



WECC Global PCB Production Report For 2010

Published September 2011

A Product of the Partnership among the WECC Member Associations
on Behalf of their Members in the Electronic Circuits Industry Worldwide



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About the WECC Global PCB Statistical Program

Development Team

The World Electronic Circuits Council (WECC) is a strategic partnership formed in 1998 by the major trade organizations serving member companies in the global electronic circuits industry. Its purpose is to increase the global influence and effectiveness of its member organizations for the benefit and improvement of the industry. The member associations cooperate on standards, market research, marketing, resource development, environmental issues, world trade and economic/political affairs.

The member organizations of WECC formed a working group in 2005 to pool their statistical resources and produce a global statistical report on printed circuit board (PCB) production for the benefit of their members.

The WECC Statistics and Market Committee includes the following members:

- ◆ CPCA – Kevin Yan, Vice President, China Printed Circuit Association, kevin_yyh@cPCA.org.cn
- ◆ EIPC – Konrad Wundt, Executive Director, European Institute of Printed Circuits, konrad.wundt@mie.de
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- ◆ HKPCA – Manda Wong, Administration Officer, Hong Kong Printed Circuit Association, mandawong@hkPCA.org
- ◆ IPC – Sharon Starr, Director of Market Research, IPC (committee chair)
- ◆ IPCA – P.S. Sudhakar, Vice President, Indian Printed Circuit Association, ipca@ipcaIndia.org
- ◆ JPCA – Masato Shishido, General Manager, Japan Electronics Packaging and Circuits Association, shishido@jPCA.org
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- ◆ TPCA – Michelle Hung, Deputy Secretary General, Taiwan Printed Circuit Association, michelle@tpca.org.tw

Please contact the representative at your association with any questions about the report or suggestions for improving this program.

Availability

The *WECC Global PCB Production Reports* are available only from these participating associations to their members. The reports are not available for sale.

Methodology

The *WECC Global PCB Production Report* includes estimates of PCB production by country or region based on the data collected by the WECC organizations from their member PCB companies. The estimates in these reports may differ from estimates published by other sources due to differences in methodology. There is no hard data on worldwide PCB production, only estimates based on data collected from representative samples of the companies in the industry.

WECC has published its Global PCB Production Reports since 2005. The reports are published annually. For the sake of comparability, all of the estimates are reported in U.S. dollars. The values reported are nominal, and are not adjusted for inflation or for fluctuations in exchange rates. Year-on-year growth rates, however, have been adjusted for currency fluctuations, due to the significant decline in the value of U.S. dollars. A table of average exchange rates for the period is included as an appendix to each report.

Confidentiality Policy

It is the WECC organizations' policy never to share any company-specific information with other associations (including the other WECC members) or with their member companies. Only aggregate data are shared for the compilation of this report. In this way, WECC maintains complete confidentiality for all member companies.

Definitions

PCB production attributed to a country or region reflects the value of the PCBs produced there, regardless of where the companies are headquartered, and should not be confused with the PCB market (i.e., where PCBs are sold).

Many flexible circuit producers also offer assembly and other value-added services. Because these producers sell assembled or partially assembled boards, it can be difficult for them to separate the value of the bare circuits from total sales. The estimates for flexible circuit production in this report, therefore, may include some assembly revenue.

Estimates of 2010 PCB Production Value

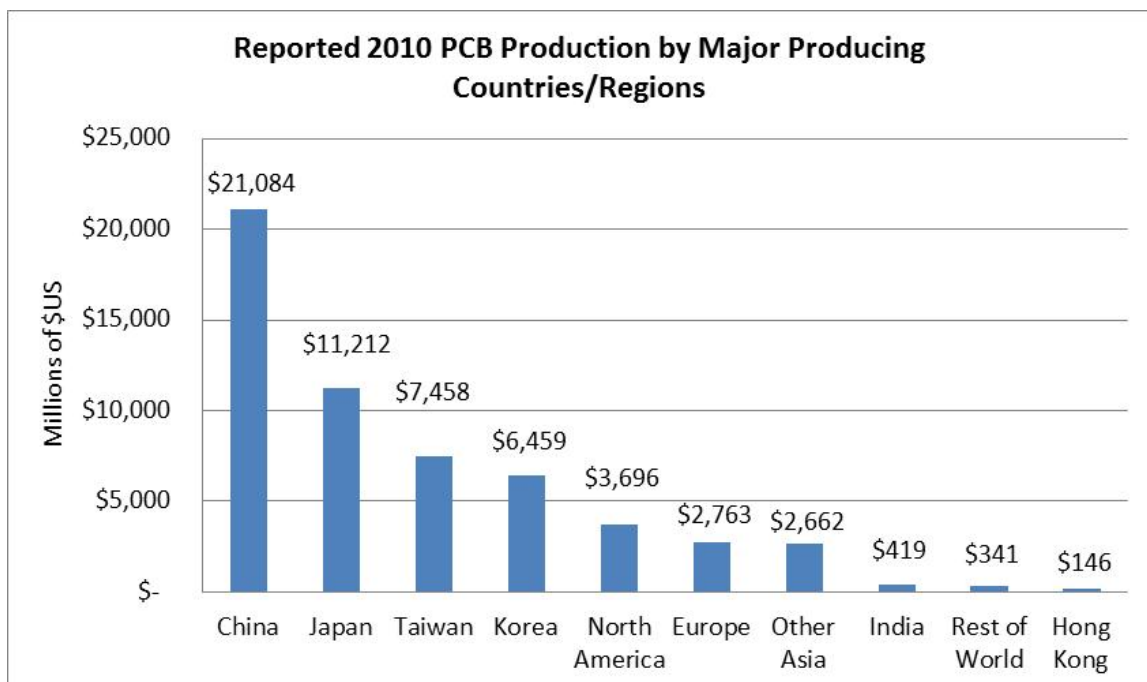
The member associations collected production data from companies producing PCBs in their countries or regions. Every effort was made to eliminate duplication between the associations' survey samples. The countries and regions included in this analysis produce nearly all of the world's PCBs, based on value.

