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The Study of Online Business: An example of Dell Computer Corporation

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Course: Electronic Commerce

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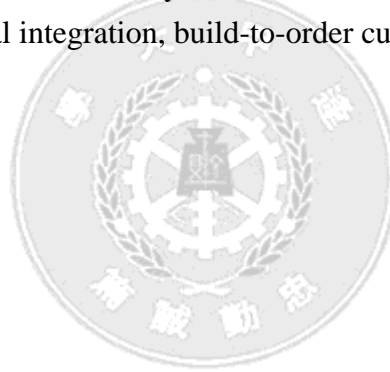Department: Graduate Institute of International Trade

Academic Year: Semester 1, 2009-2010

Abstract

In recent years, Dell Computer has an excellent performance in the personal computer industry.   This paper introduces Dell's company background and financial statement, and also shows Dell's strategies on web design and Business Model.   Dell's case illustrates how one business model may benefit from using information technology-direct sales and build-to-order.   We well use five-force analysis and value chain to analyze Dell's Business Model.

Key words: Business Model, five force analysis, value-chain analysis, Dell,
           Direct sales, virtual integration, build-to-order customer relationship

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1.Introduction

DELL Computer Corporation was multinational technology corporation that develops, manufactures, sells, and supports personal computers and other computer-related products. As July 2002, Dell was the world's largest direct selling computer company. The headquartered based on Round Rock, Texas with worldwide employer more than 765.000 people (2009). Dell had gained a reputation as one of the world's most preferred computer systems companies and a premier provider of products and services that customers worldwide needed to build their information-technology and Internet infrastructures. Dell's climb to market leadership was the result of a persistent focus on delivering the best possible customer experience. Direct selling, from manufacturer to consumer, was a key component of its strategy.

1.1Dell

On 25 February 2000, Dell announced the transition of Austin Dell Factory Outlet (DFO) to the Internet and phone sales to extend its leadership in the e-commerce. As a pioneer in e-commerce, Dell.com sold $1 million per day just seven months after its launch. In 2007 Dell.com was the fourth largest U.S. e-commerce site, with $4.2 billion in sales.

The traditional value chain in the personal computer industry was characterized as "build-to-stock." PC manufacturers, such as IBM, Compaq, and Hewlett-Packard, designed and built their products with preconfigured options based on market forecasts. Products were first stored in company warehouses and later dispatched to resellers, retailers, and other intermediaries who typically added a 20–30 percent markup before selling to their customers. PC manufacturers controlled the upstream part of the value chain, giving the downstream part to middlemen. Retailers justified their margins by providing several benefits to customers: easily accessed locations, selection across multiple brands, opportunity to see and test products before purchasing, and knowledgeable salespeople who could educate customers about their choices.

This traditional marketing isn't used by Dell, Dell change their strategy into online sales marketing. It sells their product directly to customer. Dell Computer's direct model departed from the industry's historical rules on several fronts: The Company outsourced all components but performed assembly. It eliminated retailers and shipped directly from its factories to end customers. It took customized orders for hardware and software over the phone or via the Internet. And it designed an integrated supply chain linking Dell's suppliers very closely to its assembly factories and order-intake system.

A Study of Online Business: An Example of Dell Computer Corporation

Dell's **mission** is to be the most successful computer company in the world at delivering the best customer experience in markets we serve. In doing so, Dell will meet customer expectations of:

- Highest quality
- Leading technology
- Competitive pricing
- Individual and company accountability
- Best-in-class service and support
- Flexible customization capability
- Superior corporate citizenship
- Financial stability"

2. Financial Statement and analysis

2.1 DELL Financial Statement Analysis

Table1.   Analysis of Coverage Ratio

	Formula	2008	2007
Current Ratio(%)	current assets/current liabilities	1.36	1.07
Quick Ratio(%)	quick assets/current liabilities	1.30	1.01

Current Ratio and Quick Ratio are used to analyze company's short-term solvency. So from Table1 we can see that DELL's Current Ratio and Qucik Ratio in 2008 are higher than 2007. So we can indicate that DELL's solvency becomes better.

