WEB: Salvatore’s Managerial Economics in a Global Economy, 7th ed.

Chapter 3: The Education of Michael Dell

Introductory Comment: The following selection illustrates most of the concepts presented in PART I of the text, and thus it serves as an excellent integrating case study. It clearly shows the nature and scope of managerial decisions in a current real-world situation—the industry for personal computers (PCs). In addition, it illustrates the theory of the firm in actual operation and the importance and function of profits in providing the signal for the efficient allocation of society’s resources. It also shows the firm’s optimizing behavior as it attempts to minimize costs and maximize profits.

He dropped out of college to start his company. His business model conquered the PC industry. Now, at age 40, Dell takes his place among the nation’s most respected executives. The company turned 21 years old in May 2005, and it is now one of the nation’s most prominent and respected corporations. Michael Dell’s company has run through the competition like some kind of sports team from Boston. Let’s quickly review the recent events of the PC industry: IBM, the company that practically invented the desktop computer, has exited the business by selling out to the Chinese firm Lenovo. Gateway has seen its business crash—its stock, which traded above $80 five years ago, now fetches $4 and change. Compaq wisely sold out to Hewlett-Packard, which unwisely doubled down in this market, giving Dell—as one wag puts it—“a bigger butt to kick.” And of course it was HP’s bet on Compaq that ultimately cost Carly Fiorina her job. Truly, this is an industry under assault, and in every instance the guy at the other end of the gun is Michael Dell. “You have to just say he has done a hell of a job,” says former GE CEO Jack Welch. “No one has pulled the levers of cost, quality, and service better than Dell.”

Dell has thrived as downward-spiraling prices and commodification washed over the PC industry, benefiting the company’s customers and bashing its competitors. Instead of battling the tide by attempting to erect proprietary systems, as HP and IBM often did, Dell used its low-cost, direct-sales model to ride the wave. Today, by nearly every unit of measure in the computer hardware business Dell is irrefutably the No. 1 company in the U.S. Be it in desktops, notebooks, and servers, or in profits, growth, and margins, Dell is the leader. And it isn’t slowing down either. At its mid-February (2005) earnings conference call, Dell announced that technology research firm IDC had determined that it had surpassed HP to become the worldwide leader in PC market share, with 17.6 percent.

Success brings unexpected challenges. For years Michael Dell and company CEO Kevin Rollins—Dell remains chairman but turned over the CEO reins to his right-hand man last year—cultivated a chip-on-the-shoulder mentality at their company. But now, with all the accolades and soaring market share, that could ring hollow. I suggest as much in an interview with Rollins.

*Fortune:* “You’re not an underdog anymore.”

*Rollins:* “Well, we think we are.”

*Fortune:* “You’re deluding yourself.”

*Rollins:* “I’ll tell you why we think we’re an underdog, and that is, we had been a PC company. We’ve been migrating the last three or four years out of being a PC company. We’ve moved into servers and storage, mobility products, services, software peripheral categories, and printers, and became a diversified IT company. If you look at those other categories, we’re not the leader, we’re not the biggest. So as we’ve built out a diversified IT portfolio, we’re a small guy again, and it keeps this notion of the underdog, gotta struggle, gotta change, gotta do things for the customer.”
Sure, it’s pep-talk stuff, but Rollins is describing a fundamental shift at Dell. Until recently the company’s business model was to be the world’s most efficient assembler and distributor of Wintel technology. In other words, if a customer wanted a PC with an Intel chip and Microsoft software, Dell was the optimal machine to purchase. The idea may seem basic, but remember that companies like IBM and DEC spent hundreds of millions of dollars developing alternative operating systems and hardware that didn’t pan out.

Obviously, being the premier Wintel vendor has worked like a charm for Dell, but lately growth in the PC business has been slowing down, particularly in the huge but mature U.S. market. Between 1996 and 1999, PC sales in the U.S. climbed on average 16 percent annually. Between 2000 and 2004, sales grew only 3.6 percent per year. True, Dell can still make big market-share gains—unlike Microsoft and Intel—but the graying of the U.S. PC business is nevertheless critical, because Dell derives some 50 percent of its revenue from this market. Looking ahead, Dell and Rollins understood that their company would need new growth drivers, which is why they have pushed into servers and storage, and—in a direct challenge to HP’s golden goose—printers.

Michael Dell’s Rise
By now you are probably familiar with Michael Dell’s star-spangled bio. He began his business tinkering with machines in his University of Texas dorm room, and a mere eight years later cracked the Fortune 500, making him, at 27, the youngest Fortune 500 CEO ever. Doubters said his company would never challenge the big boys, that his model wouldn’t work overseas, that he couldn’t sell servers—and he has proved them wrong every time. Today the 9.6 percent stake he holds in his company is worth some $10 billion, making him one of the richest men in the world.

