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# Research on the E-commerce Model in Textile Industry

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## Abstract

E-commerce will play an important role in textile industry. Yet the proper e-commerce model in textile industry has not been solved up till now. It is necessary to study the model as soon as possible, so that we may get together with the advanced countries.

**Key words:** E-commerce, textile industry, B2B.

## 1、 Background of EC

EC has great advantage when compared with traditional commerce, which is the essential reason for fast development. The outstanding point is that it can gain more business opportunities、 reduce business cost、 simplify business flow and increase business efficiency. It is estimate that EC could falls 40% of the cost and this data will reach 70% in some enterprises. In addition, EC can help to offer more job opportunities 、 reduce business deficit and inflation as far as government concerned. Information industry has offered more than 100-million job opportunities in USA. One of the important reasons on the lower inflation rate in recent years is the increasingly reduced cost and price. From this we can see that EC has strong life. The America has invested large-scale in the electronic information technique field since the 1980's, but the benefit is not very distinct. So that the competition capacity of traditional industry is not so good as in Japan and some American people have the point that the USA would be swallow by Japan. But the benefit emerged greatly in the early 1990's. At

the same time, a ten years economy depression began in Japan, and the depression hasn't been eliminated up till now. However, the US meets its 110-month-long rapid economy increase under the effect of lower inflation. It's an economic phenomena which amazed the ordinary people 、 government official and economist so that they couldn't explain it by traditional economic theories. The rigorous realism waked up Japan and they decided to invest a great deal of money to EC technology and tried to come up with the EC level of US. Europe countries also research and apply EC together, while many countries in Asia have launched large amount of money in EC research and development such as the multimedia porch planning in Malaysia 、 numeral harbor planning in Hongkong、 EC center planning in Singapore and software and EC planning in India as well.

## 2、 The attitude to EC

China has realized the profound effect being brought from EC revolution subtly.

(1) Chinese government looked EC as a critical technology of shortening economic gap and overtaking the economic level between herself and Europe、 US and Japan.

(2) Chinese government has increasingly accelerated the pace of electronic information industry since 1990's. We invested large scale scientific research outlay and development fund into communication 、 computer and information disposal fields and spent much money to build national trunk communication network and Internet. At the same time, under

the leading of State Department information office, a series golden engineering were constructed in the important national economy branch such as foreign trade, custom, bank and tariff department, for example the “golden bridge engineering”、 “golden barrier engineering” and “golden card engineering” and so on. It changes the poor situation of our information basic establishment and promotes the information level of the important industries to an advance level. Foreign trade, custom, bank, stock and tariff departments have already dealt with daily works without paper. Up till now, our communication main line has already equipped with fiber. Many networks such as China common computer net, China education and scientific research computer net, China SCI-tech net and China golden bridge information net have been constructed in our country. The three big support net (narrow band web, intellectual web, multimedia web) have been completed. The total outlet bandwidth had been 1237M till June 2000. The present work is to connect them.

(3) The government steps up China information industry by means of system innovation. For example, monopolistic management in telecom industry was broken and competition among telecom, CDMA, Lian Tong, Ji Tong have been formed to increase the serve quality and accelerate the development of communication industry.

(4) The government also issues several new network management licenses to change the poor situation of network serve and inadequate fundamental establishment, so that our network Chinese information quality and quantity will have fast development and the outlet bandwidth reach 1G.

(5) The government tries to speed network application in kinds of industries by means of policy leading and puts forward government network engineering and enterprise network

engineering.

(6) Although there are not any policy framework about EC or any official document including the principle of developing EC, the leaders of our country all have an active, optimism and sustaining attitude toward it. Chairman Jiang has ever spoken in many important international conferences that we should develop EC technology and should rebuild traditional industry by EC technology actively. He also points that we should know it clear that what should be done and what shouldn't be done.

(7) National information industry bureau has established a comprehensive policy document about EC. It indicates that our country attach fairly importance to information industry. “The tenth five-year-plan” in planning contains modern information technology and EC for the first time.

(8) The support behavior of government is represented in the guidance behavior to enterprise. Foreign economic commerce cooperation bureau has declared to spread international commerce management work with EC pattern. All bidding of export quota should be carried on web, so the enterprise doesn't connect with Internet will lose the bidding qualification. This will be a great drive to develop EC in international commerce enterprise. National economic commerce committee begins to call on government move the stock work to network.

Our government gives great importance on the development of EC and regards it as a critical technology on increasing economic competition capacity、 on promoting our economic development and on actualizing the great reconstruction. EC will have a beautiful future.

### **3、 Role and function of EC on Chinese future economy**

Up to now, information product manufacture about EC has contributed to

21.4% of the national economy growth. It becomes the first big industry when compared with traditional industries such as traditional textile、mechanism industry. The support industry of US 110-month great economic growth is electronic information industry. The contribution of US electronic information industry (mainly EC industry) beyond 60% and this trend will be strengthened later. However, The contribution of our electronic information industry to national economy growth is far lower than the one in USA. The gap happens to discover the huge potential and beautiful future of EC development. In the information economic era, as one of the main economic commerce patterns in the 21<sup>st</sup> century, it will bring huge innovation to world and national economy growth mode. EC is the important component for the national economy and society service information technology. It has important significance on changing economic operation mode and pushing the development of information industry and offering new opportunity to economic development.

(1) EC is the engine of national economy

The application of EC can rebuild the produce flow、resource management、manpower resource management、serve chain management and client relationship tradition of enterprise. This is a process of rational resource distribution and application, reducing produce cost、increasing competition capacity、changing the consumption custom and accelerating the sustained、healthy and harmonious development of national economy. Therefore, EC is the engine of national economy. From market distribution, commodity value can be converted into application value. If we catch hold of the middle tache, the produce and consumption aspects can be drove. EC is the very technology and it's the new engine of national economy.