Table2.   Analysis of Business Capacity

	2008	2007
A/R Turnover	198710.63	97774.63
Inventory Turnover	48.99	53.76
Fixed Assets Turnover	9.62	7.95
Total Assets Turnover	2.31	2.21

A/R Turnover is used to measure how efficiently a firm uses its assets. It means that higher A/R turnover has higher business performance. Inventory Turnover is used to examine company's sales situation, it means that higher Inventory Turnover has better business

capability. Fixed Assets Turnover is the ratio of sales to the value of fixed assets. It indicates how well the business is using its fixed assets to generate sales.Total Assets Turnover is net sales divided by total assets. This is a measure of how well assets are being used to produce revenue. Summarizes the above situations, we can see that most values in 2008 are higher than 2007. So we can say that DELL's business capacity becomes better.

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2.2 DELL compare with IBM

Table3. DELL

Company Type	Public(NASDAQ:Dell)
Fiscal Year End	December
2008 Sales(in millions)	61,101
1-year Sales Growth	-5.2%
2008 Net Income(in millions)	2,478
1-year Income Growth	-15.9%
2007 Inventory Turnover	53.76
2008 Inventory Turnover	48.99

Table4. IBM

Company Type	Public(NYSE:IBM)
Fiscal Year End	December
2008 Sales(in millions)	103,630
1-year Sales Growth	4.90%
2008 Net Income(in millions)	12,334
1-year Income Growth	18.4%
2007 Inventory Turnover	20.84
2008 Inventory Turnover	21.8

From these two statement, we can see that

1. Sales: IBM>DELL
2. Net Income:IBM>DELL
3. Inventory Turnover:DELL>IBM

We see that DELL's inventory turnover is higher than IBM's. Why does DELL have so high inventory turnover. That is because of DELL have good inventory management policies. Because of computer depreciate at a very high rate, sitting in inventory, computer will loses a ton of value. In order to prevent loose too much profit, so DELL always keeps "zero

inventories", so that the inventory turnover are lower than its competitors.

3. Web Design

3.1 Context

Michael Dell, born in February 1965, is the chairman of the board of directors and chief executive officer of Dell, the company he founded in 1984 and build relationships directly with customers. In 1992, Mr. Dell became the youngest CEO ever to earn a ranking on the Fortune 500.

3.2 Content

In 1998, Mr. Dell formed MSD Capital, and in 1999, he and his wife formed the Michael & Susan Dell Foundation to manage the investments and philanthropic efforts, respectively, of the Dell family.

When he was a student, he founded the company as PC's Limited with capital of $1000. He started trading and selling personal computer-systems directly to customers. PC's Limited could better understand customers' needs and provide the most effective computing solutions to meet those needs.

In 1985, the company produced the first computer. And they made an advertisement in computer magazines to let the customers buy products from them directly. This affect price that lower than retail brands. That is not the first company to use this way.

In 1987, the company set up its first operations in Ireland; eleven more international operations followed within the next four years. After a year, the company changed name to "Dell Computer Corporation". In 1992, Fortune magazine commented Dell Computer Corporation be one of the world's 500 largest companies.

In 2004, Michael Dell stepped aside as Chief Executive Officer while retaining his position as Chairman of the Board. Kevin Rollins has become the new CEO. But in November 2005, Business Week magazine published an article which doubted Kevin Rollins's ability. Because DELL's performance was worse than predicted.

In 2007, Kevin Rollins quit the job of CEO. And Michael Dell return to the CEO in DELL.

3.3 Community

Dell builds a web site (Community Home) to offer all of the information the customers need. This web site including the drivers、medias、the solution of problem etc. Here comes the address of the web site：http://en.community.dell.com/

And there has some special service on the web site, the IdeaStorm, which was launched in February 2007 as a way to talk directly to customers. IdeaStorm was created to give a direct

voice to customers and an avenue to have online "brainstorm" sessions to allow the customer to share ideas and collaborate with one another and Dell. The goal through IdeaStorm is to hear what new products or services the customers want to show Dell.

In almost three years, IdeaStorm has crossed the 10,000 idea mark and implemented nearly 400 ideas. In addition to the open discussion IdeaStorm site, in December 2009, Dell added "Storm Sessions" where Dell posts a specific topic and asks customers to submit ideas.

Through IdeaStorm and Storm Sessions, Dell will listen to the user's ideas to improve their products and services, and the way we do business.

3.4 Customization

Dell Support offers drivers, technical support and other resources online. Dell support is customized to meet the customers need. It has three options on the web site

1. Support for Home User
2. Support for Small Business
3. Support for Enterprise IT

The first one is when you are using your Dell products at home, Dell can help you fix it. Find answers online, download the latest files, obtain order status and more. The second one can spend less time resolving your technical issues by putting Dell's technical expertise to work for your business. Check your order status and complete other order related tasks. And the last one can support designed for IT Professionals.

