

Industry Specific Market Potential Index

2016

Advanced Manufacturing

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Insights and Rankings

Preface

The Industry Specific Market Potential Index (MPI) compares the 89 countries that globally have the highest Gross Domestic Product (GDP) on several dimensions to rank them according to their market potential for different industries.

The Index compares these countries on six dimensions: size, growth rate, capacity, market openness, existing logistics infrastructure and risk (political, economic and business) of the country. To measure each dimension, a different set of indicators is identified for every industry. Secondary data that have been gathered from various reputable sources are used for these indicators, as noted. Ranking scores are calculated by adding up the dimensions, weighted by relative importance.

While the MPI is a very useful tool for companies in the process of researching new markets for export, it shouldn't be used as the single information source in decision making. MPI is designed to support other detailed market research and to be used for verification purposes. It can be utilized as the first step in market research, to help identify the focus countries for which more detailed market research should be conducted.

Since MPI is calculated with the most recent data available, it is also important to remember that it represents the current state of the countries, and it does not aim to forecast their future states.

Industry specific MPIs are updated annually.

All the industry specific MPIs can also be found at: <http://globaledge.msu.edu/medc>

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Advanced Manufacturing

Up and Coming Markets for Future Growth Opportunities

India, Netherlands

Both the Netherlands and India have climbed up the rankings this year, indicating relatively high growth rates and market capacity to move forward with. For firms with experience with international expansion within the industry of advanced manufacturing, both the Netherlands and India provide future growth potential. The Netherlands is ranked 8th this year, eight points up from its position in 2014. The country has a high-quality infrastructure along with a skilled workforce which puts the country in a great position for its outward-facing economy, especially for the high-tech manufacturing sector. The Netherlands is also a part of the European Union which helps facilitate trading by using their import/export policies.

India had the most significant leap as it moved from being ranked 39 (2014) up to being ranked 17 this year. In the recent years, the country had edged closer to the U.S. in foreign policy which has made the United States closer with the country. As a result, the U.S. outsources a lot of back office work to India. India is not only a back office specialist but soon may be the location of a manufacturing boom. With Chinese costs rising aggressively, India may look to take some of the manufacturing business away in the coming years with their young, competitive workforce and major transport network improvements. However, India may not necessarily be a suitable option for early expansion as the country can be a riskier proposition that would require some oversight.

Established Countries

Canada, China, Germany, Japan, Singapore

Given that advanced manufacturing requires intensive capital resources coupled with considerable technical knowledge, these markets represent current and stable opportunities for expansion. China is the global center for the low cost of manufacturing for original equipment manufacturers. And even though manufacturing wages are rising, China and Japan have well-developed and high-tech manufacturing sectors with strong advantages in key areas such as electronics and heavy engineering.

Germany boasts the largest economy in Europe, with high research and development expenditures and an almost unrivaled reputation for world-class quality in manufactured goods. Canada and Germany both have large markets in the automotive and heavy machinery industries. Singapore's economy remains in a strong position and is the most developed in Southeast Asia. The business environment is highly regulated and rated and is complimented with well-established infrastructure, which should give investors great confidence. Singapore also has an advanced electronics industry with a particular strength in design and high-end manufacturing.

Export Countries

Belgium, South Korea

Belgium and South Korea don't have a large enough inherent market to warrant international expansion on that basis alone; however, they are positioned well to provide access to other markets. South Korea has great international relationships with the U.S. and has a well-established infrastructure to aid imports and exports. Both Belgium and South Korea provide low risk with big opportunities for growth. Belgium is one of Europe's most open economies with foreign trade representing 80% of its GDP value. Belgium's manufacturing sector is closely integrated with well-established countries such as Germany and France. South Korea is home to many world-class companies' cutting-edge technology in the production of everything from mobile phones to ships. South Korea is also home to a large labor force and will experience improvements in infrastructure with the 2018 winter Olympics.

