	25	23	23	23	22	22	22	21	21	21	21	21	20	20	21	21	25	25	29
Slovakia	25	25	27	29	28	27	31	33	33	35	37	36	41	39	39	42	45	43	47	46	45	36	37
Thailand	26	27	25	26	26	26	25	25	25	25	27	27	26	29	29	28	28	26	27	29	32	32	38
Hungary	27	26	26	25	24	24	24	24	24	24	24	26	27	28	28	31	37	36	36	39	37	39	36
Australia	28	28	29	30	29	28	28	27	27	26	25	25	25	25	27	22	22	22	23	24	24	22	22
Israel	29	29	28	27	27	29	27	26	26	27	26	24	23	22	22	23	23	23	22	22	23	23	23

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Turkey	30	30	31	31	31	30	29	30	31	32	33	34	34	33	33	34	33	33	35	35	34	35	39
Norway	31	31	30	28	30	32	30	29	30	29	29	29	29	26	25	25	24	24	24	25	22	21	21
Russian Federation.	32	36	36	36	33	35	35	36	36	36	35	35	35	37	38	38	35	35	34	33	31	30	26
Slovenia	33	32	32	32	32	31	32	31	32	30	30	31	31	31	31	32	32	32	32	32	30	29	28
Romania	34	33	35	34	36	37	37	37	37	38	38	42	44	45	45	45	43	42	43	42	43	40	34
Portugal	35	35	34	33	34	33	33	32	29	28	28	28	28	27	26	26	25	25	26	26	26	24	24
Brazil	36	34	33	35	35	34	34	34	35	34	34	33	32	32	32	30	31	30	29	28	29	31	30
Saudi Arabia	37	37	37	37	38	38	38	38	39	40	43	44	47	44	43	40	42	44	42	43	38	43	45
Belarus	38	38	40	39	39	41	43	45	48	47	49	50	51	52	51	52	50	49	49	48	49	45	46
Argentina	39	39	38	38	41	40	41	42	42	43	45	43	42	40	36	37	39	39	37	37	39	42	44
Indonesia	40	41	41	40	44	43	44	41	41	41	42	40	39	42	44	43	40	41	41	40	44	52	52
Lithuania	41	42	44	48	43	44	46	48	49	49	52	52	57	57	54	54	53	59	57	56	52	48	56
South Africa	42	40	39	41	40	39	39	40	40	39	39	39	40	41	41	39	38	38	39	36	41	41	41
Qatar	43	43	43	49	51	45	55	57	47	54	53	56	54	54	50	51	51	50	44	45	42	46	48
India	44	45	45	45	53	55	54	56	58	57	55	57	56	55	58	55	52	54	55	60	61	64	64

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Luxembourg	45	44	42	42	37	36	36	35	34	33	31	30	30	30	30	29	29	31	30	27	27	27	27
Estonia	46	47	51	53	49	53	51	53	55	55	54	55	55	59	57	58	61	62	63	62	62	60	60
New Zealand	47	46	46	43	45	42	42	39	38	37	36	37	37	36	37	35	34	34	33	34	35	34	35
Bahrain	48	48	47	54	55	51	50	47	53	48	48	48	69	66	66	65	62	52	51	53	56	58	55
Kuwait	49	49	50	47	46	49	48	50	46	45	47	53	49	46	48	46	63	63	62	69	79	102	71
Greece	50	50	49	46	47	46	45	44	45	44	46	45	43	43	42	44	41	40	40	38	36	37	40
Chile	51	51	48	50	50	48	49	49	51	52	58	54	53	51	52	49	49	48	50	51	53	55	57
Philippines	52	56	56	51	54	50	47	46	43	42	41	41	38	38	40	41	44	51	52	55	55	53	50
United Arab Emirates	53	53	52	44	42	47	40	43	44	46	40	46	45	53	53	53	64	65	67	70	76	83	83
Ukraine	54	52	53	56	48	52	53	54	54	56	57	59	59	61	61	59	55	55	54	50	46	44	42
Viet Nam	55	57	58	59	64	67	67	69	68	70	73	74	80	80	88	88	89	91	91	90	92	93	94
Trinidad and Tobago	56	55	55	66	59	63	63	65	67	67	69	63	66	67	71	74	72	75	79	79	78	79	80
Croatia	57	54	54	52	52	54	52	52	52	50	50	49	50	50	49	50	47	47	45	44	40	38	33
Venezuela (Bolivarian Republic of)	58	59	57	55	56	70	69	51	50	64	61	47	48	49	46	47	48	46	48	47	50	50	59