Dell engineers technical information and answers for your large enterprise and public support needs. DELL makes the support customization. It can help the customers to find what they need easily they do not need to find the supports from all the web site. They only need to classify the problems and check the suitable classification to get the support what they want.

The supports including drivers、product supports、warranty information etc. So the customers can use resource to solve the problem they have.

3.5 Communication

DELL has its own web site (http://www.dell.com/content/topics/global.aspx/sitelets/solutions/messaging/duc_home?c=us&l=en) which provides a place to solve customers questions. The web site has many connects to make different services. You can choose the service you need on the web site. For example "the Dell Business Solution Center", the main purpose is to resolve your business technology challenges. Here has database solutions、Flexible Computing Solutions and High Performance Computing etc.

And there has a feature in the web site. The "custom-built" which is Dell UC provide a service to let you implement the features you need. They will create modules logically. So if

you need to expand your deployment you can just do it.

4. Dell's business model

A business model defines how an organization interacts with its environment to define a unique strategy , attract the resources and build the capabilities required to execute the strategy , and create value for all stakeholders(Applegate , Austin, Soule,. eight edition).Michael Dell founded the company based on the concept of bypassing retailers and selling personal computer systems directly to customers, thereby avoiding the delays and costs of an additional stage in the supply chain. Much of Dell's superior financial performance can be attributed to its successful direct-sales model. As it continues to grow, it is faced with the challenge of how to maintain its customer relationships and inventory management, while continuing to meet the demands and requirements of its customers. In our study, we will focus on three parts : direct sales model, supply chain management(SCM) and customer relationship management(CRM)

4.1 Direct sales model

The traditional distribution system of the PC industry is an indirect model. (figure 1).The PC maker sells its products to distributors, who buy products from many manufacturers and then sell them to a variety of retailers, resellers, system integrators, and others, who sell products and services to the final customer.

Figure 1.　Indirect distribution channel of the PC industry

Source : Kenneth L. Kraemer, Jason Dedrick, and Sandra Yamashiro(2000)

But indirect model had inherent weaknesses. The PC makers didn't have ability to accurately forecast demand in a market driven by ever shorter product cycles. Even with the best forecasting, the indirect model was plagued by the need to hold inventory at each step in the channel in order to fill orders. In the early 1990s, it was common for PC makers to have up to 90 days of inventory on hand and in the channel.

In order to overcome high inventory costs and lack of responsiveness of the indirect channel, Dell pioneered a new business model based on selling PCs directly to the final customer (figure2).

Figure 2.   Dell's direct distribution channel

Source : Kenneth L. Kraemer, Jason Dedrick, and Sandra Yamashiro(2000)

The direct sales approach is built on three key elements :direct customer relationships, products and services targeted at distinct customer segments, and Build-to-Order Production.

(1)Direct Customer Relationships

Dell's use of the direct approach reportedly provides it with nearly a 6% cost advantage compared to indirect sellers(Kirkpatrick, 1997). Vendors that sell through

resellers and retailers often don't know who their final customers are, so they must rely on secondary market research to identify their own customer base. The direct approach also allows Dell to identify customer trends early so it can respond with the desired products before its competitors can.

(2)Customer Segmentation for Sales and Service

Dell segments its customers into large enterprise, public sector, small and medium businesses, and consumer products.[2]

1.   Consumer business unit will continue to deal with PCs designed for consumers.

2.   Large Enterprise business unit will focus on providing IT infrastructure, services and solutions for large IT users worldwide.

3.   Public business unit will answer urgent IT challenges in areas such as government, education, health care and the environment.

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[2]Anton Shiloy "Dell Realigns Business Divisions Around Major Customer Segments"

4.   Small and Medium business unit will accelerate creation and delivery of SMB-specific solutions and technology to the more than 72 million small and medium-sized businesses worldwide.

Dell's segmentation of customers helps it respond to changes in demand among different customers, to develop new customer segments, and to "grow" the most profitable segments.

(3)Build-to-Order Production

Dell's production system applies principles of lean manufacturing and just-in-time production.[3] These principles aim to minimize parts inventories by requiring suppliers to restock parts only as they are needed, and often to maintain ownership of parts until they are

used. Dell's build-to-order strategy goes even farther than lean production, however, in order to achieve mass customization of products.

