

The Rising Tide of the OEM Market

Those who follow our research know that we keep a close watch on the worldwide OEM electronics manufacturing market—in other words, the market for computer, communications, consumer, industrial/medical and the transportation sectors. It is an enormous market in terms of revenue, nearly one trillion in cost of goods sold (COGS) in 2008, declining to \$832 billion in 2009 and expected to exceed \$1.3 trillion by 2014.

<u>Market Segment (\$M)</u>	<u>2009</u>	<u>2014</u>	<u>CAGR</u>
Computer	265.6	425.0	9.9%
Communications	197.0	304.7	9.1%
Consumer	167.2	273.3	10.3%
Industrial/Medical	93.9	142.5	8.8%
Transportation	<u>108.5</u>	<u>164.9</u>	<u>8.7%</u>
Total	832.2	1310.4	9.5%

Source: New Venture Research

What is remarkable about this market is its robustness. It is difficult to find markets of this scale that are expanding that the current compounded growth rate. Even more amazing is that this growth rate has increased over the past few years which is amazing considering that it is in the last ten years that we have seen the explosion of notebook computer and mobile phones. In this next five-year period, it will be consumer products that will take the lead—products such as flat TVs, 3D TVs, video game consoles, navigation systems and IP set-top boxes.

By comparison, the medical market have always exhibited solid growth, mainly in the areas of diagnostics and imaging systems as well as surgical and monitoring equipment. Until last year, the industrial product industries such as semiconductor capital equipment, process control, test and measurement have been steadily expanding. Yet, with the downturn in 2009 capital spending went into a deep freeze and these markets contracted considerably. The same was true for the automotive industry although aerospace/defense and ‘other transportation’ (off-road, trains, marine, etc.) remained relatively strong.

Nearly 2/3 of the OEM market today is comprised of computer and communications equipment and this percentage is growing. Yet, a large part of these markets are commodity in nature, and once OEMs engage in the Asian business model of margin depletion, little money will be made out these sectors. Oddly, ODMs (original design manufacturers – eg. Compal, Asus, Quanta, Wistron – discussed later) last year were some of the most profitable in the industry in 2009. While EMS companies lost of \$7 billion, ODM firms made more than \$2 billion.

However, the real story behind the growth of OEM market lies in where the assembly of electronics products is taking place. In this regard we must look to EMS suppliers (including ODMs) and the growth rates associated with production taking place in low-cost countries. Today, EMS assembly accounts for around 32% of the total electronics assembly market. Yet, the growth of these suppliers in the three general low-cost regions (Mexico, Eastern Europe and China) account for the highest growth rates in the industry. Assembly value in these regions is approximately 50% higher than in high-cost regions. The following table summaries this data.

<u>EMS Market (\$M)</u>	<u>2009</u>	<u>2014</u>	<u>CAGR</u>
Americas	47,519	84,424	12.2%
- Mexico	15,056	27,348	12.7%
EMEA	38,105	66,713	11.9%
- Eastern Europe	25,631	46,748	12.8%
APAC	184,070	327,728	12.2%
- China	<u>112,543</u>	<u>202,895</u>	<u>12.5%</u>
Total	269,693	478,865	12.2%