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Bulgaria	59	58	59	57	57	56	59	61	63	61	64	64	63	65	64	61	57	53	53	52	51	49	43
Malta	60	60	62	64	60	57	57	58	57	53	51	51	46	47	47	48	46	45	46	49	47	47	49
Tunisia	61	61	61	60	58	62	62	62	61	60	59	58	58	56	56	56	54	56	56	58	58	61	63
Peru	62	62	64	65	66	65	66	68	70	72	74	72	75	76	76	72	74	72	73	76	74	74	76
Costa Rica	63	63	63	63	61	58	58	59	60	58	60	60	52	48	55	62	68	69	70	71	72	73	73
Oman	64	67	68	70	71	72	81	86	92	93	67	69	74	88	86	86	87	89	88	89	95	96	103
Latvia	65	64	66	67	67	66	65	66	65	66	68	68	68	68	69	69	70	71	75	73	66	59	58
Kazakhstan	66	66	71	73	68	69	71	72	72	75	79	82	85	87	87	77	75	73	71	65	69	66	70
Iran (Islamic Republic of)	67	65	60	58	76	74	72	75	78	80	82	84	89	91	92	90	92	92	92	94	90	90	93
Colombia	68	69	67	62	63	61	60	63	64	63	63	61	61	60	60	60	58	57	58	54	57	56	53
Iceland	69	68	65	61	62	59	64	64	62	62	62	62	60	58	59	57	56	58	59	61	63	63	61
Morocco	70	70	70	69	69	68	68	67	66	65	65	65	64	62	63	68	65	64	66	64	65	67	68
Egypt	71	71	72	71	73	81	79	78	77	73	78	80	71	77	81	78	84	82	82	85	85	82	85
El Salvador	72	74	73	74	74	73	70	70	84	82	81	81	83	75	77	83	82	85	81	83	82	80	81
Pakistan	73	76	76	77	77	75	73	71	71	71	71	71	73	72	73	71	67	68	68	68	71	72	74

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Serbia	74	75	75	75	72	71	74	74	73	79	76	78	79	82	68	66	71	70	64	63	59	57	54
Jordan	75	77	74	76	75	77	76	76	74	81	77	85	93	89	90	95	90	83	85	91	93	92	89
Guatemala	76	78	77	78	78	76	85	73	79	78	83	76	77	74	74	76	76	76	77	77	75	78	79
Bangladesh	77	79	79	80	85	85	84	87	88	87	91	92	90	90	89	94	94	95	99	98	98	98	102
Uruguay	78	80	78	79	79	80	80	81	83	83	84	75	72	71	67	67	66	66	65	66	64	65	66
Sri Lanka	79	81	81	82	82	82	77	77	76	77	75	70	67	69	72	73	77	77	78	78	83	88	92
China, Hong Kong SAR	80	72	69	68	65	60	56	55	56	51	44	38	36	35	35	33	30	29	25	23	20	20	20
The f. Yugosl. Rep of Macedonia	81	82	82	89	80	78	82	83	85	86	87	86	82	83	78	81	78	78	76	74	70	69	65
Mauritius	82	83	83	81	81	79	75	79	69	68	66	66	65	63	62	64	59	61	61	59	60	62	62
Bosnia and Herzegovina	83	84	85	84	84	84	86	89	93	95	96	97	96	96	95	97	97	94	97	96	96	95	95
Ecuador	84	87	87	86	86	87	87	92	94	89	93	93	92	95	94	93	91	93	89	95	99	103	101
Lebanon	85	85	80	83	83	83	83	82	80	84	88	91	91	92	91	89	86	84	84	86	86	86	91
Algeria	86	86	84	87	88	89	92	91	91	88	90	87	84	93	96	91	93	88	86	80	77	75	78
Brunei Darussalam	87	88	86	91	93	92	91	84	81	94	94	95	95	73	75	75	73	86	87	88	87	84	84

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Botswana	88	90	90	92	91	88	94	95	95	74	80	79	76	86	84	87	85	87	90	93	88	85	86
Swaziland	89	89	88	85	87	86	78	80	75	69	70	73	70	70	70	70	69	67	69	67	68	70	69
Cambodia	90	92	94	99	97	98	97	97	99	100	99	100	103	111	113	117	118	119	117	117	120	122	121
Honduras	91	97	92	95	94	94	95	98	100	98	98	98	100	98	98	100	99	114	111	111	111	113	114
Cyprus	92	91	89	90	89	93	93	94	89	90	89	90	87	84	82	80	79	74	72	72	67	68	67
Côte d'Ivoire	93	95	91	88	92	90	88	85	87	91	86	89	88	81	83	85	95	96	96	87	89	87	87
Cuba	94	93	93	93	95	96	96	88	86	85	85	77	78	79	85	82	81	80	80	81	80	77	75
Georgia	95	94	95	96	96	97	98	99	101	103	107	110	107	115	116	115	115	122	122	123	115	97	98
Jamaica	96	96	96	94	90	91	90	93	90	92	92	88	86	85	80	79	80	79	74	75	73	71	72
Nigeria	97	100	97	116	111	125	114	113	123	125	116	145	140	133	128	120	132	130	130	132	131	130	133
Bolivia (Pluri-national State of)	98	98	98	97	101	106	105	108	105	106	102	101	98	99	100	105	102	104	102	103	104	106	106
Albania	99	99	100	101	116	101	121	123	109	113	117	117	118	118	123	131	124	123	123	124	121	117	112
Armenia	100	105	106	108	103	102	99	96	103	101	100	111	112	112	111	112	111	109	109	110	112	100	100
Congo	101	103	102	100	112	116	115	115	116	116	114	127	127	130	131	129	127	126	128	133	132	131	132
Syrian Arab Republic	102	102	99	98	98	99	103	114	115	123	125	128	131	104	107	107	112	111	113	115	118	121	122