Build-to-order requires Dell and its suppliers to have available specific components as they are needed to fill an incoming order. This requires very close coordination between Dell's sales and manufacturing arms and between Dell and its suppliers. It achieves this by refining its business processes, developing close relationships with a limited number of suppliers, and using IT to facilitate communication within and outside the company.

5. Dell's supply chain management

Supply chain management (SCM) is the integration of key business processes among a network of interdependent suppliers, manufacturers, distribution centers, and retailers in order to improve the flow of goods, services, and information from original suppliers to final customers, with the objectives of reducing system-wide

costs while maintaining required service levels.[4]

Dell pioneered the concept of interacting with the customer by phone or by way of the Internet to custom-build a computer specific to that customer's needs and delivering that computer in a very timely matter.

Dell created a SCM system that ensured that the right computer parts were always available when and where needed. We will classify Dell's SCM three parts to illustrate : Virtual integration, suppliers management and inventory management.

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[3] Just-in-time (JIT) is an inventory strategy that strives to improve a business's return on investment by reducing in-process inventory and associated carrying costs.

[4] Joel D. Wisner. "A Structural Equation Model of Supply Chain Management Strategies and Firm Performance"

5.1 Virtual integration

Virtual integration is a new form of supply chain management. Under such a system, the links of the value chain are brought together by informal arrangements among suppliers and customers. Shipments of the components that your firm needs can be easily arranged through the Internet or a networked computer system. The same type of arrangement allows you to fully serve your customers in ordering, services, or any other needs. Michael Dell describes how his company is using technology and information to blur the traditional boundaries in the value chain among suppliers, manufacturers, and end users. In so doing, Dell Computer is evolving in a direction that Michael Dell calls virtual integration.

Figure 3.　Virtual integration

Source : Applegate , Austin, Soule "*Corporate Information Strategy and Management* "

5.2 Suppliers management

Dell has streamlined both procurement and inventory by redesigning its computers so that different models utilize as many of the same components as possible (Zuckerman,1997). This reduces the number of inventory parts and the complexity of managing their procurement. Between 1992 and 1997, Dell reduced its 200-plus suppliers by 75%. Fifteen of these are key suppliers who provide about

85% of Dell's materials. Dell works with these suppliers in multiyear planning and negotiating, thereby reducing the complexity of managing its supply chain.

Dell has a special vendor-managed-inventory (VMI) arrangement with its suppliers: suppliers decide how much inventory to order and when to order while Dell sets target inventory levels and records suppliers' deviations from the targets. Dell chose an inventory target of 10 days supply, and it uses a quarterly supplier scorecard to evaluate how well each supplier does in maintaining this target inventory in the revolver. Dell withdraws inventory from the revolvers as needed,on average every two hours.

5.3 Inventory management

Dell has achieved a system that at times leaves them with average inventories for long enough to last only three days. Instead of incurring holding costs, Dell doesn't order until the demand is in place. The system Dell has achieved is referred to as a JIT system. JIT is designed to keep inventories as low as possible by producing only what is needed and when it is needed. The first thing that needs to be discussed is why low inventory has such a great effect on Dell's overall performance. The reason is quite simple: computers depreciate at a very high rate. Sitting in inventory, a computer loses a ton of value.

Table5.　Dell's Inventory Turnover Data

Year	Inventory Turnover	Week's Inventory
1992	4.79	10.856
1993	5.16	10.078
1994	9.4	5.532
1995	9.8	5.306

1996	24.2	2.149
1997	41.7	1.247
1998	52.40	0.992
1999	52.40	0.992
2000	51.4	1.012
2001	63.50	.819

Source : Charles Atkinson "Dell Computers: A Case Study in Low Inventory"

Key point to notice here is that Dell was carrying over 10 weeks worth of inventory in 1993. By 2001, Dell was carrying less than 1 week's worth of inventory. This essentially means that inventory used to sit around for 11 weeks and it sits around for less than 1 week in 2001.

6. Dell's customer relationship management

Customer relationship management (CRM) is used to define the process of creating and maintaining relationships with business customers or consumers (Moon, 2003) . A long-term relationship with the customer insures their repeat business. It costs more money to gain new customers than it does to retain current ones. Dell's goal is to provide customers with their technological, as well as customer service needs.

