Industry Specific Market Potential Index

Automotive Electronics & Composites / Lightweight Materials

Insights and Rankings

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Broad College of Business International Business Center



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 in order to rank them according to their market potential for different industries.

The Index compares these countries on six dimensions: size, growth rate, capacity, openness of the market, 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 different 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 use 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: <u>http://globaledge.msu.edu/medc</u>

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Automotive Electronics & Composites / Lightweight Materials

Up and Coming Markets for Future Growth Opportunities

China

Among the largest markets in the world, China comes up as the sole nation that has attractive market growth rates and market capacity in the automotive category. This comes as no surprise given the physical size of the country and the population size, as well as its relatively new and well-developed urban infrastructure.

China is an excellent market to pursue in international growth opportunities. China also satisfies more moderate efforts at expansion given its current market size and the success of automotive outsiders like Ford and GM.

Established Countries

Germany, Japan, Canada, UK, France, Korea Rep., Belgium

These countries have today, or had in the early 20th century, an industrial background in the automotive sector. Germany, Japan and South Korea are especially well developed automotive markets. Germany and Japan are understood to have a mature and well-trained automotive industry; however, South Korea is also very attractive given that it ranks among the top five countries in terms of production and exports. Canada is an attractive automotive market from the standpoint that it is much like the US, and auto consumption follows similar trends. Additionally, entry into Canada can provide companies outside the US with an avenue into the US market. The UK is less about a remaining market that hasn't been satisfied and more about the opportunity to test out new automotive products. France and Belgium represent industrial opportunities in the sense that they serve as hubs for manufacturing in mainland Europe.

Export Countries

Hong Kong, Singapore, Sweden, Luxembourg, Finland

Hong Kong represents an opportunity for the opportunistic automotive business to drive the necessary financing to go into the surrounding Asian markets. Beyond financing, Hong Kong's manufacturing and market capacity are of limited use. On the other hand is Singapore, which has an excellent base of manufacturing for the automotive industry but is not as closely tied to the Chinese market and comes with somewhat higher political risk. Sweden, Luxembourg and Finland, as with other industries, represent an export opportunity for the EU through relatively solid logistical infrastructure as well as little to no political clout.

Results of the Automotive Parts Industry Market Potential Index 2014

Automotive	OVERALL	Market Size	Market Growth	Market	Market	Logistics	Country
Parts	OVERALL	(30/100)	Rate (15/100)	(10/100)	(15/100)	(15/100)	(15/100)
Country	RANK	RANK	RANK	RANK	RANK	RANK	RANK
China	1	1	1	1	45	12	28
Japan	2	2	67	19	12	19	3
Hong Kong SAR, China	3	4	49	7	4	4	2
Germany	4	3	55	8	31	2	9
Singapore	5	8	50	2	3	7	20
Canada	6	14	48	17	2	6	5
Korea, Rep.	7	6	43	16	34	14	13
France	8	9	65	13	48	9	18
United Kingdom	9	13	71	20	26	5	16
Mexico	10	7	13	44	20	27	37
Belgium	11	24	58	4	47	3	17
Switzerland	12	28	63	9	23	15	3
Sweden	13	30	80	11	16	13	1
Malaysia	14	18	31	48	14	22	24
Australia	15	23	60	5	10	53	11
Brazil	16	5	10	24	79	61	35
Denmark	17	42	77	14	30	11	7
Luxembourg	18	82	70	6	32	10	19
Austria	19	32	68	12	39	18	10
Spain	20	15	78	25	55	8	36
Finland	21	54	86	15	6	16	6
Netherlands	22	25	74	22	21	1	45
Israel	23	41	32	10	5	48	34
India	24	11	7	42	62	66	43
Italy	25	12	75	27	60	21	33
Saudi Arabia	26	22	35	46	24	29	30
Czech Republic	27	20	40	31	46	32	23
Norway	28	40	57	18	18	25	32
New Zealand	29	46	59	32	7	54	8
Russian Federation	30	10	12	26	82	67	41
Slovakia	31	29	15	40	57	47	12
Ireland	32	50	82	23	9	24	22
Peru	33	53	5	67	17	55	48
Poland	34	17	39	36	58	34	38
Chile	35	55	36	49	28	31	26
Estonia	36	61	41	33	13	38	29
Thailand	37	16	17	68	64	63	44
United Arab Emirates	38	57	87	21	11	17	25
Indonesia	39	19	3	57	49	84	54
Costa Rica	40	64	30	64	1	71	53
Portugal	41	38	62	28	40	20	49
Bahrain	42	83	26	39	19	37	51
Kuwait	43	60	46	30	41	76	15
Turkey	44	21	45	37	59	28	59
Oman	45	77	81	34	22	42	14
Slovenia	46	65	72	29	42	30	27
Dominican Republic	47	68	22	62	8	33	69
Morocco	48	56	11	72	68	26	56
Malta	49	79	79	41	43	23	31
South Africa	50	27	47	54	63	35	42
Vietnam	51	36	2	70	53	73	72
Guatemala	52	70	29	88	27	39	65
Hungary	53	35	73	35	52	40	46
Cyprus	54	67	54	38	35	41	64
Tunisia	55	63	14	52	74	49	60
Romania	56	33	20	60	78	74	39
Egypt, Arab Rep.	57	45	24	82	37	44	76
Bulgaria	58	44	42	59	71	65	47