There is one key point in Michael Dell’s story that is overlooked, however, and that is the extent to which he is almost completely self-taught. Unlike CEOs such as GE’s Immelt, Home Depot’s Nardelli, and 3M’s McNerney, for instance, Michael Dell didn’t do time at GE’s famed Crotonville, N.Y., training center, soaking up management acumen at the knee of Jack Welch. Dell never went to Wharton or the Harvard Business School either. He didn’t even stick around at the University of Texas long enough to collect his undergraduate degree.

Initially the man and his company were perceived as geek and gimmick. Dell knew how to cobble together PCs on the cheap and sell them on the phone—hardly a threat to the technology orthodoxy. After early success, though, it was acknowledged that the man and the company had become players in the PC industry. Dell understood not just the guts of a computer but also what made IBM tick and—more to the point—how to skewer Compaq and why it’s not wise to compete with Sony in consumer electronics. And today the man and the company have become global business paradigms, analyzed by management consultants, studied by old-school companies like GM and Lockheed Martin, and naturally the subject of case studies at the Harvard Business School. Sure, Michael Dell has surrounded himself with mentors and consultants when he needed to, but that’s not always easy for a founding CEO. “Michael never had an ego problem or a not-invented-here mentality. He had no problem going outside the company to find talent,” says Mike Kwatinetz, a general partner with Azure Capital in Silicon Valley who, as a former analyst at Sanford Bernstein, was one of the first on Wall Street to recognize Dell’s potential 13 years ago.

The company’s ride has not always been smooth, and of course its mistakes have contributed mightily to Michael Dell’s business education. In 1989 the company developed a family of high-end products code-named Olympic, which customers rejected out of hand. Dell killed the products hastily rather than allow engineers to convince him that they could be tweaked.

Four years later poor quality derailed Dell’s notebook line. Michael Dell brought in John Medica, the man behind Apple’s PowerBook, to fix the mess, and at his urging the company focused on the one notebook that worked best and scrapped the rest of the line.
More recently Dell and Rollins discovered that their subordinates perceived them as cold technocrats. Now Dell, Rollins, and the rest of management are working hard on the fuzzy stuff. Employees rate their bosses—including Michael and Kevin—every six months in “Tell Dell” surveys. “If you’re a manager and you’re not addressing [employee] issues, you’re not going to get promoted, you’re not going to get compensation,” says Dell. “And if you consistently score in the bottom rungs of the surveys, we’re going to look at you and say, ‘Maybe this isn’t the right job for you.’”

Just to give you an idea of how far Dell has come: 21 years ago (when the company was founded in 1984) IBM and HP were voted No. 1 and No. 3, respectively, on America’s Most Admired Companies list. (At that point if you had asked the voters, “What’s a Dell?” they probably would have told you it was a small, secluded, wooded valley.) As for PC market share, of course, Dell wasn’t on the radar screen, while Commodore, with about $1.1 billion in PC sales, was the industry leader with a 27 percent U.S. market share. IBM was No. 2, and Apple and Tandy came in at No. 3 and No. 4. (Atari and Kaypro were big back then, too, remember?) Fast-forward to today (2005) and you’ll notice that HP and IBM are no longer in the Most Admired’s top ten, though interestingly IBM ranks higher than Dell on the industry list (perhaps because Dell’s competitors didn’t want to vote for a company that’s eating their lunch). As for market share in the U.S., Dell is just above 33 percent, which means that today one in three PCs shipped is a Dell. (Worldwide it’s one in six.) Besides the U.S., Dell is now the No. 1 brand in Britain, Canada, and Ireland (all top-ten markets).

Dell’s market-share gains would be impressive enough, but the company also has the growth and profitability throttles open all the way. Its worldwide revenues are growing 19 percent now—that’s seven percentage points higher than the rest of the industry—while profits are growing even faster. Dell’s margins are revealing, in that its gross margin of 18 percent is actually lower than IBM’s and HP’s. That’s because Dell is generally selling lower-margin machines. But a funny thing happens on the way to the bottom line: Dell’s net margin checks in at 6 percent, while the others are close to 1 percent. Why is that? Because Dell’s operating expenses—i.e., selling, general, and administrative—are so low, a direct result of the cost-effectiveness of selling directly to customers rather than through a middleman.

Dell also spends less on research and development than HP, IBM, and the others, a point that makes the folks at Dell a little prickly and defensive. Dell’s competitors say it is evidence that Dell doesn’t innovate. The folks at Dell beg to differ. Recently I had dinner in Austin at a place called Kenichi with Jeff Clarke, senior VP of products and head of R&D at Dell. As we order, I point out that Dell spends less than $500 million a year on R&D, or less than 1 percent of sales, while HP and IBM lay out upward of 6 percent. “It means they’re spending a lot more money than we are,” says Clarke, who’s been at Dell for 18 years. “One has to measure effectiveness. One has to measure the value. We tend to be a very efficient and a very effective spender of our dollars.” Clarke argues that Dell’s R&D effort is focused solely on open-standards-based computing (read Wintel), while the competition spends much of its R&D resources on proprietary systems that often don’t cut it in the marketplace.

