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PRECONDITION FOR ELECTRONIC BUSINESS STRATEGY: PRINCIPAL OF TCS

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ABSTRACT

1. BACKGROUND AND DEFINITION FOR PRINCIPAL OF TCS

Not all enterprises involved in electronic business strategy win the expected result. Some of them were well paid because of the radical increase in the aspect of product's competitive power, while others only wasted their large investment on the electronic business that could not be compensated by the revenue. Certain analyst deems that electronic business strategy is equal to an empty idea without feasibility. Obviously, this view is too pessimistic to spot the potential promising future of electronic business. Other viewers attribute the failure to external situation or the internal management. For example, they attribute unsound legal environment to some failure cases. Or they criticize that the dotcom companies concentrate too much on the prospect of going public and ignore the basic management principals. That is right to some extent but hardly reveals the real reason for the trouble.

In author's opinion, electronic business strategy is in accordance with the era trend and has a brighter future. At the very beginning of this article, a theory model is used to draw a logic-oriented conclusion: electronic business strategy brings more profit by improving the product's competitive power. After that, the reasons are spotted that why electronic business strategy is unable to play its role in some cases. At last, the article stresses Principal of TCS is the

precondition of electronic business strategy.

The definition of principal of TCS that we used is the following :

Time, Cost, Service — — is the fundamental criteria and precondition to decide whether an enterprise should take electronic business strategy or not. That is to say, the implement of electronic business strategy will shorten customer's waiting time, reduce cost, and improve service level radically in order to gain anticipated benefits.

Principal of TCS is based on a classic idea: An enterprise always pursues the maximum profit. Compared with traditional business model, electronic business is still a business tool no matter what we call it. The essence of any kind of business model is to pursue the maximum profit.

According to modern management and financial theory, we can infer in this way: firstly, the main channel of profit comes from the main business field. Secondly, the scope of business field is decided by the competitive power of product provided to a large extent. Thirdly, the competitive power of product or service depends on four essential factors: quality, time, price and service. Therefore, a logic-oriented conclusion can be reached: the profit depends on quality, time, price and service of product provided. To simplify the analysis model, two hypotheses are made here: firstly, quality factor is excluded from the analysis model because electronic business is a tool of business not one to improve technique used in the manufacture

process so it has little influence on the product's quality. Secondly, the product provided meets the demand of customers and need not sell under normal price. So in the following analysis the factor of cost is used to replace the factor of price. And then the four fundamental factors are converted into three factors: time, cost and service.

From above, a logic-oriented conclusion is drawn: Time, Cost, Service are the three essential factors to win profit.

Consequently, the chief of executive should not follow the electronic business rush without thorough thinking. The best way is to evaluate how EC can increase the level of product on Time, Cost, Service rationally before the start-up of electronic business strategy.

The following material gives a more detailed description that how electronic business strategy dramatically shorten customer's waiting time, reduce cost, and enhance service level. Correlative cases are provided to demonstrate the usage of electronic business strategy.

2. IMPROVEMENT BY ELECTRONIC BUSINESS STRATEGY

● Time

The word "time" we use is the customer's waiting period that starts from the confirming of the order, manufacturing the ordered product, packing, transporting, storing, distributing and at last delivering to the end-user. The whole period can be divided into three parts: the period of order processing, the period of manufacturing, and the period of distributing.

Electronic business strategy is able to shorten the three periods respectively on account of its characters of large data storage capabilities and speediness in data-processing with the support of advanced information technology. Firstly,

electronic business system can receive, confirm or refuse the orders automatically to shorten the period of order process. Secondly, the period of manufacturing is decreased greatly owing to the introduction of virtual manufacture and virtual research because people in different regions can share the same database and exchange the updated research results on the basis of modern communication technology. For instance, Kodak company decreased the design period of 35mm-lense-camare from 70 weeks to 38 weeks with the help of internal network which resulted in 25 percent reduce in manufacture fees.¹ Thirdly, electronic business strategy may merge the internal and external logistics system to track efficiently the whole process and distribute goods as requested in a shorter time.

A chart followed is to demonstrate the shortening of Time:

e xampl es	Time shortened by electronic business		
	Period of order process	Period of manufacturin g	Period of distributing
variou s kinds of produc ts with small- scale quantit y			
transp ortatio n cross- provin ce or cross- nation logisti cs			
	collaborative producing collaborative research		

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● Cost

Generally speaking, product cost is the whole fare that happened before the delivery to the end user. It includes: purchasing cost for raw material, manufacture cost, storage cost for material and products, cost for sales. To simplify the analysis, we exclude the factor of manufacture cost because at the very beginning we have made a hypothesis that electronic business strategy deals little with technique about production process.