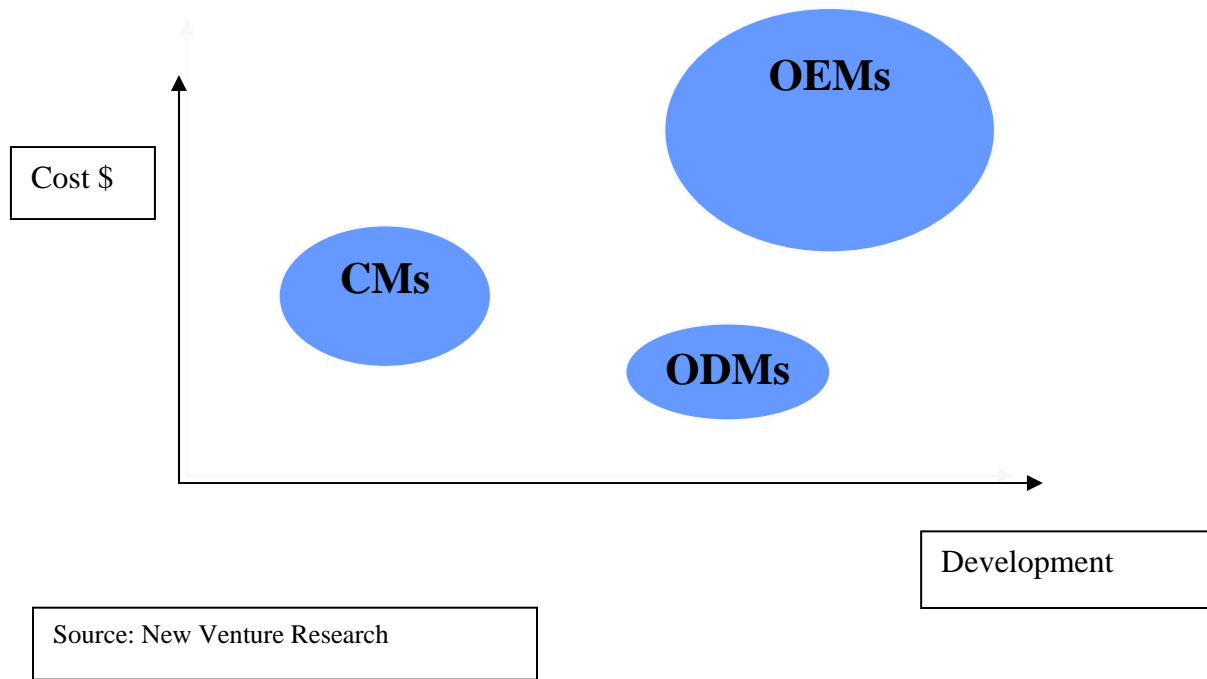
Source: New Venture Research

The reason for this disruption can be understood when comparing the average base (unburdened) labor rates throughout the world. Essentially, there exists an order of magnitude of difference between low-cost regions when compared to the base wage rate of high-cost regions. Making matters more difficult, once a competitor makes the move to migrate to a low-cost region, frequently others must follow to remain viable. (As the saying goes, ‘Once one cow crosses the rivers, so will the others.’)

<u>2009 EMS Labor Rates by Country</u>	<u>Hourly Rate (USD)</u>
Germany	10.65
England	9.09
USA	8.25
Japan	8.47
Ireland	7.86
Spain	6.21
Hungary	3.84
Mexico	2.35
Taiwan	2.70

India	1.30
China	1.22

ODMs have served to disrupt the EMS industry the way EMS suppliers once disrupted the OEM electronics industry. ODMs typically have a lower cost of operation due to their focus on a select few commodity products and Asian operations base. Moreover, they can discount their assembly prices by raising their design and component prices which are often bundled into their service offering. As a result, EMS suppliers find it difficult to compete head on with ODMs in the product sectors that they excel in. The figure below highlights the supplier differences in value-add and cost.



OEMs like to work with ODMs because they lower risk by not having to invest in design, materials or inventory (EMS companies frequently burden the OEM customer with inventory liability). ODMs are attractive because they offer advanced designs, fresh IP and the ability to bring a new product to market very quickly. But ODMs are risky because an ODM partner may become an industry competitor once they gain the product design knowledge, as has happened in the past. Moreover, ODMs have a tendency to tolerate unhealthy profit margins just to gain a contract and this can be risky for the OEM should the market soften or they go out of business. (Oddly Foxconn, which is officially a EMS company, succeeds by modeling the ODM business model.)

One might ask with the EMS industry only accounting for 32% of the total available market, where is the other 68% of OEMs product assembly? The answer to this can be found in the geography and business philosophy of leading electronic companies. By a wide margin, Asian (Chinese, Taiwanese, Korean and Japanese) OEMs prefer to manufacture in-house while North American and increasingly European OEMs are looking to outsource as their business model. Furthermore, a high percentage of OEM products are simply not outsourceable (aerospace, defense, medical, industrial, etc.) and are often produced in such low volumes that subcontracting is not profitable. As a result, EMS penetration is not expected to exceed more than 37% of the entire OEM industry by 2014.

NVR has analyzed the opportunity for outsourcing by market industry and leading OEM company in excruciating detail through its recent report, "The Worldwide OEM Electronics Assembly Market - A Unique Database Providing Global Electronics Assembly Data on Nearly 300 of the World's Leading Outsourcing Companies", published in August 2010. For more information, see www.newventureresearch.com/