Estimates of Total 2010 PCB Production in the World's Major Producing Areas (in millions of U.S. dollars)

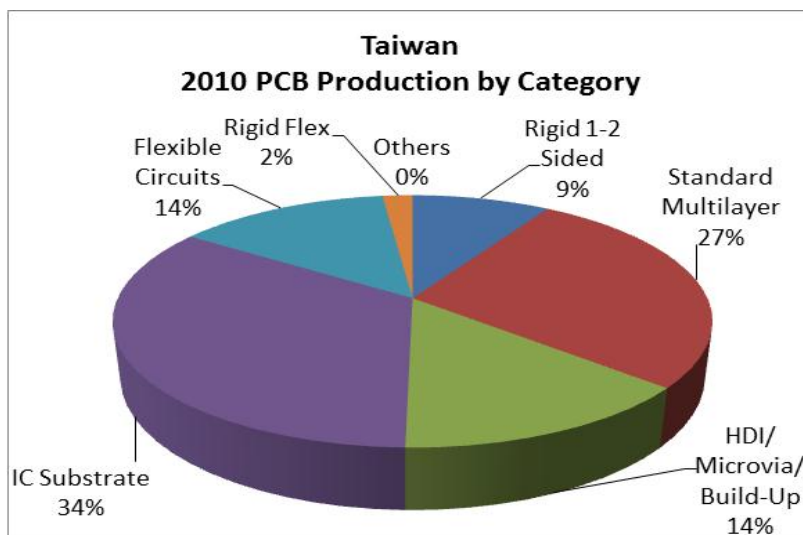
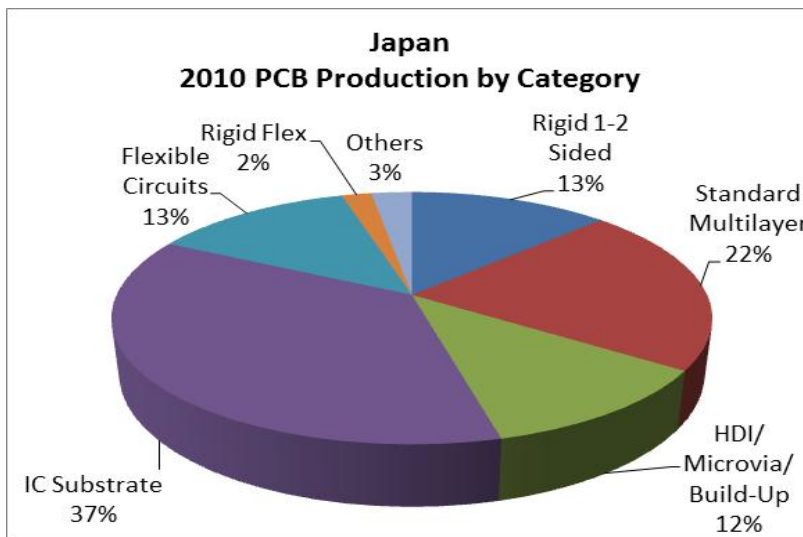
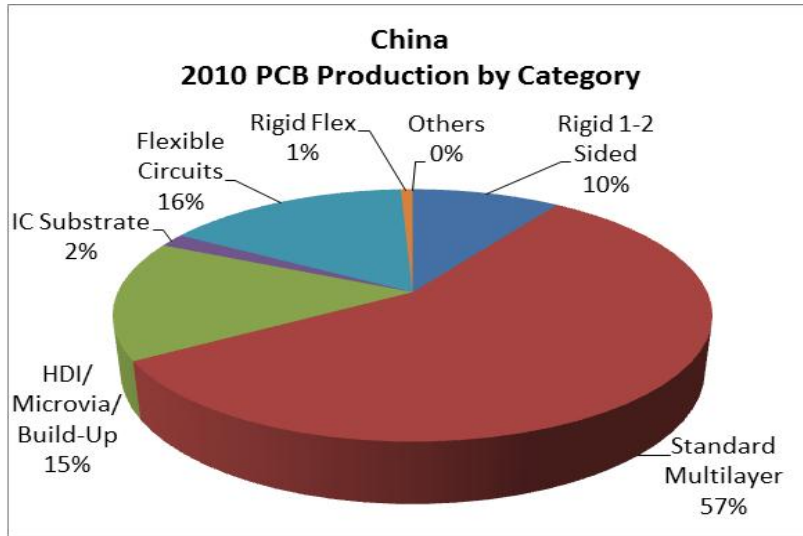
Country Where PCBs Were Produced	Rigid 1-2 Sided	Standard Multilayer	HDI/ Microvia /Build-Up	IC Substrate	Flexible Circuits	Rigid Flex	Others	Total Estimated Production Value
China	\$ 2,014	\$ 11,988	\$ 3,240	\$ 360	\$ 3,323	\$ 159	\$ -	\$ 21,084
Hong Kong	\$ 7	\$ 76	\$ 8	\$ 55	\$ -	\$ -	\$ -	\$ 146
India	\$ 240	\$ 152	\$ 2	\$ -	\$ 25	\$ -	\$ -	\$ 419
Japan	\$ 1,437	\$ 2,426	\$ 1,294	\$ 4,093	\$ 1,457	\$ 213	\$ 292	\$ 11,212
Korea	\$ 571	\$ 1,562	\$ 1,001	\$ 1,680	\$ 1,207	\$ 438	\$ -	\$ 6,459
Taiwan	\$ 663	\$ 2,042	\$ 1,048	\$ 2,541	\$ 1,020	\$ 144	\$ -	\$ 7,458
Other Asia	\$ 556	\$ 333	\$ 73	\$ 375	\$ 1,315	\$ 10	\$ -	\$ 2,662
Europe	\$ 768	\$ 1,310	\$ 268	\$ 22	\$ 193	\$ 164	\$ 38	\$ 2,763
North America	\$ 326	\$ 2,708	\$ 182	\$ 30	\$ 235	\$ 165	\$ 50	\$ 3,696
Rest of World	\$ 154	\$ 133	\$ 4	\$ 4	\$ 11	\$ 35	\$ -	\$ 341
Total Production of Major PCB-Producing Countries	\$ 6,737	\$ 22,730	\$ 7,120	\$ 9,160	\$ 8,786	\$ 1,328	\$ 380	\$ 56,240