Uruguay	59	78	53	50	67	36	50
Lithuania	60	58	83	45	33	43	58
Honduras	61	75	25	79	44	45	73
Colombia	62	59	56	65	72	46	40
El Salvador	63	76	66	74	25	57	62
Philippines	64	31	52	89	38	81	55
Nicaragua	65	88	27	80	54	68	68
Papua New Guinea	66	89	19	84	29	89	61
Ecuador	67	71	33	75	51	51	77
Paraguay	68	80	16	87	65	75	66
Latvia	69	66	85	53	36	58	52
Sri Lanka	70	72	21	86	61	70	74
Greece	71	34	69	43	66	50	70
Nigeria	72	43	9	71	70	77	78
Croatia	73	69	84	47	56	52	63
Serbia	74	73	34	55	69	79	71
Qatar	75	48	89	3	15	56	21
Algeria	76	39	37	63	85	82	56
Bangladesh	77	81	4	85	81	85	79
Argentina	78	26	38	51	84	59	80
Kazakhstan	79	52	18	61	87	80	67
Cambodia	80	86	6	83	73	86	84
Pakistan	81	62	44	77	76	69	81
Ukraine	82	37	76	56	75	62	82
Belarus	83	47	28	58	83	64	86
Myanmar	84	87	23	76	50	88	86
Venezuela	85	51	61	66	77	72	83
Cuba	86	85	64	69	80	60	86
Azerbaijan	87	74	88	73	86	78	75
Iraq	88	49	8	78	88	87	86
Uzbekistan	89	84	51	81	89	83	84

Assumptions

Since the automotive parts industry has a big aftermarket segment, the Automotive Electronics & Composites / Lightweight Materials MPI has been calculated with a focus on both segments of the industry:

- 1) Auto parts used for manufacturing
- 2) Auto parts used for aftermarket (maintenance and wholesale)

Thus for the market size, both the number of cars and commercial vehicles manufactured and the number of cars and commercial vehicles already in use are used as variables. Also the values of Automotive Electronics & Composites / Lightweight Materials manufactured and imported are integrated in the market size calculations. Market growth rate is measured by calculating the Compounded Annual Growth Rate (CAGR) of each market size indicator for the last 5 years.

Trade and tariff data for the following Harmonized System (HS) codes is used for the measurement of the market openness dimension as well as other generic export-related indicators.