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Senegal	103	101	101	102	99	109	113	104	102	99	101	99	102	102	102	108	106	106	107	107	106	108	111
Cameroon	104	107	105	106	100	100	108	107	112	109	112	104	113	114	101	101	109	108	105	101	100	99	97
Fiji	105	109	107	105	105	104	102	101	96	96	97	96	97	97	97	96	96	98	95	99	97	94	96
Barbados	106	108	103	103	104	103	100	100	97	97	95	94	94	94	93	92	88	90	93	92	91	91	90
Suriname	107	110	109	120	113	122	119	122	127	126	126	126	126	100	99	99	100	99	98	97	94	89	88
Kenya	108	104	104	104	106	107	107	105	111	104	104	113	110	107	106	104	104	102	104	104	103	109	107
Gabon	109	111	108	110	114	111	110	109	108	108	110	108	108	109	110	111	113	113	112	113	114	116	117
Bahamas	110	114	111	107	109	108	104	106	104	105	106	103	99	108	119	134	133	131	132	131	130	129	130
Paraguay	111	112	112	109	107	110	109	111	110	110	108	106	105	110	109	106	105	103	103	108	109	114	115
Azerbaijan	112	113	113	111	110	105	106	103	107	114	113	114	111	105	105	98	98	97	94	84	81	76	77
Republic of Moldova	113	118	118	119	117	112	111	110	106	107	109	107	115	119	112	113	108	105	108	102	108	107	99
Zambia	114	115	115	114	115	115	112	121	117	119	119	118	117	113	120	119	122	124	124	125	125	125	125
Papua New Guinea	115	116	114	115	119	121	122	120	121	112	118	116	104	103	104	103	103	107	106	105	102	105	109
Mongolia	116	117	117	118	118	114	118	124	122	120	121	123	124	127	124	121	120	117	119	118	119	119	119
Panama	117	73	119	123	123	118	117	116	113	111	105	102	101	101	103	102	101	100	100	100	101	104	105

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
State of Palestine	118	119	121	117	121	117	116	112	114	115	115	109	106	106	108	109	107	101	101	106	107	110	110
Ghana	119	106	124	127	128	126	124	118	128	127	120	119	121	120	121	122	119	118	121	121	116	118	118
United Republic of Tanzania	120	120	120	124	124	130	132	132	131	132	131	133	132	129	129	135	136	136	134	135	135	134	135
Belize	121	121	122	121	125	120	120	119	119	118	127	125	109	116	114	116	114	110	110	112	110	115	116
Mozambique	122	122	134	126	129	131	129	129	129	129	129	131	135	137	137	136	138	138	137	137	137	137	137
Uganda	123	124	131	133	132	134	134	138	140	140	141	140	141	141	140	138	137	139	143	143	143	143	145
Kyrgyzstan	124	125	125	129	126	124	126	125	120	121	124	121	122	123	117	114	117	116	114	109	105	101	104
Madagascar	125	123	123	125	120	123	127	128	124	128	128	122	119	126	127	126	125	129	131	126	127	126	127
Tajikistan	126	126	127	130	130	128	125	126	125	122	123	124	123	124	122	123	123	120	116	114	113	112	113
Yemen	127	127	126	128	127	127	131	130	132	130	134	137	137	138	138	137	135	134	133	134	133	133	134
Nepal	128	128	128	131	131	129	128	127	126	124	122	120	120	122	125	125	121	121	120	120	122	127	129
China, Macao SAR	129	132	129	122	108	95	89	90	82	76	72	67	62	64	65	63	60	60	60	57	54	51	47
Malawi	130	129	133	137	137	138	140	139	136	135	140	134	134	136	135	133	129	133	129	130	134	135	131
Saint Lucia	131	130	130	132	133	133	135	135	134	133	132	132	130	134	133	130	128	125	125	119	124	124	124
Niger	132	131	136	136	135	136	137	134	135	134	135	130	129	131	132	128	130	127	127	129	128	128	128