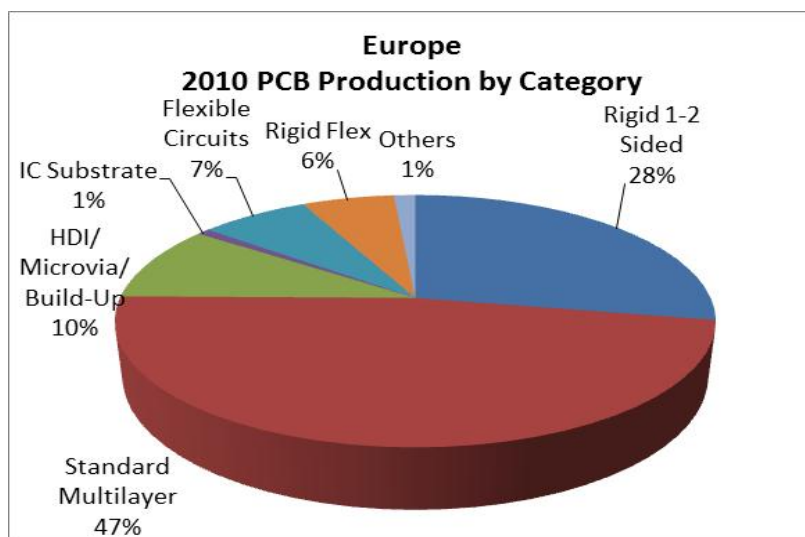
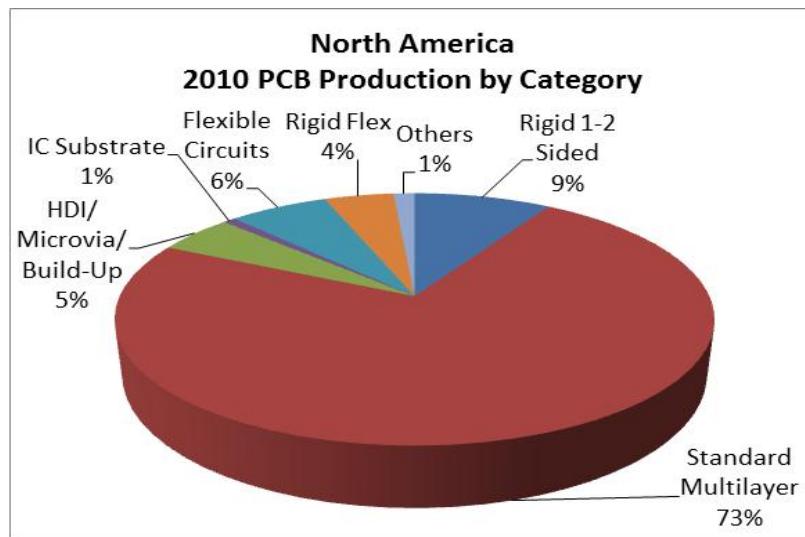
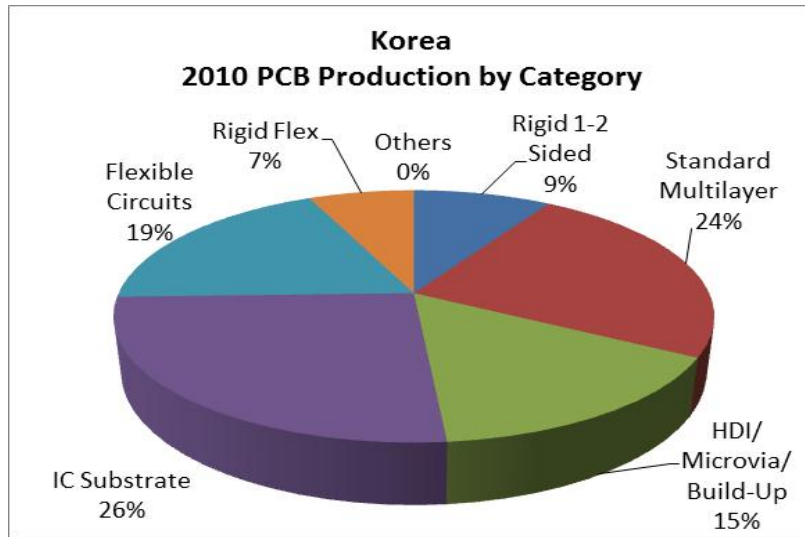
Notes:

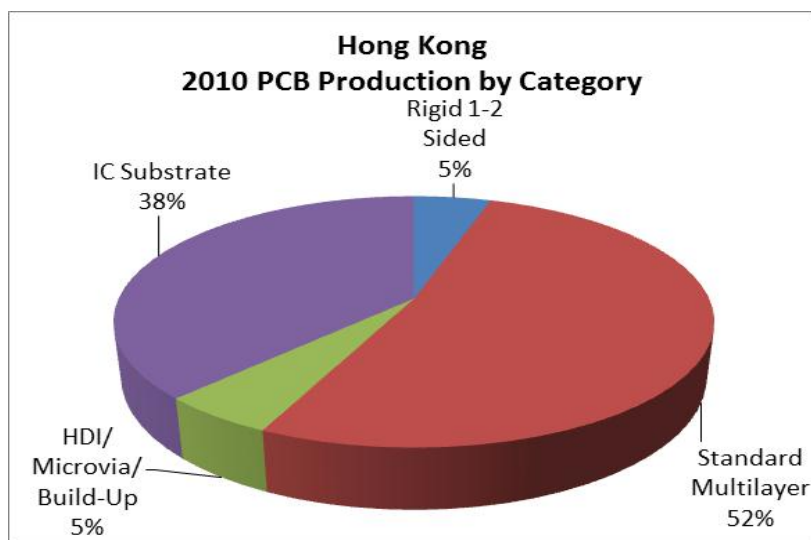
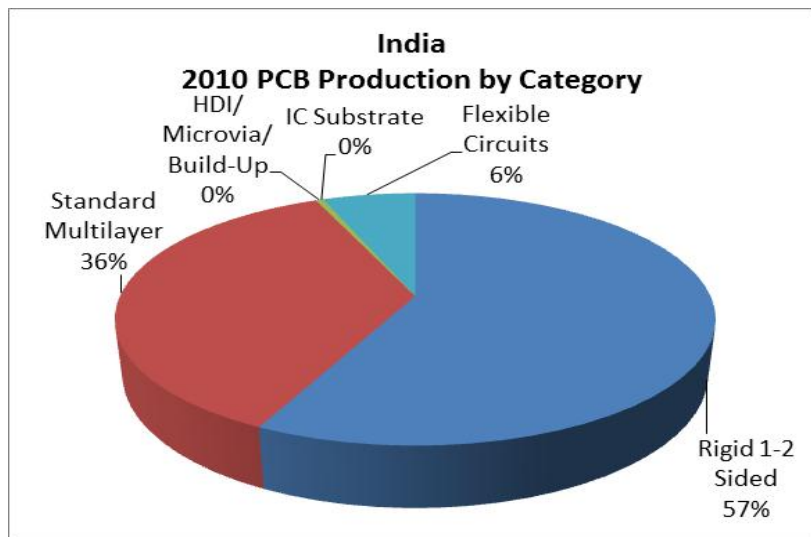
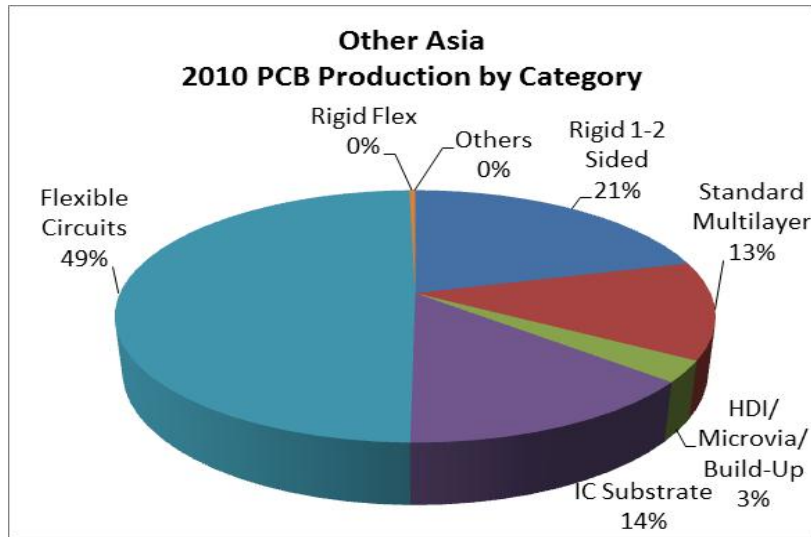
1. Flexible circuit and rigid flex estimates may include some assembly revenue.
2. Other Asia includes Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam.
3. The revenue estimates in this report are nominal and have not been adjusted for inflation or exchange rate fluctuations. Please see the appendix on exchange rates to determine the impact on amounts in specific currencies.
4. Totals may vary slightly from the sums of the numbers in the table due to rounding.

