

# Logistics and e-business in dell inc.

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## **Introduction**

This brief purports to provide a critical evaluation of planning and organising efficient operations and networking. It also aims to analyse the problems associated with the control of component activities and quality. In particular, the critical discussion is centred on the effect of processtechnologyand e-business on Dell Inc., evaluating such effect on its logistical and operational capability.

Dell Inc. is a computer company founded in1984, which became a market leader in the worldwide selling of personal computer products and services. It adopts a simple concept of direct selling of computer systems to customers, which enables it to establish every system to order and offer preconditioned systems for customers at well-competitive prices. Compared to its competitors, the company is able to introduce latest technology more rapidly, utilise supply chain techniques and customer-centred manufacturing, and provide an average of four days for inventory turn-over. This process has resulted in a ratio of 1: 5, in which a Dell computer is being sold worldwide for every five standards-based computer system (Rushton and Walker, 2007).

Dell also made a report in 2006 that 44 per cent of its sales came from the US, and its revenue in China grew by 29 per cent. Additionally, an 18 per cent increase was experienced for its shipments in Europe, Africa, and Middle East. It was able to maintain its number one position in the US market for personal computing, in which it recorded a market share of 32 per cent. In 2006, Dell opened 14 new manufacturing and development facilities vis-a-

vis maintaining significant investments in the US, China, and Germany, amongst others (Rushton and Walker, 2007).

### Process technology and e-business in Dell

Before directly addressing the effect of process technology and e-business on Dell Inc., it is deemed necessary to clarify the concept of e-business. According to Harsono (2014), e-business refers to as a set of business models and practices enabled by Internet technologies whose emphasis is on networks of customers, suppliers, and productive capabilities, pursuing an aim to continuously improve the performance of supply chain. E-business is a powerful concept in that it enables the adoption of the Internet in establishing integrative relationships amongst members of the supply chain. Chen and Popovich (2003) noted that Dell' s example of customer relationship management exemplified success in combining information technology (IT) and front-and-back office operations. In addition, Dell adopted a build-to-order e-business design, which featured a rapid cycle of product development (Harsono, 2014).

Moreover, Dell was amongst those who initially established a customer-driven configuration capacity for personal computers (Harsono, 2014). It established a web of components manufacturers and IT providers for its successful direct marketing system (Sushil, 2013). With the absence of retail stores and through call centers and phone orders, the company adopted a build-to-order assembly model through which it receives orders. Its website made a strong influence on software applications of its own customer service representations to establish a self service web application that enables

customers to produce their own custom orders for personal computers. Dell allowed customers to explore a number of computer configurations with the use of a 'choice board' capability, showing price differences for components that customers intend to include in their order. This PC order is then submitted through the website ecommerce, translating the order data into a design, ordering the components, and electronically scheduling the proper resources to complete the order (Kurbel, 2013). Customer demand is also integrated from direct-sales channel that is linked to its back-end supply chain (Harsono, 2014). The company is able to pursue an effective integration and implementation of e-commerce and supply chain management

Noteworthy is the fact that Dell serves as a strategic supplier to British Airways, in which the former supplies desktops and notebook computers to the latter's purchasing agents. Dell enables British Airways to buy and track orders to a Dell website that adopts customisation for the user's needs. The airline has adopted Dell's e-procurement tools on its intranet, allowing authorised staff to make PC purchases through a portal that is directly connected to Dell's system (Harsono, 2014).

Not only does Dell support its business customers with e-procurement tools, but it also utilises e-commerce for its own e-procurement. It was able to develop a specific e-procurement model aimed to be shared with its business partners. One feature of the model is the conduct of bids using electronic tendering, which Dell also uses when buying product components. Through Dell's adoption of process technology and e-business, it is able to

communicate and collaborate with a range of business partners. Its build-to-order capabilities allow it to pursue significant improvements in its demand planning and accuracy of factory execution, reduce the time entailed in order and delivery, and improve customer service. It is worthy of note that Dell also partners with Accenture to create and foster a high-performance supply chain solution for planning and design execution. Its factory scheduling and demand-planning capacity and inventory management also became automated, through information technology utilisation and adoption of e-supply chain models (Harsono, 2014).

Dell's supply chain has been cited by several researchers as a model of excellence, which is made possible through a closed-loop supply chain and logistics techniques. Dell utilises a variety of techniques that maintain build-to-order operation. It has an assortment of process maps within its forward and reverse supply chains. Dell's example suggests a need to provide emphasis on supply chain efficiencies in order to build customer value and carefully investigate its capabilities prior to the implementation of any specific collection of logistics approaches similar to its supply chain operation (Kumar and Craig, 2007). In addition, Dell is constantly adjusting and improving its processes over time, in which its business model consists of working directly with customers and providing better value (Teece, 2010).

