

**Dell, A Great Company – Great for the US Economy?
Offshoring Viewed through Dell, Inc.'s Business Model – Ernest Nounou* April 29, 2004**

Summary

Dell, a paradigm among US corporations, and a leader in the hi-tech industry, has in twenty years evolved into a powerhouse. Others increasingly emulate its business model relying on offshore sourced components. While offshoring contributes to individual company competitiveness and profitability, taken in aggregate it has a negative impact on the US economy, especially by contributing to a structural component in the balance of trade deficit. Dell's contribution to the balance of trade deficit in 2003 is an estimated \$17.3 billion.



Dollar devaluation, the traditional method for addressing trade imbalances, and being pursued by Treasury Secretary Snow, will actually make matters worse. Detailed analysis of Fortune 2000 import and export are necessary for reaching sensible trade and economic policy conclusions.

Without offshored sourcing of components, it is unclear Dell could be an operating entity. In a sense Dell operates more as a foreign than US company. In fact Honda and Toyota's US operations contribute more to the American economy than does Dell.

Heavy reliance on foreign suppliers raise national security issues, and it remains unclear how US leadership in industries such as hi-tech can be assured absent significant domestic production.

Domestic Content, a policy successfully implemented by the auto industry 30 years ago, offers lessons that should be considered by other sectors of the economy.

Introduction

Time Magazine's April 26, 2004 edition deservedly ranks Michael Dell among the 100 most influential people in the world. Started from his dorm room 20 years ago with a \$1,000 investment, Dell, Inc. is now the leading seller of computers with total 2003 revenues of \$41.4 billion. Based in Round Rock, Texas Dell employs 46,000 people, of whom 22,200 are in the US. It has a stock market capitalization of \$91 billion, and is on many recommended lists for investing in hi-tech. It is a paradigm of great US companies, and again deservedly so. Why then question its business model's impact on the US economy?

Reductio ad absurdum

Per Wikipedia, "Reductio ad absurdum (from Latin *reduction to an absurdity*) is a type of logical argument where we assume a claim for the sake of argument, arrive at an absurd result, and then conclude the original assumption must have been wrong, since it gave us this absurd result." This concept is at the core for understanding the emotions and passions generated by the current debate on offshoring. It is also fundamental to the analysis and understanding of Dell and other US companies business models.

Offshoring is a legitimate business process and a necessary tool in management's arsenal for insuring a company's competitiveness in a globalized economy. Taken to extremes offshoring leads to some absurd results, and ignoring them by labeling opposing views as "Protectionist, Anti Free Trade, or Benedict Arnold CEOs" adds nothing to our understanding.

Dell and the US Corporate Business Model

Denials to the contrary and with rare exceptions, the US corporate model requires publicly listed companies to achieve higher operating results and increased margins each quarter, resulting in higher share prices. Senior management, at least in theory, is rewarded accordingly. (The extent of these rewards and how the pie is split is for another discussion.) With limits to sales growth over the past several years, managements have had fewer options for generating increased profits, with most opting to cut costs. This has been achieved in two ways:

1. Increased Productivity – A combination of headcount control and increased use of technology to produce the same or greater output with fewer workers.
2. Offshore US jobs to lower cost centers by closing US plants and laying-off workers, replaced by cheaper and sometimes superior equivalents.

As a paradigm Dell represents the ultimate of this model. Its April 12, 2004 10-K Annual Report filing and news release of same date reported by Reuters offer useful data for analyzing its impact on the US economy. The raw data and analysis is in the appendix below. The methodology behind the analysis seeks to identify the US component of Dell's operations. Four reasonable and non-prejudicial assumptions to Dell were made for the analysis:

1. Dell's Cost of Sales assumes a 10% US component, essentially to include domestic purchases of US chips and software it resells with its computers.
2. The average cost including benefits of Dell's 22,200 employees is assumed at \$50,000.00, resulting in a 2003 US payroll of \$1.1 billion.
3. US portion of total Cost of Sales is directly proportional to US sales: 69% in 2003 and 71% in 2002.
4. 50% of Dell's Gross Profit was remitted to the US.

Dell Operation and Financial Highlights

Table 1 - Dell, Inc. Sales (\$ Million)
(Source Reuters, 10-K Annual Report, and www.thethinktank.biz)

Sales by Geographic Zone	1/04		1/03		1/02
Sales – US	28,603	14%	25,047	5%	21,760
Sales – Europe	8,495	23%	6,912	8%	6,429
Sales – Asia	4,346	26%	3,445	16%	2,979
	41,444	17%	35,404	14%	31,168

- US sales as a percentage of total sales were 69% in 2003 from 71% in 2002.
- Offshore sales are growing nearly twice as fast as domestic sales.

