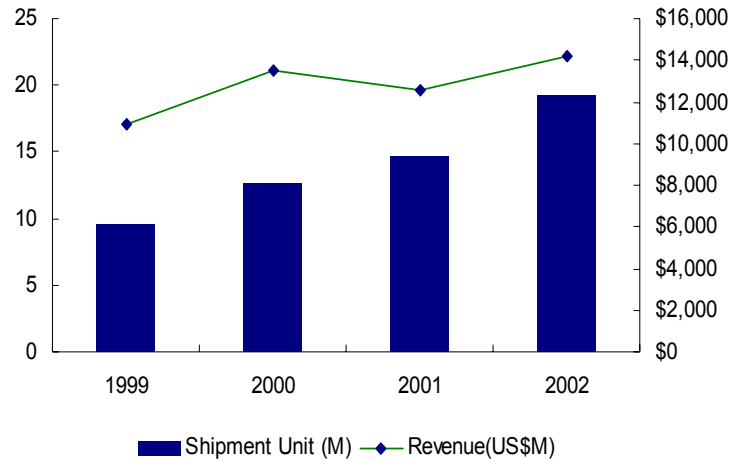


Top 10 ODM/OEM Notebook Manufacturers in Taiwan, 2002

Key Finding: Taiwan made notebooks will reach 19M units, 63% of the worldwide shipment in 2002.

In 2001, Taiwan became the worldwide biggest notebook manufacturer country. The total number of notebooks manufactured in Taiwan had amounted to 6 million, 9.7 million, 12.7 million, 14.2 million and over 19 million (projected) in 1998, 1999, 2000, 2001 and 2002, respectively. As such, Taiwan's notebook manufacturing industry has generated a tremendous growth of 49% (1998-2002 CAGR), which is much higher than the worldwide growth of 16.4% during the same period. However, due to a dramatic decrease in notebook's ASP from 2000, the Taiwanese notebook manufacturers faced very tough requirements from their customers. The fierce challenge decreased the OEM/OEM makers' revenue and profit since 2000. The total revenue of the Taiwanese notebook vendors was US\$8.4 billion in 1998, US\$11 billion in 1999, US\$13.5 billion in 2000. It decreased to US\$12.6 billion in 2001, and is expected to reach US\$14.2 billion in 2002. Even though the freefall of the ASP damaged the Taiwanese vendors' profit, it also brings more business opportunities for the most flexible and cost effective notebook suppliers in the world.

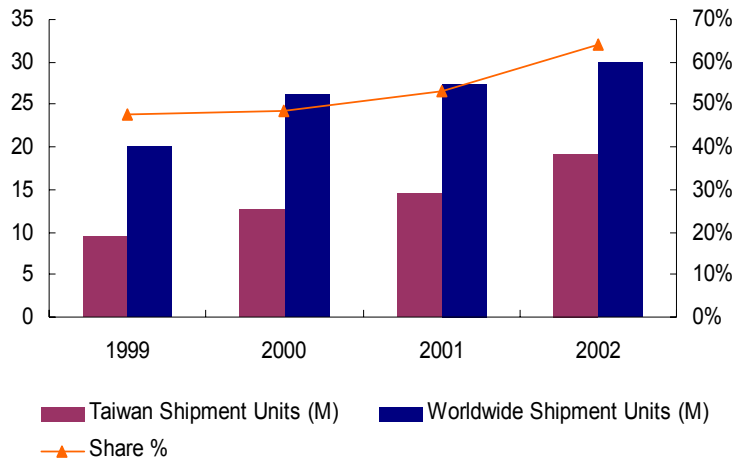
Figure 1
Taiwan Notebook Production Units and Revenue, 1999-2002



Source: Top 10 ODM/OEM Notebook Vendors in Taiwan, 2002

After replacing Japan as the largest notebook manufacturer worldwide in 1999, the Taiwanese makers maintained the leadership and kept increasing their market share. With more than 19 million shipments projected this year, Taiwan is expected to seize a 64% share of the total worldwide notebook production.

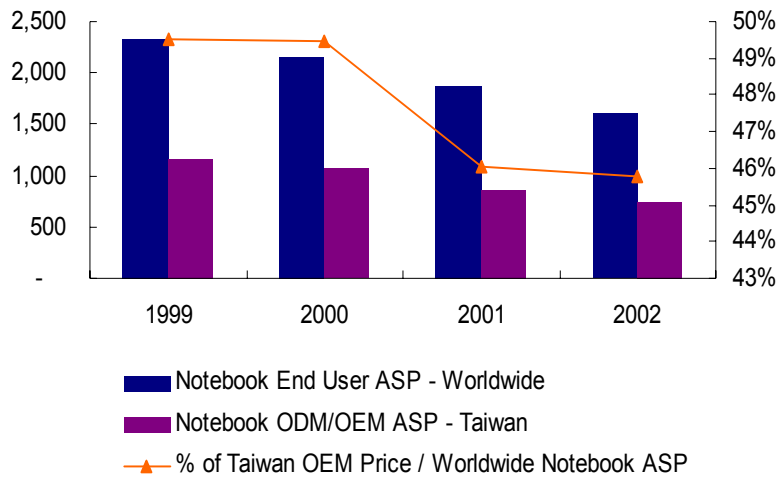
Figure 2
The Percentage of Taiwan Made Notebook, 1999-2002



Source: Top 10 ODM/OEM Notebook Vendors in Taiwan, 2002

The notebook cost for the outsourcing brand name vendors and prices for the end users have been decreasing. The Taiwanese-produced notebooks accounted for 50% of vendors' cost in average in 1999, but the percentage is expected to decrease to less than 46% in 2002. Not only has the fierce competition between the notebook makers driven the OEM/ODM price down, but it has also increased the production of the notebook's motherboard and barebone, as opposed to producing the complete notebook system. The revenue of the barebone, aside from LCD, CPU, and Hard Disk, is only 50% to 65% of a complete notebook, and the motherboard revenue is even much lower. Vendors such as Dell and Sony, the highest growth vendors in recent years, are the key players that are only demanding for barebone and motherboard shipments.

Figure 3
Taiwan Notebook ODM/OEM Price vs. Worldwide Notebook ASP,
1999-2002



Source: Top 10 ODM/OEM Notebook Vendors in Taiwan, 2002