Dell’s Move into Printers
The latest great battle in the PC business isn’t in computers but in printers. Dell is now waging war on Hewlett-Packard’s vaunted imaging and printing division, which produces some 70 percent of that company’s operating profit. To destroy this business would be devastating to HP. Printing is what’s known as an installed-base business, much like the famous Gillette razor-blade model. You sell the customer a razor, or in this case a printer, but the real margins are in the blades or, in the case of the printer, the cartridges, and you now have a captive customer who will buy from you for years. Dell began selling printers, both inkjet and lasers, two years ago, and Michael says that so far the effort is coming along fine. “Our goal this past year was to sell five million printers, and we did that,” he says. “We now have about 20 percent of the inkjet-printer market in the U.S., which I think is pretty remarkable. That suggests to me that five or ten years from now this is going to be a very significant business for us in terms of revenues and profits.” For now, Dell admits that margins are “not as great
as the other businesses,” but he insists that his machine’s lower price will erode HP’s business. (He maintains that a Dell color laser is roughly half the price of an HP and that the toner is 45 percent less.)

Vyomesh Joshi, head of printers and PC business at HP, counters by saying that Dell succeeded in PCs because that business was commodifying, while printers aren’t. He also believes that Dell’s partners (Dell outsources the making of printers) won’t let it get big. Told of this, a Dell executive responded, “Go back and see what HP said about us in servers five years ago. I’m sure they were saying the same kind of thing.” Yes, it’s true that Lexmark, Fuji, and Kodak are manufacturing Dell’s printers, but Dell’s engineers are digging into this business to make the machines work seamlessly with Dell PCs, servers, and notebooks. Dell has an ever-improving feature that will alert the customer when he’s getting low on ink. Just click to reorder one of those high-margin cartridges! And of course there is no middleman to take a slice of the profit.

Whether or not Dell is an innovator or will reign supreme in printers, what is unassailable is that this company is a manufacturing marvel. A fundamental difference between Dell and the competition is that at Dell, every single machine is made for a specific order. The others are producing machines to match a sales forecast. The advantages that Dell derives from this model on the factory floor are tangible and enormous. For instance, industry sources say Dell now carries only four days of inventory, while IBM has 20 days and HP has 28. Obviously, low inventory frees up mountains of cash for Dell that is otherwise tied up at IBM and HP. Dell’s manufacturing prowess doesn’t stop there. The company urges its suppliers—everyone from drive makers to Intel—to warehouse inventory as close to its factories as possible. Any cost that can be “shared with” (read “transferred to”) those suppliers, is. (Does that remind anyone of a certain large retailer headquartered in Bentonville, Ark.?) Pay a visit to a Dell plant and you can watch workers unload a supplier’s components almost right onto the assembly line.

All this is reflected in one eye-catching statistic: In 1998, Dell produced $745,000 of revenue per employee. Now, seven years later, the company does $900,000 of sales per employee (HP comes in at $540,000).

You would be correct, then, if you guessed that Dell’s factories are running full-tilt boogie right now. “We challenged our manufacturing guys to triple the throughput, and they did it,” says Rollins. Adds Dell: “We need capacity. The plants here are running flat out, seven days a week.” But Dell and Rollins saw that coming, and in late 2003 the company began searching for a site for a massive new plant. Where was the most cost-effective location? Taipei? Mumbai? Kuala Lumpur? Would you believe, Winston-Salem?

The notion of building a giant new computer-assemble plant in the U.S.—east of the Mississippi, mind you—is, to put it mildly, counterintuitive. Can Dell really make money manufacturing computers in North Carolina? “Our business in North America continues to grow in increments of $6 billion to $7 billion a year—but where are you going to make all the stuff?” asks Dell. “With our business model, it just does not make sense to go off-shore. The value equation is better building close to the customer.”

While the number of employees at the Winston-Salem plant is fairly modest, the state of North Carolina hopes the factory will attract dozens of other businesses to serve Dell and turn into something really large. Might be a pretty good bet. When Michael Dell first appeared on the business horizon a little more than a decade ago, you could see the potential of his business in the same way you can see an 18-wheel truck coming at you ten miles across the Bonneville Salt Flats. You know it’s going to take a while, but there’s no question it’s a big rig and no question it’s coming. If there are still any questions, let it be said that Dell, the big rig of the PC business, has arrived.

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Fast Forward

In 2006, Dell had 18 percent of the world PC market while HP had 15 percent. Since 2006, however, Dell has faced declining market share and falling profits as a result of stiff competition from other PC companies and the shift in growth in the PC market toward consumer sales instead of corporate sales on which Dell now relies upon for close to 80 percent of sales. In early 2007, Michael Dell returned as CEO trying to revive the company, but results have been inconsistent and Dell lost its spot as the world’s second PC vendor (after Hewlett-Pakard) to Taiwan’s Acer. In 2010, Dell share of world PC shipments had fallen to 12.3 percent as compared with HP's 17.4 percent and Acer's 14.0 percent. We live in a very competitive world and firms' fortunes can change rapidly.