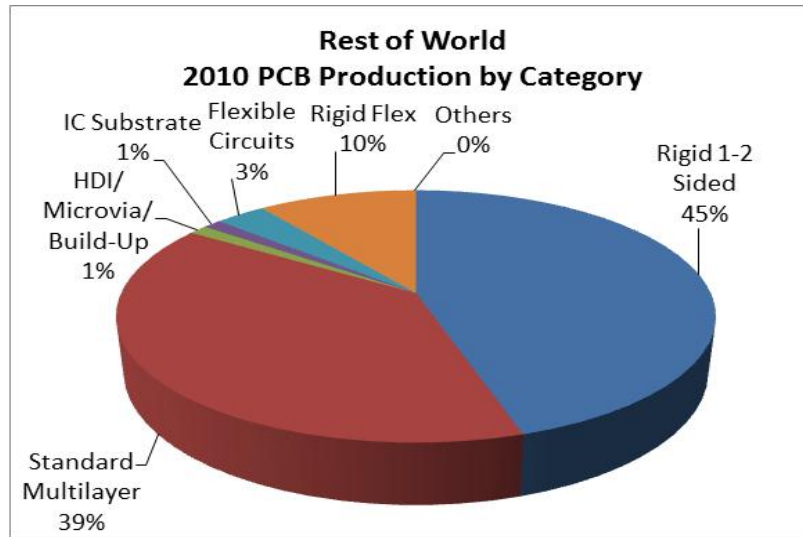


Product Profiles of Major PCB Producing Countries/Regions



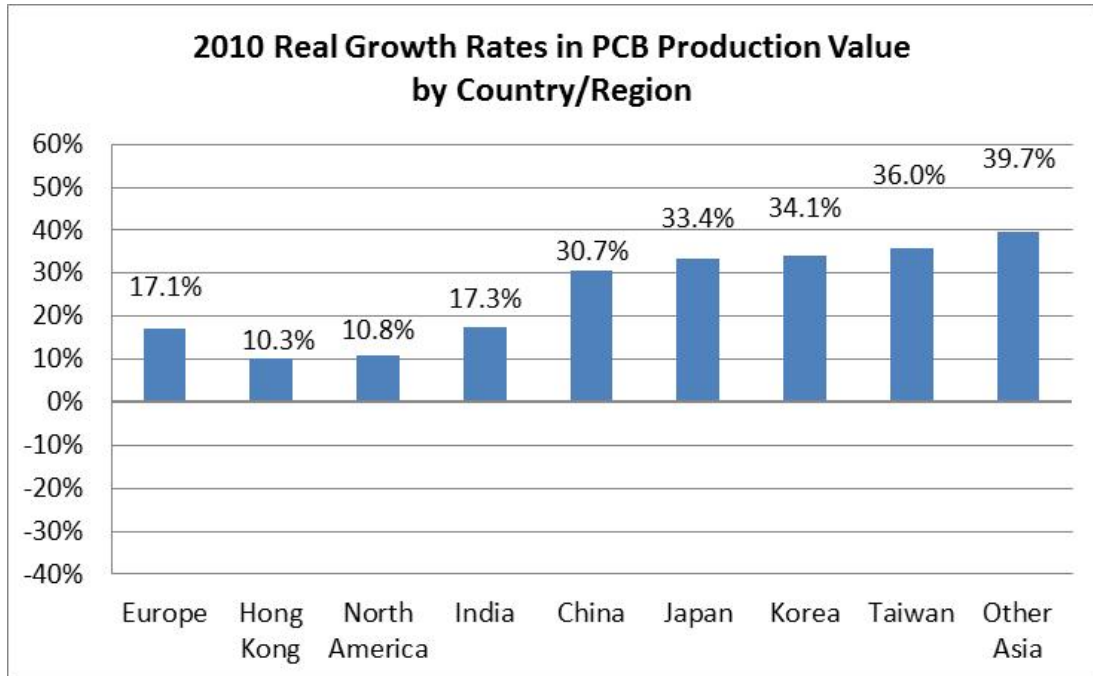