HS7 Code	DEFINITION					
390950	Polyurethanes					
392099	Of other plastics					
392630	Fittings for furniture, coachwork or the like					
392690	Other (articles of plastics and articles of other materials of headings 39.01 to 39.14)					
732690	Other (articles of iron or steel)					
852610	Radar apparatus					
853120	Indicator panels incorporating liquid crystal devices (LCD) or light emitting diodes (LED)					
853650	Other switches (Electrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (for example, switches, relays, fuses, surge suppressors, plugs, sockets, lamp-holders and other connectors, junction boxes), for a voltage not exceeding 1,000 volts; connectors for optical fibers, optical fiber bundles or cables)					
853710	For a voltage not exceeding 1,000 V (Boards, panels, consoles, desks, cabinets and other bases, equipped with two or more apparatus of heading 85.35 or 85.36, for electric control or the distribution of electricity, including those incorporating instruments or apparatus of Chapter 90, and numerical control apparatus, other than switching apparatus of heading 85.17)					
853890	Other (Parts suitable for use solely or principally with the apparatus of heading 85.35, 85.36 or 85.37)					
854370	Other machines and apparatus					
8542	Electronic integrated circuits.					
854449	Other (Insulated (including enameled or anodized) wire, cable (including co-axial cable) and other insulated electric conductors, whether or not fitted with connectors; optical fiber cables, made up of individually sheathed fibers, whether or not assembled with electric conductors or fitted with connectors.					
870810	Bumpers and parts thereof					
870829	Other (Parts and accessories of the motor vehicles of headings 87.01 to 87.05)					
870899	Other (Parts and accessories of the motor vehicles of headings 87.01 to 87.05)					
9033	Parts and accessories (not specified or included elsewhere in this Chapter) for machines, appliances, instruments or apparatus of Chapter 90.					
940540	Other electric lamps and lighting fittings					

Indicators & Resources

Dimension	Weight	Measures Used
Market Size	30	 Imports of Parts and Accessories (2012)² Number of Cars & Commercial Vehicles in Use (2012)¹ Number of Cars & Commercial Vehicles Manufactured (2012)¹ Value of Auto Parts Manufactured (2012)¹
Market Growth Rate	15	 Growth Rate of Imports of Parts and Accessories (2012)² Growth Rate of Number of Cars & Commercial Vehicles in Use (2012)¹ Growth Rate of Number of Cars & Commercial Vehicles Manufactured (2012)¹ Growth Rate of Value of Auto Parts Manufactured (2012)¹
Market Capacity	10	 Foreign Direct Investment, Net Inflows (2011)³ GDP Per Capita (2011)³ R&D Expenditure (2012)¹
Market Openness	15	 Applied Tariff Rate on Auto Parts (2012)⁴ Burden of Customs Procedure (2012)³ Cost to Import (2012)³ Imports of Auto Parts and Accessories from US as a Share of Global Imports (2012)²
Logistics Infrastructure	15	 Distance of Country from US (2013)⁵ Liner Shipping Connectivity Index (2012)³ Quality of Port Infrastructure Index (2012)³ Reliable Logistics Infrastructure Rating (2012)³
Country Risk	15	 Business Risk Rating (2012) ⁸ Economic Risk Rating (2012) ⁷ Intellectual Property Rights Protection (2012) ⁹ Political Risk Rating (2012) ⁶

Data used are those available for most recent year. All sources were accessed in May 2013.

¹ Passport GMID, <u>Global Market Information Database</u> ² UN Comtrade, <u>Commodity Trade Statistics Database</u>

- ³ World Bank, World Development Indicators

- ⁴ World Trade Organization (WTO), <u>Tariff Database</u>
- ⁵ Happyzebra, <u>Distances</u>
- ⁶ Ducroire | Delcredere, <u>Country Risks</u>
- ⁷ Coface, <u>Economic Studies</u>
- ⁸ Swiss Export Risk Insurance, <u>Cover Practice for Countries and Banks</u>
- ⁹ International Property Rights Index, <u>2013 IPRI Report</u>
- ¹⁰ U.S. Energy Information Administration (EIA), <u>International Energy Statistics</u>

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 Yeniyurt, Industrial Marketing Management, October 2004, Volume 33, Issue 7, 607-617