It is obvious that electronic business strategy decreases cost greatly:

Firstly, purchasing cost is dramatically cut down by on-line bidding. Digital information takes place of paper documents to save a lot of expenses spent on printing, publishing, mailing and work time in registering and replying which are now taken by software automatically. Moreover, more companies have access to the information. Thereby, plenty of large-scale enterprises even some government departments have tried to purchase via web.

Secondly, storage cost for raw material and finished products is on the decline with the introduction of electronic business strategy. It is believed that "Storage is the resource of evil" in Japan due to the fact that products in the warehouse are unable to bring revenue to compensate for the manufacture cost and easy to loss value if the market become soft. The final goal to eliminate storage is "zero storage" whose precondition is the market-oriented production. Dell Computer Company, for example, receives customer's order via web and assembles computer exactly in accordance with request. That is the main reason for its success.

Thirdly, sales cost is reduced by support of difference electronic business

models and tools. Sales cost refers to the whole fare that happened in order to promote the customer to cognize and reach the contract in the end. It includes promotion cost, cost for information releasing, cost for communicating and etc. Many an enterprise benefit from electronic business especially multinational corporation or small-scale company in the rural areas. Let us take a international engineering project contract corporation as an example. While running a project the corporation need to communicate with its partners in different countries. Thanks to information technology, electronic mails, news group meeting, shared database smooth over the work flow among these partners. Statistics shows the communication fee dropped by more 40 percent than that of the traditional international direct dial or fax.² In addition, small-scale companies in the rural areas spend less with wider exposure to potential customers all over the world via public platform or industrial vertical website run by electronic business companies.

● Service

The word "Service" we use here can be explained as an additional and unseparated part of physical product or "invisible product" provided in some given industries such as repairing, educating and so on. Despite of the fact that different industry has its different and various specific standards, there is a universal criteria to evaluate the service level by customer's satisfaction degree. Some persons attribute the reason for customer's complain to the fault of employees without realizing the real reason lying in the organization itself. With the increase in the enterprise's scale the number of departments is also on the rise and the service provided goes through

a large number of departments before it reaches clients. The complexity of business process makes it difficult to negotiate and cooperate among departments and any delay or noise signal in information transfer would be amplified to lead to the dissatisfaction on the side of customers.

Think about our experience in the out-patient department. To begin with register in the registration office, the patient has to queue up in the waiting room before he is allowed into the consulting room to receive diagnosis. Doctor maybe requests the patient to test blood or go to X-rays department to find the reasons of symptom. So the patient might again stand in line in the other departments to get an examination report. Only after the doctor has written prescription on the basis of these reports can the patient go to pharmacy. The patient would disappoint at the service level unless the whole process was arranged for the convenience of customer without unnecessary delay.

Electronic business therefore works most effectively in such organization that possess long business process chain because electronic business can consolidate overall recourse including information scattered before.

3.SUCCESSFUL CASES

So far lots of corporations have benefited from their electronic business strategy in aspect of Time, Cost and Service.

- **Time**

Apart from the examples mentioned above, railway or air corporations can facilitate nationwide clients with the support of online ticket system. Figures show that “Xin Tian You” ticket system developed by China Civil Aviation may shorten customer’s waiting time by more

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than 20 percent.

Another example comes from financial industry. Online stock dealing has attracted attentions from the traditional stock company, customers like it for its advantage of timeliness. According to statistics, E-trade company (<http://www.etrade.com>), the first one to run on-line stock exchange electronically booms during several years. In May 1999, the number of its clients amounted to one million and daily exchange volume reached one hundred thousand USD. In China, a lot of stock companies also take active part in establishing virtual exchange on the web.³

- **Cost**

As a first-class manufacturer for postage machine located in America with an annual amount of 4.2 billion USD , P&B corporation purchases more than 25 thousand kinds of raw material from nuts, bolts, accessories of Cannon ink printer to wearable powder-metal-components that is only produced by a few plants. It is electronic business strategy that reduces storage to the maximum.