Dell organised its value chain around the choice of products that it sells through its distribution system whereby it enables developing efficient capabilities on selecting the specific products to produce. Certainly, the whole strategy is reliant on available suppliers who are able to produce at

highly competitive prices. It must be noted nonetheless that Dell did not bring significant enhancements to the technology of personal computers but is noteworthy for its combination of innovations of both suppliers and its own distribution systems in delivering compelling value to its customers (Teece, 2010). An important point as well is that Dell does not utilise the Internet to create a marketplace; rather, it uses the Internet to exchange information on demand and inventory with its suppliers, thereby allowing suppliers to produce proper production levels and aid Dell's supply chain towards improved complementariness of its supply and demand (Chopra and Van Mieghem, 2000; Harsono, 2014). By being a virtual IT department apart from being a PC vendor, Dell tracks all corporate-wide purchases vis-a-vis giving customers the convenience to order anytime at any place. Indeed, Dell has relied heavily on a few suppliers that also function as long-term partners (Chopra and Van Mieghem, 2000).

Just-in-time production is implied in Dell's logistics process, in which expected administrative problems related to large numbers of individual orders have been superseded by information technology. Dell has epitomised this move towards the system of building products to order and shipping them to the customer. It is important to note that the company has integrated its computerised management information system with its logistics software to aid the analysis of purchasing and selling of products. Further, e-logistics allows Dell to view the big picture by capturing data for procurement, in which logistics-generated data are being sent to strategic decisions formulated by other aspects of the organisation. Apparently, the Internet has provided Dell real information of supply and demand, rather

than a merely forecast one. E-logistics likewise enables a closer integration of Dell's internal business systems with web-based functions, allowing the facilitation of collaborative solutions in the supply chain (Joseph, 2005). The company continues to integrate the Internet into its whole business process, such as procurement, online sales, and relationship management (Chou et al., 2004).

### Impact of Process technology and e-business on Dell

The effect of process technology and e-business for Dell is increased customer value, in which the company enables to keep its retail customers to come back, helping the company to drive sales to more than \$55 billion in 2004. Additionally, Dell utilises e-commerce to provide real-time information to its suppliers in the supply chain. In this regard, suppliers utilise this information to adjust their production time, in which they only produce the adequate components for Dell's needs and adopt an appropriate mode of delivery to enable these products to arrive just in time for production (Ross, 2011). It must be noted also that the strong impact of e-business in Dell's supply chain enabled it to deal with its more than US\$ 100 million losses through a best practice example of impeccably incorporating e-marketing and supply chain management to boost its processes (Harsono, 2014). With Dell's utilisation of e-business and process technology, the effect is its revolutionisation of the business model in its core geo-product sphere with its manufacture and marketing of personal computers. Its adaptability and flexibility allowed Dell to acquire wealth by leveraging its revenue, utilising

alliances to develop the right combination of products, and reducing change-related costs (D'Aveni, 2001).

Another impact of process technology and e-business on Dell's logistical and operational capability is its ability to deliver high customer value in relation to customisation, as well as lower process cost. Its direct selling of computer using web technology enables it to receive higher margins than conventional PC manufacturers, who need to share some margin with retailers. It is clear that retailers occupy a weaker position to utilise this e-business opportunity than other members of the supply chain. In terms of revenue, Dell's direct sales model through its e-business channel made the company to continue obtaining increased margins compared to traditional computer manufacturers with resellers. It was able to effectively manage its ability to change prices and delivery times based on component availability. In the same manner, the company is able to work on its supply chain's input and output ends to harmonise demand with supply (Chopra and Van Mieghem, 2000).

Apparently, through Dell's stance to use e-business, the results include increased efficiency in logistics and marketing processes, cost reductions, reduced inventory levels, decreased time-to-customer process to improve competitive situation, and lower time to market process (Shin, 2005).

## Conclusion

This brief was focused on Del Inc. as it attempted to provide a critical evaluation of planning and organising in its efficient operations and



networking activities. The discussion was centred on the impact of process technology and e-business on the company.

Dell became a market leader in selling personal computers and services, employing direct selling to customers, enabling it to provide preconditioned systems for customers at a very competitive price. The company was successful in combining IT and front-and-back office operations. Its fast cycle of product development was based on a build-to-order e-business design. The build-to-order assembly model featured the use of call centers and phone orders rather than the usual retail store. Dell's supply chain and logistics success is exemplified in its partnership with British Airways and Accenture. The company utilises e-commerce to provide e-procurement tools to its business customers and for its own e-procurement.

The effects of Dell's process technology and e-business are increased customer value; enhanced real-time information processes for suppliers; high customer value delivery in terms of customisation; lower process cost; increased margins; reduced production cycles; increased efficiency in logistics and marketing processes; and decreased inventory levels. These impacts are enabled by a demand-driven supply chain that replaced the traditional supply chain approach.

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