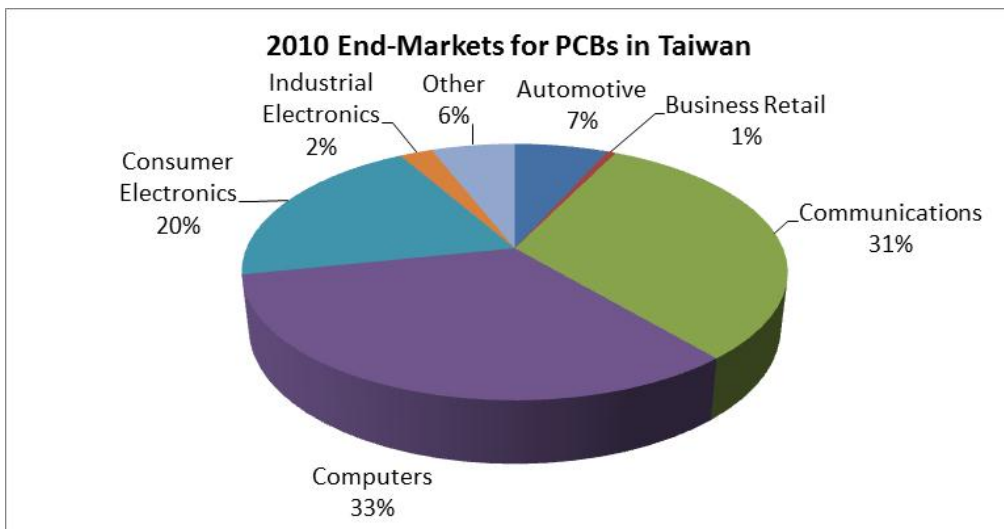
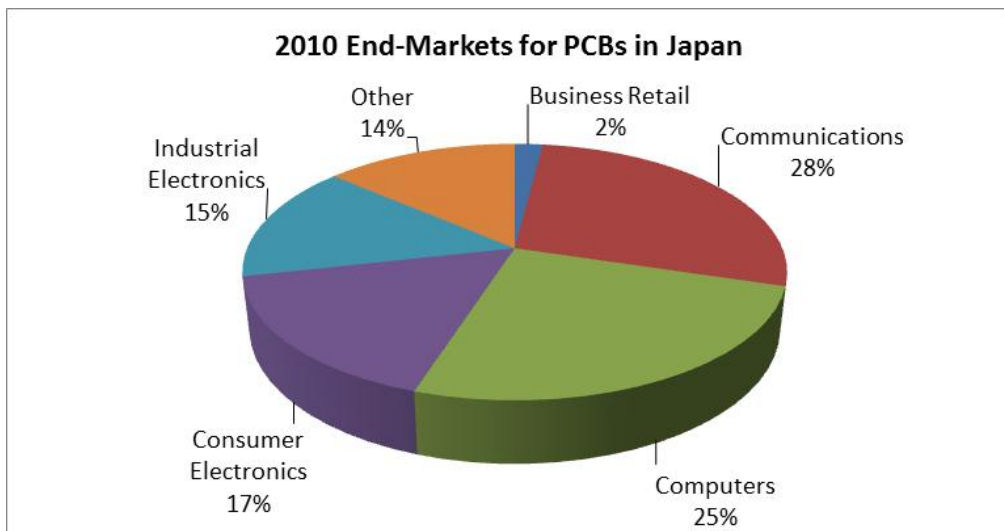
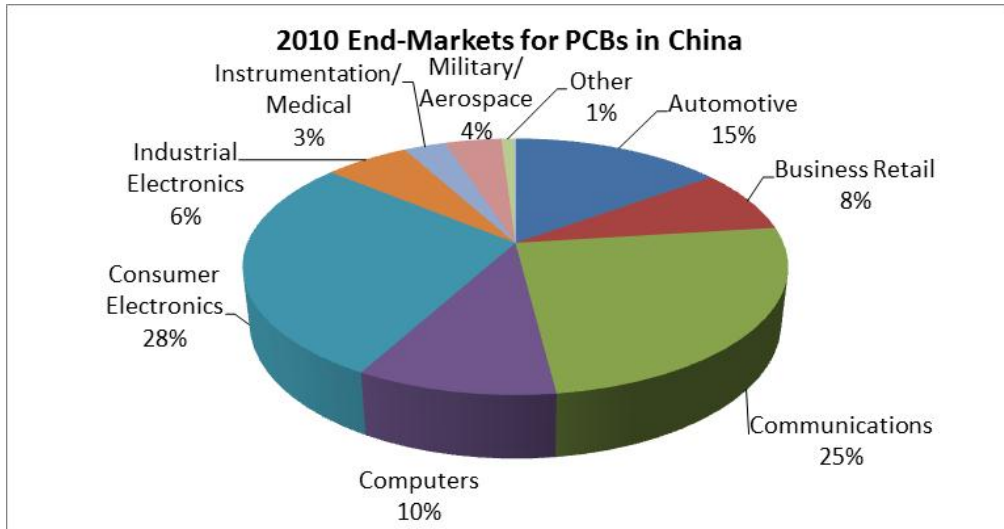
Industry Growth