Dell uses information to manage relationships with customers. It outsources customer service but operates as broker between the customer and the third-party maintainers (TPMs) that actually provide service. Dell's call center service people trouble-shoot the customer's problem and trigger one electronic message to ship the needed parts and another to dispatch a TPM to the customer. As a result, Dell knows the kinds of problems customers face, the parts causing the problems, and the performance of its TPMs. Dell uses this information to develop computerized sets of frequently asked questions (FAQs) and problem solutions, to train service representatives, to identify problematic suppliers, and to identify problematic TPMs.

Dell provides custom Web pages (called Premier Pages) for over 200 of its largest relationship customers (Magretta, 1998), and therefore the IT departments, and in some cases individual employees, of large corporate customers can access a Dell Website set up especially for their company—a customized version of the site at www.dell.com. The popularity and demand for such customization subsequently led Dell to develop tools to help customers set up their own customized versions of dell.com, of which there were reportedly 7000 as of 1998 (Magretta, 1998). Dell also uses the Internet as a sales channel through its completely automated Dell Online service. Customers can go to Dell's Web page, try out and price various configurations, and then call in the order or even place the order directly over
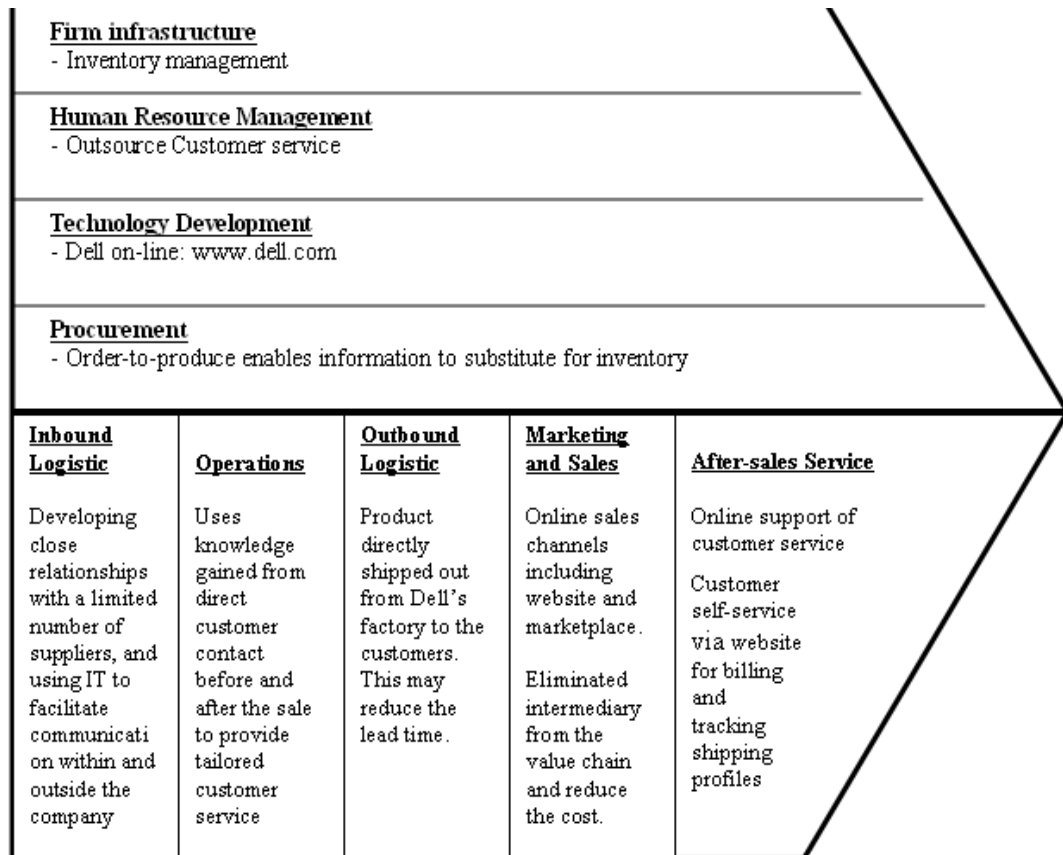
the Internet.