Table 2 - Dell Employee Analysis
(Source Press Release - Reuters and www.thethinktank.biz)

Employees	1/04	1/03	Net Gain	Gain %
US	22,200	21,200	1,000	4.70%
Offshore	23,800	17,900	5,900	32.90%
	46,000	39,100	6,100	17.60%
US Employee Cost - Assume Average Cost \$50,000.00				
	\$1.11 billion	\$1.06 billion		

- US workforce as a percentage of total workforce was 48% in 2003, down from 54% in 2002.
- While US headcount increased by 1,000 in 2003, offshore headcount increased by 5,900, a 32.9% growth rate versus US 4.7%. Offshore hiring outpaced US hiring by a rate of 6 to 1.
- Dell's business growth, as reflected in its financial reporting, is clearly increasingly offshore centric. Note Dell already has design centers in Taiwan and China, and from the 10-K Report: "Dell's effective tax rate was 29.0% in fiscal 2004 compared to 29.9% for fiscal 2003...Dell's effective tax rate may decline in future periods as the company's business outside the U.S. continues to expand and contribute an increasing portion of Dell's consolidated operating profits."

Dell and the US Balance of Payments

Table 3 - Dell US Sales – Impact on Balance of Trade (\$ Million)
(Source Reuters, 10-K Annual Report, and www.thethinktank.biz)

	1/04	1/03	1/02
Cost of Sales	33,892	29,055	25,661
US Content - Assume 10% Cost of Sales	3,389	2,906	2,567
Cost of Sales Less US Content:	30,503	26,149	23,094
US Portion of Cost of Sales	21,047	18,566	16,166
Less: 50% Gross Profit	3,776	3,175	2,754
Dell Net Import/Yr – Balance of Trade Impact	17,271	15,391	13,412

- Dell, a paradigm US Corporation and hi-tech leader contributed \$17.2 billion dollars to the US balance of trade deficit in 2003, up from \$15.3 billion in 2002.
- As additional US Corporations across all sectors of the economy have increasingly adopted this model to source components and services offshore, a major part of the balance of trade deficit becomes structural and won't go away, absent domestic alternatives.

As the accompanying photograph illustrates, very little of Dell's products contain US made components. The possible exceptions are the operating systems and software from Microsoft and Intel that Dell resells with each machine. Nor is it clear that Dell has any domestic alternatives for any of its hardware components, even if it wanted to source domestically.

Reductio ad absurdum: While offshoring has certainly contributed to Dell and other companies' abilities to profitably compete and provide great products at attractive prices, taken in aggregate to their logical extreme it has resulted in lost jobs, reduced domestic alternatives, and increased foreign dependencies now structurally embedded in the US Balance of Trade. This is similar to our dependency on foreign oil, surely an absurd result. So questions:

- As US hi-tech firms already and increasingly emulate Dell's business model, can we be sure of a vibrant US hi-tech industry, when little if any of it is produced in the US?
- For US national security, does it make sense for the critical hi-tech industry to be so dependent on offshore sourcing for manufactured components?

A glass of wine enhances the dinner experience and is reportedly beneficial to one's health. Similarly, offshoring is unquestionably a powerful force that enhances corporate profitability and competitiveness. Taken in the aggregate and to extremes offshoring has consequences as serious as taking an entire bottle or two of wine with every meal.

US Trade Policy – Wrong Choices

Economics 101 teaches the solution to trade imbalances is for the surplus country's currency to appreciate, while the deficit country's depreciates to a level that brings trade and services into equilibrium. And so Treasury Secretary Snow and others have been imploring China and other surplus countries in Asia to revalue their currencies against the US dollar. But as US imports of goods and services are increasingly "must have" requirements of the business sector, the effects of such a policy lead to perverse results, certainly in the near and visible term. Consider how

10% and 20% dollar devaluations impact Dell's 2003 operations, its domestic customers, and the US economy.

**Table 4 - Foreign Currency Revaluation Analysis on 2003 Dell Operations
(\$ Million)**

	+10%	+20%
Cost of Sales Less US Content - Per Table 3	30,503	30,503
Cost of Sales Less US Content - Adjusted for currency revaluation	33,553	36,604
Add: US Content - Per Table 3	3,389	3,389
Adjusted Cost of Sales	36,942	39,993
US Component of Adjusted Cost of Sales – 69%	25,490	27,595
Adjusted US Sales - Assume 18.2% Margin	31,162	33,735
Less: Actual US Sales in 2003	28,603	28,603
Price Increase/Headcount Decrease/ Addition to Trade Deficit	2,559	5,132
Impact in %	8.9%	17.9%

- 10% - 20% foreign currency revaluations (dollar devaluation) result in the balance of trade deficit increasing between \$2.5 billion and \$5.1 billion.
- Absent domestic alternatives, Dell's US operations must pass on between 8.9% - 17.9% price increases to customers and reduce US headcount in some combination to maintain it's 18.2% operating margin, prized by Wall Street. Note eliminating Dell's entire 22,200 domestic headcount saves only \$1.1 billion.
- Dell's foreign sales and assets appreciate in value via currency translation to US dollars, so Dell actually has incentive to have more offshore operations and sales versus domestic equivalents. This could lead to even more US job losses.