Countries arranged by 2012 CIP ranking	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Bermuda	133	133	132	134	134	135	133	131	130	141	139	138	138	139	139	140	139	137	138	139	140	139	139
Haiti	134	134	135	135	136	137	136	133	133	131	130	129	128	128	130	127	131	135	136	127	126	111	108
Rwanda	135	135	137	138	138	141	142	142	142	142	142	141	144	143	143	144	145	145	145	145	145	145	145
Iraq	136	136	138	139	142	132	130	141	141	137	133	105	125	125	126	124	126	128	126	128	129	132	126
Central African Republic	137	137	139	140	139	139	139	136	139	139	137	135	133	132	134	139	134	132	135	136	136	136	136
Burundi	138	138	140	141	141	142	143	143	143	143	145	143	145	145	145	145	143	143	141	138	138	138	138
Gambia	139	139	141	142	143	143	145	144	144	144	143	144	143	144	144	143	144	141	142	142	142	142	142
Ethiopia	140	140	142	143	144	144	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	143
Eritrea	140	140	142	143	144	144	144	145	145	145	144	142	142	142	142	142	142	144	144	144	144	144	144
Tonga	140	140	142	143	144	144	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145
Lesotho	NA	NA	110	112	122	119	101	102	98	102	103	112	114	117	115	118	116	115	115	116	117	120	120
Nicaragua	NA	NA	116	113	102	113	123	117	118	117	111	115	116	121	118	110	110	112	118	122	123	123	123
Benin	NA	NA	NA	NA	NA	NA	138	137	138	138	136	139	139	140	141	141	140	140	139	141	139	141	141
Dominican Republic	NA	NA	NA	72	70	64	61	60	59	59	56	83	81	78	79	84	83	81	83	82	84	81	82
Burkina Faso	NA	NA	NA	NA	140	140	141	140	137	136	138	136	136	135	136	132	141	142	140	140	141	140	140

10.   Conclusion: Towards a sustainable industrial competitiveness of nations

Industrial competitiveness is often understood as a zero-sum competition among nations. Hence, it can be inferred that nations struggle with 'short-termism' as regards their industrial capabilities in order to sustain their position. Short-term views in industrialization, as is the case in North Africa, are partly responsible for economic recessions.

Public awareness about sustainable development has rapidly increased over the past few decades. Many researchers have investigated how industrialization affects the standards of living and wellbeing of individuals as well as the environment. Many countries are moving towards economic policies that include the sustainable aspect of development. Furthermore, in September 2014, the United Nations released its Sustainable Development Goals for 2015 – 2030. A linkage between sustainability aspects of industrial development and the competitiveness of markets should be established. According to Lall (2001), competitiveness in industrial activities means developing relative efficiency along with sustainable growth.

Given the two above mentioned concerns, namely long-term competitiveness and sustainability of industry, *sustainable industrial competitiveness* can be defined as collective industrial policies and actions that ensure the wellbeing of those currently living. Furthermore, ensuring the wellbeing of future generations while nations stay productive over the long-term is necessary for a positive outlook for industrialized nations. Germany, Japan and the United States are examples of countries that have sustained and further advanced their positions in industrial competitiveness over the long-term. This was achieved by maintaining knowledge and a high-tech based industry which is resource and energy efficient. As such, these countries enjoy higher and more sustainable industrial performance.

History supports this approach. Trade of technology intensive activities tend to grow faster than simple activities and also account for a greater share in total manufactured trade. High-technology exports grew by 10.2 percent between 1990 and 2007, well above the exports of less sophisticated products. Despite the decrease in recent years due to the commodity price boom, complex exports (medium- and high-tech exports) continue to dominate world trade, accounting for 61.3 percent of total manufactured exports.

Furthermore, while resource-based and low technology activities are more exposed to competitive pressures, technology intensive sectors are less vulnerable to entry by competitors, as barriers to entry exist due to the complex capabilities and processes required. As a result, high-tech based industry enjoys higher and more sustainable margins.

To attain industrial competitiveness, authorities need to provide an environment that supports the industries established in the country. This requires a long-term view. Policy makers should ensure security, stability and long-term investment in the resources on which these industries depend on. A sustainable and competitive industry can be achieved through the creation of highly-skilled labour, research and technological development, providing infrastructure and investing in alternative energies.

The above may seem apparent. However, when it comes to making decisions between short-term economic gains and long-term benefits, many politicians prefer the former. Sustainable industrial competitiveness may involve sacrificing current temporary benefits for the goal of achieving a long-term improvement in the wellbeing and prosperity of society through industrialization.