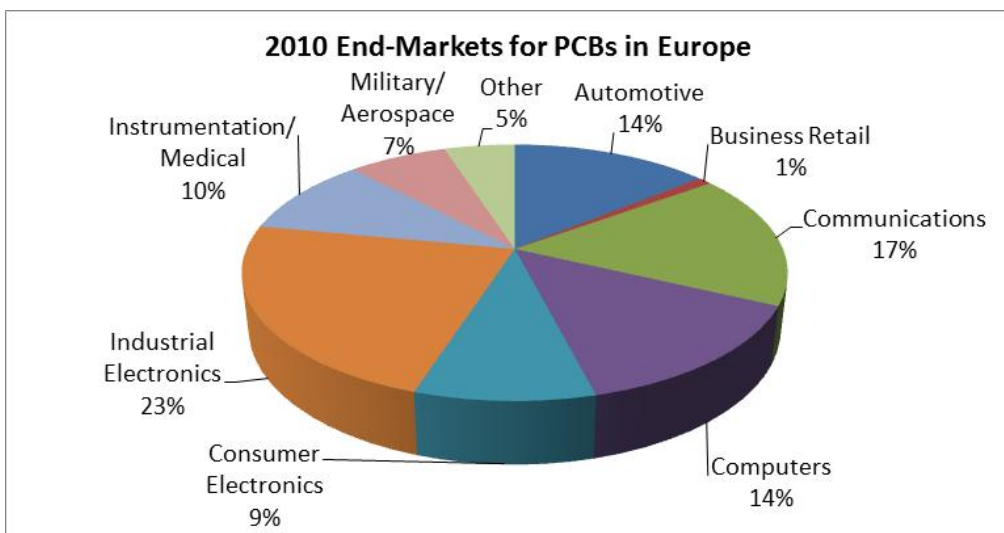
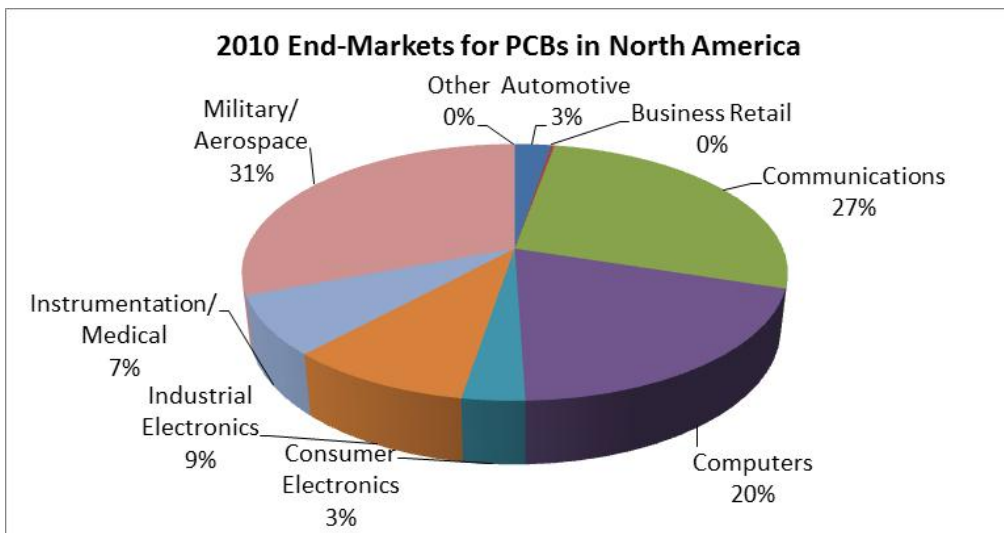
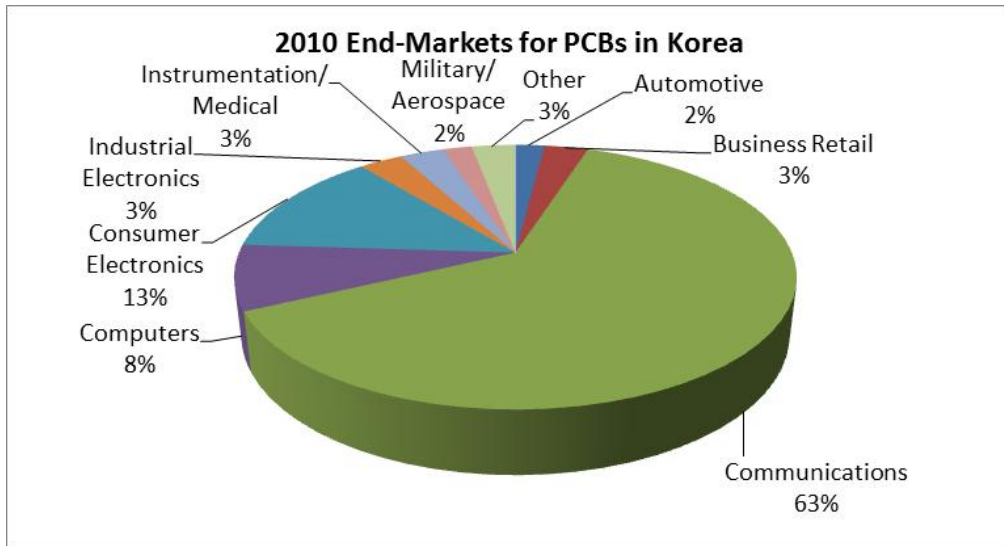
Based on a comparison of the 2009 and 2010 estimates from the WECC PCB production surveys, and adjusting to factor out the effects of exchange rate fluctuations, worldwide PCB production increased 30.4 percent from 2009 to 2010.