Results of the Advanced Manufacturing Industry Market Potential Index 2016

<i>Advanced Manufacturing</i>	OVERALL	Market Size (30/100)	Market Growth Rate (15/100)	Market Capacity (10/100)	Market Openness (15/100)	Logistics Infrastructure (15/100)	Country Risk (15/100)
Country	RANK	RANK	RANK	RANK	RANK	RANK	RANK
China	1	1	38	1	36	7	30
Japan	2	2	76	2	20	17	11
Singapore	3	5	15	7	1	10	1
Germany	4	3	62	3	29	3	7
United Kingdom	5	6	19	11	12	4	15
Canada	6	9	61	6	40	5	12
Korea, Rep.	7	8	56	4	25	14	22
Netherlands	8	23	74	17	9	1	12
France	9	10	59	14	39	8	21
Belgium	10	14	37	31	30	2	17
Sweden	11	22	69	26	7	11	6
Hong Kong SAR, China	12	55	58	22	2	9	2
Luxembourg	13	16	47	63	14	12	4
Switzerland	14	17	45	32	24	15	4
Finland	15	21	68	60	4	24	9
United Arab Emirates	16	58	8	53	3	19	20
India	17	7	11	8	54	62	43
Norway	18	20	52	61	15	22	3
Austria	19	30	27	24	22	25	7
Denmark	20	33	41	58	13	13	12
Spain	21	12	71	29	43	6	37
Qatar	22	67	14	10	11	45	23
Estonia	23	28	40	38	10	34	24
Malaysia	24	46	22	54	6	23	27
Australia	25	29	78	9	21	54	15
Poland	26	25	20	50	38	28	28
Ireland	27	18	85	18	8	21	19
Mexico	28	11	26	40	68	26	48
Saudi Arabia	29	35	7	70	44	36	34
New Zealand	30	62	80	21	5	50	10
Lithuania	31	27	31	55	28	47	26
Portugal	32	59	34	69	16	18	31

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Country	RANK	RANK	RANK	RANK	RANK	RANK	RANK
Italy	33	13	73	37	53	20	49
Slovenia	34	40	39	34	17	30	45
Czech Republic	35	53	28	39	35	31	25
Russian Federation	36	4	55	35	79	60	68
Indonesia	37	19	17	23	42	80	53
Chile	38	50	46	43	19	33	32
Turkey	39	26	16	48	57	29	59
Vietnam	40	70	2	87	51	69	64
Peru	41	60	10	20	55	51	39
Israel	42	47	30	47	26	53	35
Malta	43	56	77	66	33	27	18
Latvia	44	37	64	28	27	37	50
Slovakia	45	74	29	33	48	49	28
Hungary	46	52	63	45	23	38	47
Nigeria	47	48	1	71	81	73	79
Dominican Republic	48	78	23	5	45	32	65
Cyprus	49	24	82	65	32	63	40
Sri Lanka	50	82	3	36	34	75	66
Costa Rica	51	57	24	78	56	64	38
Kuwait	52	71	12	84	65	74	33
Philippines	53	42	21	44	59	81	36
Morocco	54	84	54	67	41	16	43
Bulgaria	55	32	42	74	60	65	51
Croatia	56	61	66	81	37	42	55
Uruguay	57	79	48	80	50	59	46
Romania	58	72	70	57	58	56	42
Bahrain	59	85	53	46	18	52	54
South Africa	60	77	49	30	72	48	52
Greece	61	36	81	56	46	35	71
Thailand	62	65	79	52	52	58	56
Honduras	63	66	33	19	70	46	74
Egypt, Arab Rep.	64	43	44	73	47	40	78
Paraguay	65	75	13	27	75	71	67
Colombia	66	41	51	68	78	44	57
Bangladesh	67	45	5	88	73	82	76
Tunisia	68	69	72	13	66	77	63
Ecuador	69	68	25	42	62	39	81
Guatemala	70	86	32	64	69	43	58
Algeria	71	38	67	77	71	78	62
Brazil	72	31	83	16	82	61	60
Pakistan	73	49	35	49	63	72	82
Serbia	74	76	43	82	74	70	70
Nicaragua	75	83	9	86	77	68	77
Papua New Guinea	76	54		12	49	89	72
Azerbaijan	77	51	18	79	83	76	75
Cambodia	78	88	4	89	67	83	69
Kazakhstan	79	39	36	62	85	79	73
Argentina	80	44	60	59	84	57	80
Oman	81	73	87	83	31	55	41
Ukraine	82	15	84	41	80	66	85
Cuba	83	64	50	72		84	86
Venezuela	84	34	57	15	87	67	89
El Salvador	85	87	86	85	61	41	61
Belarus	86	63	75	75	76	85	86
Myanmar	87			51	64	86	84
Iraq	88	81	65	76	86	87	86
Uzbekistan	89	80	6	25	88	88	83