Global Competitive Industrial Performance Index

Industrial competitiveness is an important determinant for the well-being of states in an international environment. The map below shows individual state competitiveness.
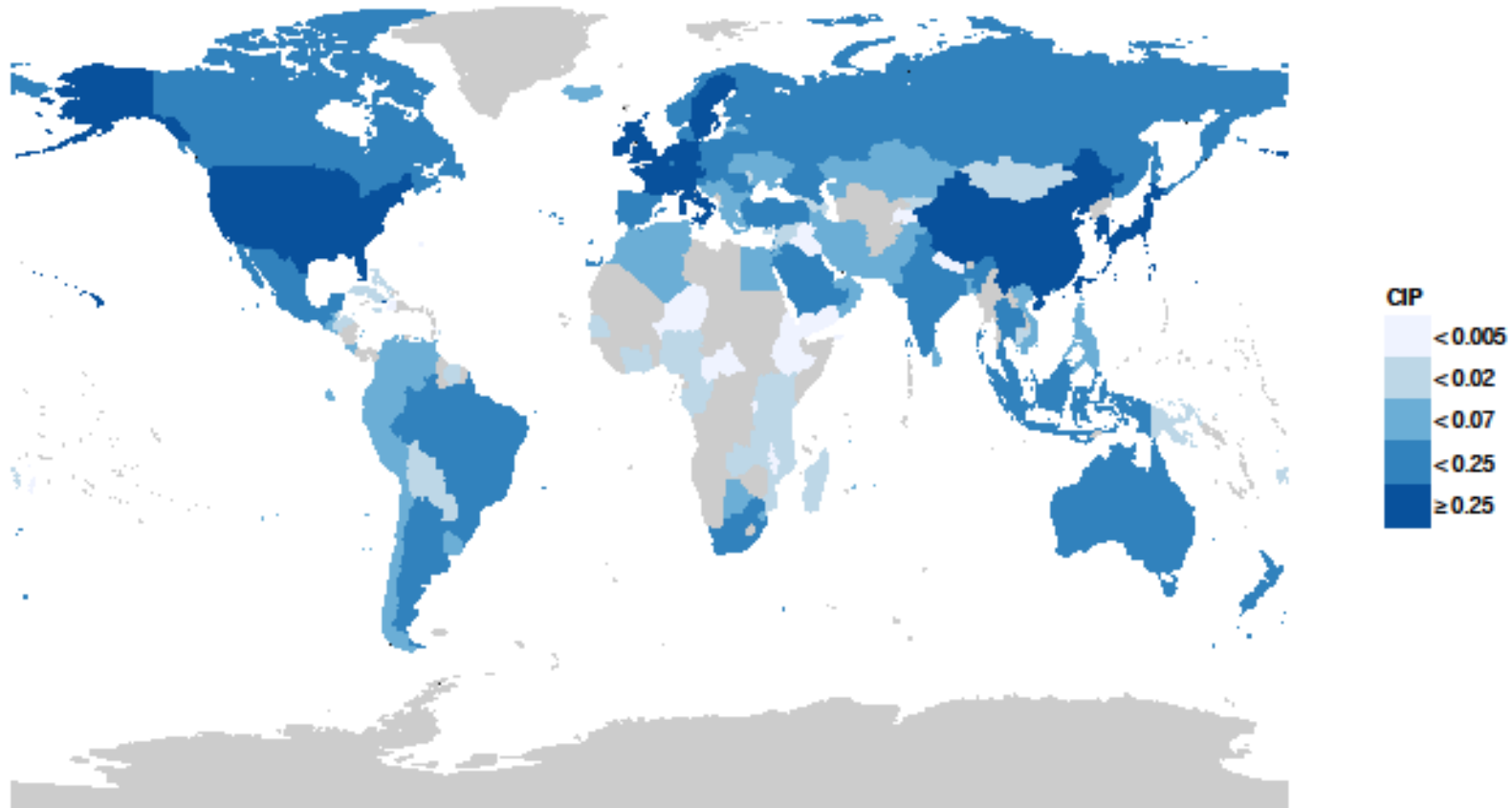
Table 19   **Competitive Industrial Performance (CIP) index and underlying indicators, 2012**

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
1	0.5539	Germany	7303.993	15123.728	60.142	19.469	72.474	87.560	6.783	10.018
2	0.4855	Japan	7955.767	5833.941	56.097	21.345	79.525	92.367	11.393	5.959
3	0.4374	United States of America	5409.545	3243.122	50.593	12.567	62.504	75.698	19.348	8.274
4	0.4144	Republic of Korea	6372.732	10913.202	60.098	28.718	70.627	96.787	3.507	4.284
5	0.3462	China	1085.851	1461.757	41.383	32.533	58.444	96.576	16.647	15.986
6	0.3388	Switzerland	10392.812	26000.824	61.707	18.238	70.838	88.998	0.910	1.625
7	0.3271	Singapore	9007.056	32241.426	82.261	26.219	68.991	89.760	0.536	1.515
8	0.3170	Netherlands	5092.829	26305.814	46.930	12.483	50.981	79.267	0.964	3.552
9	0.3040	Belgium	5040.187	36223.518	40.111	13.361	52.707	87.451	0.616	3.157
10	0.3038	Ireland	12981.278	24058.482	62.940	28.272	51.247	93.542	0.673	0.890
11	0.2998	China, Taiwan Province	4859.006	11644.966	61.880	25.389	70.065	95.726	1.283	2.194
12	0.2978	France	3630.089	7688.922	47.124	10.241	65.025	87.665	2.609	3.942