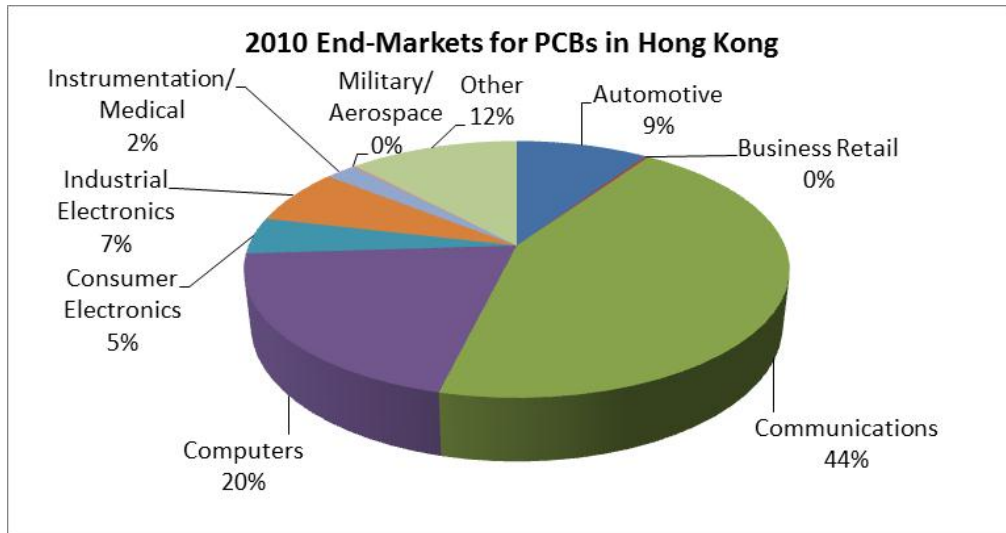


Notes: The growth rates shown in the graph above are based on data in 2009 constant dollars in which exchange rate fluctuations were factored out.

End-Markets for PCBs by Country/Region







Appendix: Average Exchange Rates for 2009 and 2010

		2009 Average Exchange Rate (=1.00 USD)	2010 Average Exchange Rate (=1.00 USD)	Currency (ISO Code)	% Change
ASIA/PACIFIC	Australia	1.28	1.09	AUD	-14.9%
	China	6.84	6.76	CNY	-1.2%
	Hong Kong	7.75	7.77	HKD	0.2%
	India	48.85	45.71	INR	-6.4%
	Indonesia	10428.88	9055.33	IDR	-13.2%
	Japan	93.62	87.75	JPY	-6.3%
	Malaysia	3.53	3.21	MYR	-9.1%
	New Zealand	1.60	1.39	NZD	-13.3%
	North Korea	139.58	135.00	KPW	-3.3%
	Pakistan	81.77	84.43	PKR	3.3%
	Philippines	47.73	44.94	PHP	-5.9%
	Singapore	1.45	1.36	SGD	-6.3%
	South Korea	1279.08	1153.15	KRW	-9.8%
	Taiwan	33.07	31.51	TWD	-4.7%
	Thailand	34.57	31.50	THB	-8.9%
Vietnam	18006.81	18924.20	VND	5.1%	
EUROPE	Austria	0.72	0.75	EUR	5.0%
	Belgium	0.72	0.75	EUR	5.0%
	Czech Republic	19.09	19.07	CZK	-0.1%
	Denmark	5.36	5.62	DKK	5.0%
	Finland	0.72	0.75	EUR	5.0%
	France	0.72	0.75	EUR	5.0%
	Germany	0.72	0.75	EUR	5.0%
	Hungary	202.37	207.76	HUF	2.7%
	Ireland	0.72	0.75	EUR	5.0%
	Italy	0.72	0.75	EUR	5.0%
	Netherlands	0.72	0.75	EUR	5.0%
	Norway	6.30	6.04	NOK	-4.1%
	Poland	3.12	3.01	PLN	-3.6%
	Portugal	0.72	0.75	EUR	5.0%
	Russia	31.82	30.31	RUB	-4.7%
	Slovakia	0.78	0.75	EUR	-2.7%
	Spain	0.72	0.75	EUR	5.0%
	Sweden	7.65	7.20	SEK	-5.9%
	Switzerland	1.09	1.04	CHF	-4.0%
	Turkey	1.56	1.51	TRY	-3.3%
United Kingdom	0.64	0.65	GBP	1.0%	
THE AMERICAS	Canada	1.14	1.03	CAD	-9.8%
	Mexico	13.52	12.62	MXN	-6.6%
	USA	1.00	1.00	USD	0.0%
	Argentina	3.72	3.90	ARS	4.9%
	Brazil	1.99	1.75	BRL	-11.9%
	Chile	549.43	501.04	CLP	-8.8%
Venezuela	2142.67	4210.73	VEB	96.5%	

Source: www.oanda.com/convert/fxhistory