P&B corporation established online relationship with its large amounts of suppliers via VendorSite developed by Eventra company since August 1998. Suppliers, even tray suppliers that has only five employees, are able to access to P&B corporation’s internal ERP system via VendorSite to know exactly the demand and supply information about his own products. Ray Hill, a manager in P&B corporation, believed the supply chain will reach its best status in the near future, that is “zero storage” with a sharp decrease in the cost of purchase and storage.⁴

- **Service**

To meet customers’ demands that the package can be tracked at any time and in any place, Fedex corporation, one of the

top global logistics corporation, began to connect Cosmos Information Net which built up 20 years ago to internet at the end of 1994. At that time, the so-called Fedex.com only has two web-pages: one page shows a pane for the customer to input tracking number, the other page demonstrates the newest place of package. Today, Fedex.com has developed into one that contained 8000 web-pages to be able track 315000 packages sent to 209 countries in the real time every day.

What's more, Fedex corporation informs their customers of emergencies via Fedex.com and avoided the crisis once happened to its competitor, UPS. An unexpected strike and slow reactions to inform customers led to a loss of 35 million USD. To make things worse, some customers no longer believe in the service provided by UPS and turned to Fedex. "Customers dislike the suddenness. Nothing can be worse than the failure to meet customer's demand." , said the marketing vice president of Fedex corporation.⁵

4. FAILED CASES

It should be stressed that principal of TCS improves performance dramatically. The reason for some companies' failures lies not in electronic business strategy but in the fact that they ignored the importance to shorten time, reduce cost and enhance service in a radical level.

● Time

The number of Christmas purchasing orders all over America doubled and amounted to 6 billion USD in 1999, according to a survey taken by Jupiter Communications Company. Facing large amounts of orders, the excited online retailers became worried soon. Fingerhut company, for instance, called upon several hundreds of white-collar managers, even its chief executive officer

to work overtime to pack and distribute the goods. Unfortunately, there were still many customers who complained they did not received what they ordered. "Delivery in time" has become the biggest question that threatened the survival of online retailers.

The total customer's waiting time is prolonged although the commodity-choosing time has been shortened since the online retailers ignored the establishment of logistics network and still handle distribution process with hands. This is same in China.

● Cost

Boo ,a fashion website, surprisingly closed down although it was once very popular in the western countries. Professionals pointed out that the extra high performance cost is responsible for bankruptcy. The income earned by electronic business could not meet the expenses on employees' salary and branches all over the Europe. The salary is too high and the expansion is unrationally. All this debays the principal of Cost.

Many enterprises spot the potential opportunity of electronic business but ignore the precondition; overestimate the possible income but underestimate the real cost. The operation of electronic business strategy need both infrastructure such as server and staff which include technicians and web-page designers, in addition, marketing activities also need large amounts of money. Only a dramatic increase in revenue can compensate for the large investment at the beginning. Especially in China ,the backward situation in IT infrastructure, immature social credit system, and developing logistics system gave a heavier burden to the companies. That is why many B2C

companies closed down.

● **Service**

Some of dotcom companies regarded the feature service as the unique approach to success. Really? It is reported that a website ,which once announced itself as the first one to help enterprises solve the interlink debt problem, now closed “without day”. The same destiny happened to a dotcom company that provided psychological advice to men and offered high-quality good designed carefully ,but the website did not flourish even though it has high reputation in the web surfers.

The fundamental reason is the service lacks obvious advantages compared with its substitutes, that is to say, the level of service did not be enhanced dramatically. People can get similar service through other channels. Limited by low salary, users in developing countries will choose cheaper service if the toll service could not bring considerable return.

In this way it is reasonable for risk investor to turn to B2B model. The dramatic improvement will be made by reengineering the long internal supply chain than the return from B2C model. This is proved by many cases of multinational corporations.

5.CONCULSION

It could not be denied that there are many disadvantages to hinder the operation of electronic business strategy. For example, the dotcom companies paid more attention to attract public’ s interests and less on the real profit support model.

So it is necessary to take second thoughts on the electronic business strategy. Electronic business strategy is far from publishing address or listing catalogue and it should create real value for customer by shortening time , reducing cost and improving service of

product. Using the principal of TCS beforehand will to a large extent avoid the intrinsic flaw.

REFERENCES(BIBLIOGRAPHY)

- [1]Rui Mingjie. Qian Pingfan. Reengineering Process. Zhejiang University Press.1997
- [2]Xin Xu.Electronic Business Application in International Project Contract Corporation. International Economic Cooperation. 2000.2 : 21—23
- [3]Xu Yongfeng. Situation and Countermeasures of International Electronic Business. <http://www.chinabyte.com>
- [4]Mary J. Cronin. The lean supply chain of P&B Corporation. <http://www.keycorp.net>
- [5]Allin Brown. Customer Service of Fedex. <http://www.keycorp.net>