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
13	0.2961	Italy	3987.149	7181.587	42.588	14.062	53.265	90.885	2.753	3.537
14	0.2751	United Kingdom	4014.936	5764.454	46.871	10.546	63.038	76.371	2.856	2.925
15	0.2589	Austria	7615.519	16389.060	44.769	18.974	60.968	86.981	0.727	1.116
16	0.2584	Sweden	7217.793	16175.515	43.804	16.299	55.665	88.904	0.776	1.241
17	0.2267	Canada	3860.800	7558.446	30.947	10.664	55.806	59.973	1.516	2.117
18	0.2215	Czech Republic	3879.579	13728.783	47.935	27.432	67.618	92.735	0.464	1.172
19	0.2097	Spain	2983.654	4954.189	36.516	11.985	54.420	81.038	1.581	1.872
20	0.2017	Finland	7644.684	12173.613	49.047	19.857	46.465	90.133	0.468	0.531
21	0.1899	Mexico	1484.511	2499.456	36.953	17.347	78.594	78.325	1.953	2.345
22	0.1810	Denmark	5487.720	13794.319	49.304	11.843	51.586	72.698	0.348	0.623
23	0.1806	Poland	2343.020	4076.945	37.630	22.019	54.964	86.978	1.017	1.262
24	0.1757	Malaysia	1710.200	6314.025	42.502	25.346	58.532	81.398	0.568	1.496
25	0.1707	Slovakia	3445.765	13545.733	44.576	29.818	66.457	92.943	0.214	0.600
26	0.1641	Thailand	1137.180	2822.093	46.268	35.498	59.634	85.939	0.900	1.594

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
27	0.1578	Hungary	2343.153	8964.207	56.245	21.344	73.752	86.591	0.264	0.721
28	0.1455	Australia	3245.405	5212.868	27.758	8.785	19.645	46.625	0.842	0.965
29	0.1434	Israel	3070.792	7863.029	51.686	13.218	54.299	95.827	0.268	0.489
30	0.1367	Turkey	1510.733	1676.670	32.666	17.924	40.292	81.900	1.275	1.009
31	0.1294	Norway	5311.798	8277.982	48.003	7.961	44.882	25.510	0.298	0.332
32	0.1211	Russian Federation	955.156	1481.751	28.082	13.901	23.659	40.294	1.544	1.708
33	0.1164	Slovenia	3726.545	12005.394	49.014	19.867	61.608	90.439	0.086	0.198
34	0.1124	Romania	1578.653	2407.070	36.454	29.006	53.968	88.909	0.382	0.416
35	0.1116	Portugal	2142.991	5031.542	26.922	12.208	39.379	92.212	0.260	0.435
36	0.1095	Brazil	745.257	760.857	37.162	13.007	38.515	62.216	1.674	1.219
37	0.1083	Saudi Arabia	1979.833	2528.436	41.233	11.421	35.638	19.049	0.644	0.586
38	0.1008	Belarus	1456.833	4221.653	47.132	30.160	40.606	87.320	0.157	0.325
39	0.0892	Argentina	1419.590	987.866	26.803	20.736	47.176	50.193	0.661	0.328
40	0.0859	Indonesia	441.727	448.450	37.874	25.294	30.703	57.762	1.225	0.887

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
41	0.0859	Lithuania	1849.889	7672.791	27.327	20.251	37.534	85.182	0.069	0.204
42	0.0839	South Africa	925.627	1076.234	26.461	15.282	45.445	62.974	0.532	0.441
43	0.0834	Qatar	4318.580	10221.711	25.768	7.528	35.904	14.976	0.095	0.160
44	0.0780	India	158.451	193.471	38.695	14.567	28.050	84.076	2.258	1.967
45	0.0755	Luxembourg	4809.720	22470.725	10.583	5.977	38.379	85.943	0.028	0.095
46	0.0752	Estonia	2033.612	11742.241	26.603	17.288	44.463	86.656	0.031	0.127
47	0.0744	New Zealand	3259.316	3691.200	16.911	11.848	20.965	45.840	0.165	0.133
48	0.0737	Bahrain	2037.329	14885.352	22.374	14.545	1.707	91.024	0.031	0.157
49	0.0704	Kuwait	2235.245	7783.387	22.603	5.839	13.450	40.932	0.073	0.231
50	0.0688	Greece	1354.088	2473.396	19.563	7.379	22.691	80.284	0.175	0.228
51	0.0686	Chile	1146.516	2225.281	16.247	12.116	12.101	49.531	0.226	0.313
52	0.0659	Philippines	341.890	490.568	41.729	22.721	73.137	91.019	0.374	0.382
53	0.0653	United Arab Emirates	2880.008	2617.336	8.749	10.544	21.204	10.584	0.264	0.164

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
54	0.0647	Ukraine	386.657	1211.891	24.921	18.222	44.859	79.282	0.197	0.440
55	0.0629	Viet Nam	219.346	936.224	24.873	23.763	43.581	73.350	0.223	0.679
56	0.0580	Trinidad and Tobago	2114.998	5510.407	39.491	15.417	17.700	73.955	0.032	0.068
57	0.0552	Croatia	1393.242	2467.634	15.569	13.475	45.332	87.521	0.069	0.087
58	0.0547	Venezuela (Bolivarian Republic of)	815.871	1018.141	34.282	12.697	4.317	32.813	0.276	0.239
59	0.0547	Bulgaria	731.505	2611.210	26.084	15.984	34.674	72.354	0.061	0.156
60	0.0501	Malta	1894.751	12771.924	31.650	11.602	40.253	94.778	0.009	0.043
61	0.0478	Tunisia	615.898	1336.822	21.854	16.170	45.284	84.144	0.075	0.116
62	0.0473	Peru	615.204	807.672	13.452	14.355	5.712	52.268	0.207	0.194
63	0.0462	Costa Rica	1013.122	1734.963	9.472	17.680	59.580	73.927	0.055	0.067
64	0.0455	Oman	1481.005	3188.826	19.386	9.742	34.115	20.276	0.049	0.075
65	0.0451	Latvia	911.755	4393.502	20.354	11.956	34.752	77.407	0.023	0.079