Assumptions

Since advanced manufacturing is considered as a sub-sector for almost all industries, it's assumed that advanced manufacturing has the widest scope of all industry MPIs. As a result, for the market size measurement, the value of all manufacturing is used, instead of focusing on the manufacturing value of a specific group of products. It is supported by the indicators of skilled and educated labor force, made up of people who are more likely to be employed in the advanced manufacturing jobs.

On the other hand, "number of nanotechnology patent grants" is used among the other more generic market capacity indicators, assuming the level of nanotechnology advancement is a good indicator of advanced manufacturing. Since there is no focus on any specific product group, no trade indicators are used for the measurement of the market openness dimension. As a final note, the market growth rate is measured by calculating the Compounded Annual Growth Rate (CAGR) of each market size indicator for the last 5 years.

Indicators & Resources

Dimension	Weight	Measures Used
Market Size	30	<ul style="list-style-type: none"> Labor Force with Secondary & Tertiary Education (2014) ³ Manufacturing, Value Added – Constant 2010 (2014) ³ Students at Secondary Level Technical Colleges (2014) ¹
Market Growth Rate	15	<ul style="list-style-type: none"> CAGR of Labor Force with secondary & tertiary education (2009-2014) ³ CAGR of Manufacturing, Value Added – Constant 2010 (2009-2014) ³ CAGR of Students at Secondary Level Technical Colleges (2009-2014) ¹
Market Capacity	10	<ul style="list-style-type: none"> Foreign Direct Investment, Net Inflows (2014) ³ GNI Per Capita (2015) ³ Nanotechnology Patent Grants (2012) ¹ R&D Expenditure (2015) ¹
Market Openness	15	<ul style="list-style-type: none"> Burden of Customs Procedure (2015) ³ Cost to Import (2014) ³
Logistics Infrastructure	15	<ul style="list-style-type: none"> Distance of Country from US ⁵ Liner Shipping Connectivity Index (2015) ³ Logistics Performance Index (2014) ³ Quality of Port Infrastructure Index (2015) ³

Country Risk

15

- Business Risk Rating (2016)⁸
- Economic Risk Rating (2016)⁷
- Intellectual Property Rights Protection (2015)⁹
- Political Risk Rating (2016)⁶

Data used are those available for most recent year. All sources were accessed in August-September 2016.

¹ Passport GMID, [Global Market Information Database](#)

² UN Comtrade, [Commodity Trade Statistics Database](#)

³ World Bank, [World Development Indicators](#)

⁴ World Trade Organization (WTO), [Tariff Database](#)

⁵ Happyzebra, [Distances](#)

⁶ Credimundi, [Country Risks](#)

⁷ Coface, [Economic Studies](#)

⁸ Swiss Export Risk Insurance, [Cover Practice for Countries and Banks](#)

⁹ International Property Rights Index, [2013 IPRI Report](#)

For More Information

For the indexing methodology, please refer to:

"Measuring the Potential of Emerging Markets: An Indexing Approach" - S. Tamer Cavusgil,
[Business Horizons, January-February 1997, Vol. 40 Number 1, 87-91](#)

"Complementary Approaches to Preliminary Foreign Market Opportunity Assessment: Country Clustering and Country Ranking" - S. Tamer Cavusgil, Tunga Kiyak and Sengun Yenyurt,
[Industrial Marketing Management, October 2004, Volume 33, Issue 7, 607-617](#)