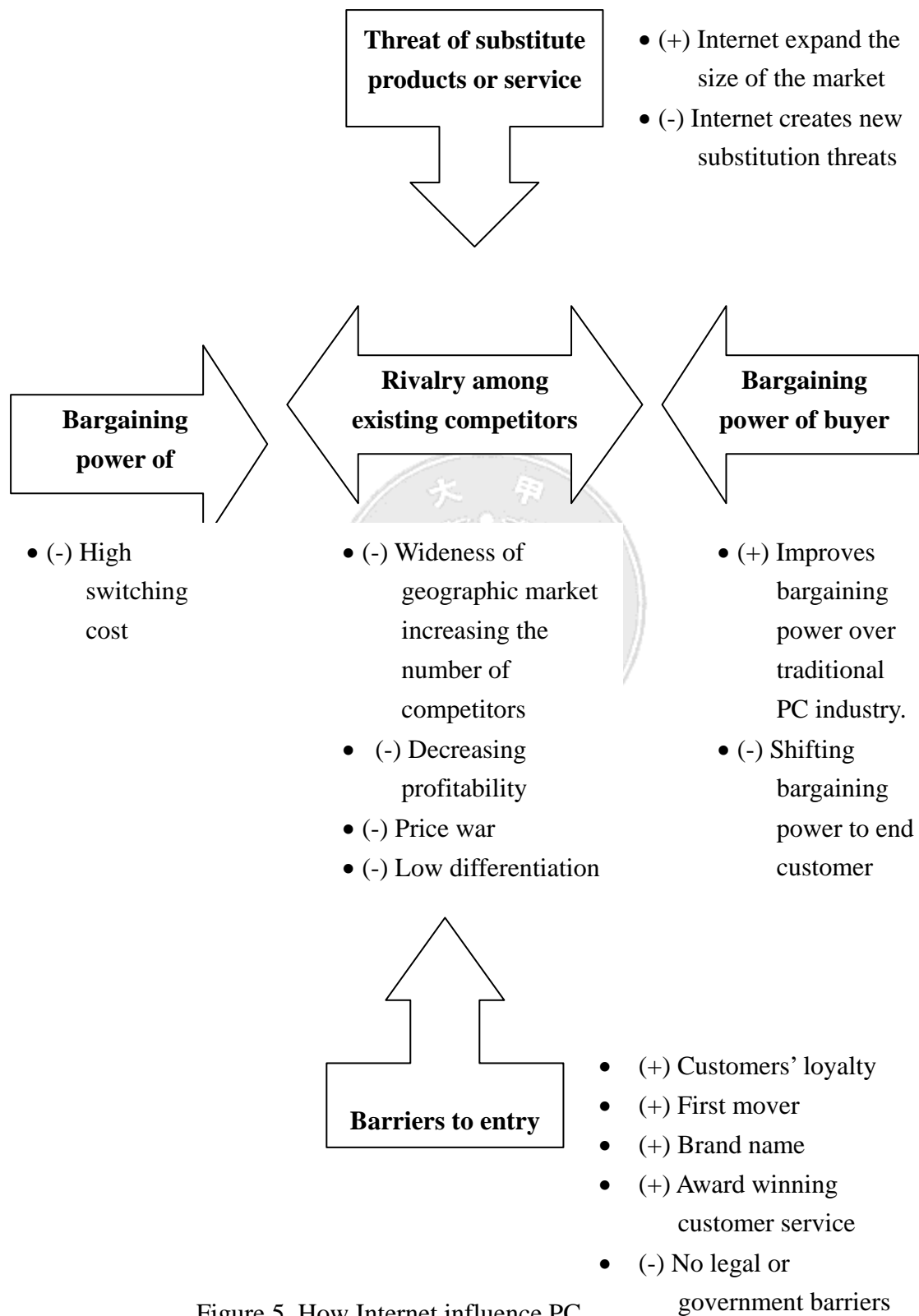Figure 4.   Applications of the internet in Dell's Value Chain

Figure 5. How Internet influence PC

7. Summary

Dell has growth rapidly to become one of the top PC vendors in the industry. The key to Dell's success is its direct sales and build-to-order business model. Dell continually refines and extends its business model to meet the rapid growth and change of the PC industry.

IT plays an important role in implementing Dell's business model. Dell uses IT to coordinate its build-to-order, procurement, logistics, production, service, and support. By using IT, Dell reduced its inventory, speed up logistics, understand the market trend, and also able to provide additional after sales service to customers.

While bringing efficiency to the company, IT will also bring some impacts to the company. Sometimes, it is very difficult to separate the impacts of investment in IT from other factor such as change in business process, effective use of human resource, and general acceptance of the direct model by user. In the long run, Dell might make some mistakes that allow competitors to pass it by. However, the forces behind Dell's success will continue to apply to the company, in which time is a key competitive factor.

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