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
66	0.0435	Kazakhstan	586.194	1325.217	6.839	10.996	40.194	23.524	0.109	0.175
67	0.0431	Iran (Islamic Republic of)	360.265	343.563	45.353	11.259	31.690	19.685	0.309	0.205
68	0.0410	Colombia	529.963	348.144	20.874	12.428	34.160	27.466	0.285	0.134
69	0.0398	Iceland	5613.389	4463.718	16.566	10.744	40.664	28.915	0.021	0.012
70	0.0397	Morocco	319.468	516.684	27.955	12.790	42.478	78.644	0.118	0.136
71	0.0354	Egypt	234.449	218.728	23.018	15.635	30.560	62.426	0.223	0.148
72	0.0333	El Salvador	650.353	762.299	20.833	21.318	14.850	89.436	0.046	0.039
73	0.0311	Pakistan	145.506	110.657	24.591	18.182	9.540	80.667	0.297	0.161
74	0.0307	Serbia	319.070	917.828	17.438	11.285	40.937	79.607	0.036	0.073
75	0.0304	Jordan	458.149	768.990	26.496	16.466	43.806	74.304	0.034	0.040
76	0.0299	Guatemala	393.673	445.197	20.349	17.055	21.317	66.565	0.067	0.054
77	0.0297	Bangladesh	109.565	154.525	20.545	18.099	2.026	95.646	0.189	0.185
78	0.0286	Uruguay	970.753	978.547	13.667	12.932	23.356	38.100	0.037	0.027

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
79	0.0276	Sri Lanka	339.520	318.365	10.660	18.818	8.862	73.605	0.082	0.055
80	0.0269	China, Hong Kong SAR	589.105	928.665	14.197	1.810	41.475	29.872	0.048	0.054
81	0.0245	The f. Yugosl. Rep of Macedonia	397.976	1746.856	15.482	11.233	43.036	90.227	0.009	0.029
82	0.0245	Mauritius	948.423	1359.189	6.983	14.361	4.049	96.301	0.014	0.014
83	0.0236	Bosnia and Herzego-vina	321.530	1100.360	29.170	9.347	22.767	79.812	0.014	0.033
84	0.0233	Ecuador	455.756	340.534	8.095	12.256	21.041	21.223	0.077	0.041
85	0.0231	Lebanon	554.062	629.788	19.950	7.584	33.379	60.795	0.027	0.022
86	0.0223	Algeria	169.898	453.333	27.236	5.018	0.546	23.016	0.070	0.134
87	0.0219	Brunei Darussalam	2723.129	1282.911	3.320	11.067	82.796	4.075	0.013	0.004
88	0.0215	Botswana	256.072	2791.539	16.977	4.029	5.403	95.977	0.006	0.046
89	0.0201	Swaziland	602.491	890.353	0.007	25.501	28.963	92.856	0.008	0.010

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
90	0.0183	Cambodia	147.548	357.799	0.260	21.389	7.446	66.090	0.024	0.042
91	0.0181	Honduras	276.720	302.232	6.715	17.506	36.782	50.919	0.025	0.019
92	0.0168	Cyprus	1025.372	501.664	14.466	6.146	50.922	67.893	0.013	0.005
93	0.0162	Côte d'Ivoire	160.443	182.458	13.455	17.346	15.592	34.598	0.037	0.030
94	0.0156	Cuba	397.242	87.086	16.223	7.876	63.425	33.277	0.052	0.011
95	0.0151	Georgia	260.865	282.457	22.063	12.004	47.832	74.411	0.013	0.010
96	0.0150	Jamaica	278.239	548.342	18.767	6.943	13.073	92.087	0.009	0.012
97	0.0130	Nigeria	32.616	121.323	28.606	3.058	10.885	14.122	0.062	0.163
98	0.0126	Bolivia (Pluri-national State of)	150.197	312.225	5.054	11.652	3.949	27.083	0.017	0.026
99	0.0122	Albania	228.206	408.196	10.549	6.756	14.691	66.936	0.008	0.011
100	0.0116	Armenia	265.766	271.145	4.226	12.449	16.886	65.855	0.009	0.007
101	0.0115	Congo	91.497	597.251	9.337	4.593	83.423	34.906	0.004	0.022
102	0.0115	Syrian Arab Republic	52.280	243.995	21.519	3.071	22.688	43.867	0.013	0.046