At issue is whether the gains from US dollar devaluation increase exports more than the cost of imports. The US would be better served with a granular study of the actual tradeoffs by a dollar devaluation on the imports and exports of the Fortune 2000, rather than assume an unconfirmed benefit based on Economics 101. Meanwhile, and thankfully, China and other countries have not listened to Secretary Snow.

Nor is it clear how more tax cuts or increased training for Dell workers would lead to higher value-added work in the US.

An Alternative Approach – Domestic Content

In the 1960s and 1970s a self-satisfied US auto industry leadership presided over the manufacturing of inferior cars, surrendering industry primacy to foreign competition, notably Japanese. Fearing an onslaught of auto imports, a quota system was imposed to protect this critical industry. Foreign auto companies were incited to establish manufacturing facilities in the US, and produced superior products for the US market.

Based on 2002 statistics posted on their websites, Honda and Toyota purchase US goods and services roughly equivalent to one-third of US sales, preserving a US industry, suppliers, jobs and purchasing power. Moreover, some of their sales represent exports. It is not clear Dell exports much, if anything at all.

Table 5 - Profile of Honda, Toyota, and Sony US Operations
 (Source – Corporate Websites and www.thethinktank.biz Assumptions)

	Year	US Sales	US Purchases	US Purch/US Sales	US Employees
Honda - Note 1	2002	\$32.4 billion	\$11.0 billion	33.90%	24,000
Toyota - Note 2	2002	\$47.6 billion	\$17.3 billion	36.30%	36,349
Sony - Note 3	2003	\$20.0 billion	?	?	22,000
Dell - Note 4	2003	\$28.6 billion	\$3.4 billion	11.90%	22,200

Note 1: Honda Sales Assumptions based on 1.24 million cars sold at average \$23,000 and 490,000 motorcycles at \$8,000.

Note 2: Toyota Sales Assumptions based on 2.07 million cars sold at average \$23,000.

Note 3: Sony did not indicate US purchase data

Note 4: Dell US Purchases are estimated at 10% of Total Cost of Sales - See above

Table 5's profile comparisons provide a useful framework for questions that immediately leap out:

- Honda and Toyota provide more business to the domestic US economy than does Dell, one of America's paradigm hi-tech leaders. Does this make sense?
- If Honda and Toyota can save \$1,000 / car through a combination of sourcing parts offshore and reducing US headcount (operationally but not politically doable), would the US economy be better off?
- Are there lessons learned from the auto industry's successful survival and competitiveness applicable for other sectors of the economy, including hi-tech?
- Given their shares are listed on US stock exchanges, their employment level of US workers, and level of contribution to the US economy, which companies are more "American," Honda and Toyota or Dell? (For another discussion.)

Conclusions

- Dell's operations prove the power of offshoring as a powerful and effective business process contributing to profitability and competitiveness.
- Taken to extremes, as does Dell's business model, its US sales significantly contribute to the nation's balance of trade deficit. As more US companies emulate its processes, they create and contribute to a structural component in the deficit in the absence of domestic alternatives.
- Dollar devaluation, the traditional solution for addressing trade imbalances, and being advocated by Treasury Secretary Snow, will further aggravate rather than improve matters.
- Detailed analysis of Fortune 2000 import and export are necessary for reaching sensible trade and economic policy conclusions.
- Offshoring contributes to reliance on foreign suppliers raising national security issues and concerns.
- Domestic Content, a policy of more than 30 years in the auto industry offers lessons that should be considered by other sectors of the economy.

Appendix

Dell, Inc.

Source 10-K Filing April 12, 2004 & Press Release April 12, 2004 - Reuters and

www.thethinktank.biz

(\$ Million)

	1/04		1/03		1/02
Sales	41,444	17%	35,404	14%	31,168
Cost of Sales	33,892		29,055		25,661
Gross Profit	7,552		6,349		5,507
Gross Margin	18.20%		17.90%		17.70%
Sales – US	28,603	14%	25,047	5%	21,760
Sales - Europe	8,495	23%	6,912	8%	6,429
Sales - Asia	4,346	26%	3,445	16%	2,979
	41,444	17%	35,404	14%	31,168
Sales: US %	69.00%		71%		70%
Sales: Offshore %	31.00%		29%		30%
Europe	20.50%		20%		21%
Asia	10.50%		9%		9%
Operating Exp	4,008		3,505		3,718
R & D	464		455		452
Selling & G & A	3,544		3,050		2,784
Non-Recurring					482
Operating Income	3,544		2,844		1,789
Income Before Tax	3,725		3,027		1,731
Taxes	1,080		905		485
Net Income	2,645		2,122		1,246
Effective Tax Rate (Per 10K)	29.0%		29.9%		28.0%

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