Model Behavior

Billions have been spent in the past decade trying to find the right mix of capacity, inventory and demand. The result? Red ink, as for the better part of the past three years, OEMs haven't made money, EMS companies haven't made money, and suppliers haven't made money. Reasons abound. Companies paid big bucks to resolve their irrational exuberances (read: no-holds barred buying sprees) of the late '90s. Pile on a few billion dollars worth of inventory writedowns. And for good measure, throw in the costs of a litany of restructurings, bankruptcies and the like, and well, it's a big number. Really big.

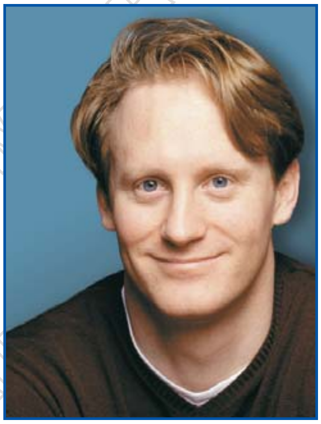
Yet check out the underlying profit model, which is anything but logical. The OEM beats up the EMS provider, who in turn pinches pennies from the board fabricators and solder-paste vendors, who extract every concession they can from suppliers of materials and metals, and so on back to the mines.

At last count there were way north of 1,000 EMS firms worldwide, which means plenty of bling to go around, provided every product was outsourced … but only a fraction are. And a situation in which 1,000 companies provide the same service and none (or very few) turn a profit is another way of saying it's time to own up to the fact that our outsourcing model is more than a little broken. "The greatest amount of disinformation," says Charles Barnhart of Technology Forecasters, "is related to cost and price. OEMs are sure they are getting screwed on price. CEMs are positive on the basis of their results they are getting screwed."

One of the reasons a remedy has been so slow in coming is because we've lacked the forum to broadly debate the real issue: pricing. To survive, Barnhart says, EMS firms need purchase price variance. "OEMs want CEMs to manage everything but don't want to pay for that service." Is there a middle ground, or are we chasing peace in the Middle East? Clearly, a better system would be for the OEM to sit down with its EMS provider at the start of a program and say, Here's the form factor and the functions we need, and here's the price we think we can sell it at. And the EMS firm would then help map a plan for how to build the product so that each segment of the chain – OEM, EMS and all suppliers – could turn a profit.

This of course assumes that the 600-lb gorilla of the supply chain, the OEM, has incentive to change. Barnhart thinks it does: "There's risk with getting product for free. There's an investment on everyone's part – certainly on the OEM's part upfront in qualifications, transfer of knowledge, and so on – and when that is done simply on price and not on cost-of-ownership, things like continuity of business and IP are at risk." Adds Mark Zetter, president of Venture Outsource and an expert in outsourcing contract requirements and supply-chain risk mitigation, "It has to be a win-win situation."

Barnhart has developed a simple methodology based on how prices are done, which he has been quietly teaching to EMS and OEM managers over the past two years. Formerly vice president of strategic accounts at Sanmina-SCI, Barnhart bases his model on data culled from confidential interviews with tier one to four CEMs, surveys and case studies. The workshop looks at the quotation process and uses role-playing for effect.



The reason most models don't work, Barnhart believes, is because buyers "don't comprehend the total cost accrued in the manufacture of a product and don't understand what subjective business costs a company makes in formulating a price before margin is applied." In response, he instructs procurement staff on how to calculate prices and, more importantly, how prices should change with circumstances.

When a PCB costs less than a Krispy Kreme doughnut – and many do – it's a sign that OEMs are getting a sweet deal from their suppliers. So while demand doesn't outstrip capacity overall, but in specific geographies for specific technology, this is happening. Short supply lines mean OEMs don't have time or inventory in pipeline to switch vendors. The shrunken chain may also embolden EMS firms to say, ante up or get out.

As of late, OEMs are showing signs of bending, if only a little. Zetter has negotiated into contracts ECOs that normally would not be itemized. Companies like Fogbreak Software have emerged, providing tools that fashion real-time assessments of ERP, SCM, CRM, and Demand Planning data into a clear pricing picture. (Sanmina-SCI and Plexus are customers.) Barnhart is circumspect. "When you ask someone to do something, you pay them. When you provide pricing into a very difficult negotiation, if it can't be done in a way that's profitable, you have to walk away."

Flextronics CTO Nic Braithwaite told me last year, "It's not the number of companies doing something that gives stability in the supply chain. It is the financial strength of the companies." In short, a universe of 1,000 money-losers is bad, but one of 10 profitable companies is good. He may be right, but let's hope it doesn't come to that.

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