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
103	0.0114	Senegal	106.998	126.405	19.579	12.801	16.291	65.447	0.016	0.013
104	0.0111	Cameroon	155.135	68.985	9.809	15.252	14.264	33.031	0.036	0.011
105	0.0109	Fiji	442.469	476.466	6.801	12.295	6.269	71.929	0.004	0.003
106	0.0106	Barbados	480.850	888.015	38.111	4.428	41.746	82.381	0.001	0.002
107	0.0105	Suriname	647.777	626.203	11.644	14.422	19.368	13.831	0.004	0.003
108	0.0100	Kenya	61.447	62.325	6.589	10.231	24.928	48.847	0.030	0.023
109	0.0098	Gabon	303.123	660.581	4.871	4.334	10.087	18.229	0.005	0.011
110	0.0095	Bahamas	844.262	659.079	0.460	3.779	66.936	68.537	0.003	0.002
111	0.0095	Paraguay	165.473	170.911	12.979	9.623	15.865	15.708	0.013	0.009
112	0.0091	Azerbai-jan	111.179	259.078	9.925	3.583	14.733	10.244	0.012	0.020
113	0.0088	Republic of Moldova	99.782	282.319	9.587	8.342	27.011	71.496	0.004	0.008
114	0.0086	Zambia	72.426	129.637	17.064	8.955	19.448	19.220	0.011	0.015
115	0.0085	Papua New Guinea	67.498	323.835	3.740	6.266	8.063	51.396	0.005	0.019

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
116	0.0083	Mongolia	84.298	668.587	6.154	5.261	3.742	45.230	0.003	0.015
117	0.0081	Panama	369.055	95.617	8.325	4.720	9.981	42.175	0.015	0.003
118	0.0077	State of Palestine	135.205	111.978	11.217	8.735	7.966	86.014	0.007	0.004
119	0.0074	Ghana	49.565	90.564	10.012	6.891	20.000	12.331	0.014	0.019
120	0.0073	United Republic of Tanzania	41.660	43.347	3.211	8.844	22.970	37.239	0.022	0.017
121	0.0070	Belize	430.916	463.277	16.537	10.332	0.400	44.089	0.002	0.001
122	0.0069	Mozam-bique	49.930	42.101	10.738	11.615	37.912	29.696	0.014	0.008
123	0.0058	Uganda	28.531	36.486	11.238	6.941	32.983	55.129	0.012	0.011
124	0.0056	Kyrgyz-stan	64.391	102.631	3.446	10.933	14.625	38.906	0.004	0.005
125	0.0054	Madagas-car	37.421	35.458	3.650	13.619	3.105	65.593	0.009	0.006
126	0.0044	Tajikistan	74.118	15.504	2.396	14.351	66.305	13.824	0.006	0.002

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
127	0.0042	Yemen	53.021	24.780	2.324	7.141	9.753	9.230	0.015	0.005
128	0.0040	Nepal	22.919	23.704	2.106	6.336	19.597	79.619	0.008	0.006
129	0.0038	China, Macao SAR	395.056	137.725	6.438	0.809	2.599	27.325	0.003	0.001
130	0.0036	Malawi	23.975	32.830	11.345	9.244	14.800	35.578	0.004	0.004
131	0.0036	Saint Lucia	274.027	247.105	4.015	4.579	30.003	61.638	0.001	0.000
132	0.0035	Niger	13.987	58.331	24.772	4.728	1.624	82.255	0.003	0.008
133	0.0030	Bermuda	1000.298	144.536	3.431	1.354	43.650	97.617	0.001	0.000
134	0.0029	Haiti	45.020	6.148	5.260	9.873	3.796	82.974	0.005	0.001
135	0.0027	Rwanda	24.864	19.601	6.591	6.278	11.285	53.263	0.003	0.002
136	0.0016	Iraq	36.870	3.628	7.100	2.182	5.231	0.266	0.014	0.001
137	0.0014	Central African Republic	28.967	7.039	9.792	7.930	13.240	30.389	0.002	0.000
138	0.0011	Burundi	15.374	4.505	2.840	8.917	25.419	17.050	0.002	0.000
139	0.0008	Gambia	22.855	6.658	2.942	5.279	1.082	65.985	0.000	0.000

CIP Ranking 2012	CIP Index 2012	Country	MVApc	MXpc	MHVAsh %	MVAsh %	MHXsh %	MXsh %	ImWMVA %	ImWMT %
140	0.0000	Ethiopia	11.443	3.264	9.409	4.220	17.831	9.826	0.011	0.002
140	0.0000	Eritrea	12.492	0.473	7.161	5.673	14.675	34.567	0.001	0.000
140	0.0000	Tonga	174.469	14.922	1.705	6.492	49.501	11.305	0.000	0.000

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Annex

The medium- and high-technology industry group

International Standard Industrial Classification description	International Standard Industrial Classification code revision 3
Manufacture of chemicals and chemical products	24
Manufacture of machinery and equipment	29
Manufacture of office, accounting and computing machinery	30
Manufacture of electrical machinery and apparatus	31
Manufacture of radio, television and communication equipment and apparatus	32
Manufacture of medical, precision and optical instruments, matches and clocks	33
Manufacture of motor vehicles, trailers and semi-trailers	34
Manufacture of other transport equipment*	35

*Subsector 351 is subtracted