(2) EC is an important tool of economic regulation

Good market mechanism can't independent of the support of the exact, timely and integrate market information system. EC technology can help to construct the exact, timely and integrate mechanism of obtaining、disposing and utilizing information. It can also carry out and feedback the decision made by regulation mechanism so that economic regulation becomes more quickly、scientific and efficient. The functions of EC to the whole economic activity are shown as follows: (1) EC is in favor of shrinking the economy gap between China and the developed capitalist countries. When compared with USA, the gap of foundation in agriculture is about 100 years, and the gap in education is about 40 to 50 years. So if our enterprises have enough power to compete with a multinational is a problem to doubt when china reenter into WTO. There is a normal point of view that the investment in EC and network in our country is later than in foreign countries. The US model will be utilized to construct Chinese web sites after one or one and a half year by Chinese students aboard and the speed is equivalent to the Japanese、French and Spanish web sites. That is, we are quite uncultured from the whole situation to say, but our lag degree is not very big in the EC field. Thus, our country will catch up with the western developed countries in some fields as long as we catch hold of the opportunity and make good use of it. (2) It will release our brain、increase the efficiency and quality of economic activity and will save many raw materials in EC activities (consult、trade、finance、statistic and so on) such as paper、pen and ink. It is more important that the no paper business can reduce the disposal time、increase disposal efficiency and quality of a great lot business bill of document greatly. It can avoid the situation of making mistakes in the manual

work and release the simple work of people so that energy can be put into advanced creative headwork to make the society progress. (3) It is easy to actualize the optimal distribution of commodity and material, to increase transport efficiency and to decrease transport cost. Many traditional goods (such as document, video produce and service produce) can be delivery by electronic mode on Internet without manual or machine load and unload, transport and service to door. Large numbers of labors are saved so that people can obtain more leisure and entertainment time and improve the life quality finally. (4) It makes economic decision more accurate and more in time so as to avoids blindness. EC obtains commerce information entire, in time, accurate and safe, save money, energy, manpower and save trouble as well. EC technology can help people to obtain all kinds of accurate information such as political, economic, scientific, technological and military information so that people can make scientific and quick decision by it. (5) It accelerates the modernization of finance and improves the operating quality and stimulates the producing of new products. It's necessary to use e-currency in EC. So, corresponding safe technology and equipment should be developed to realize e-currency. It will drive corresponding research and produce of safe technology production and equipment and development of some other corresponding industry and new products such as net bank, family bank and international finance service etc. The e-currency and electronic finance speed each other, which reduce the produce, storage, circulation and management of cash. E-currency and EC are drove by each other, and the obvious indirect efficient is the reduction of concept currency. (6) it's helpful to form a united big market, big currency and big business so as to be managed and standardized uniformly. Electronic network

can help to break the limit of division in piece and zone. It is favor of standardizing commodity business behavior and creating new business mechanism. It is efficiency to describe or trade commodity by electronic information, and it is also favor of forming centralized restriction management mechanism, which is the intensive and efficient management mechanism.

Anyway, EC can rebuild tradition industry to a information society level and step up resource optimal distribution and rational utilization. It can also reduce produce cost, improve enterprise competition, ameliorate economic measures of government management, shrink and gap between China and developed capitalist countries so as to catch up with them or surpass them. EC is the necessary selection of Chinese economy development. It is the important role it takes in Chinese economy development.

#### **4、 EC in Chinese textile industry**

National information industry ministry announces the decision of regarding textile industry as national enterprise informization experimental industry. The great engineering of reconstructing traditional textile industry with high-tech represented by information technology has already been startup formally. It will bring huge impetus to the great object in Chinese textile industry of realizing textile great power in the new century. The main contents of EC development are shown as follows:

- (1) Spreading ERP technology in 200 large-medium enterprises in the next 2~3 years.
- (2) Constructing expert query system about dress and surface stylish in whole country.
- (3) Making effort to improve the scientific contribution rate to textile industry from 15% to 30% in short term.

In order to make the three objects come true, Chinese textile industry is confronted with two challenges.

- (1) Traditional textile industry leading by information technology has faced with high technological trend.
- (2) It has faced with rapid economy globalization and market uniformity indicating by WTO.

The former not only creates higher productivity, but also accelerates the textile economy globalization course, while the latter not only brings favorable factor of participating in international competition, but also steps up the internationalization of national market and increases the risk of old productivity being thrown off.

Emergence of virtual factory will strengthen the drastic international competition of textile dress market. At the same time, modern consumption develops towards more diversification and individuation. Functional produce will be replaced by functional and artistic produce while singular variety and large quantities of produce will be substituted by multi-variety and small quantities or even single made production. New technology enters into the whole process of textile dress produce, which not only changes the quality, variety, function and style, but the traditional produce increasingly comes into a new era with flexible, intelligent, prompt, extractive, green, artistic and globalization characteristics. In the face of the new space-time condition fill with Internet, we must re-survey the traditional advantages of Chinese textile industry. Many enterprises still don't get rid of the traditional economy or even small produce competition mode, which greatly depended on such factors as raw materials and labors. Some other factors such as stiff innovation mechanism, small research and development investment, absence of innovation talented person, lagging and

inefficient management mode and the lack of enterprise innovation external condition especially fundamental establishment, result in the passive phase of low sci-tech content and intensive degree and lack of development advantages. It is difficult to catch hold of the innovation an economy globalization opportunity unless to promote the construction of information technology and increase the development advantages.

### **5、Information technology thought in textile industry and research of the E-commerce Model in Textile Industry**

(1) Continue to enlarge the application and service of information technology (IT) in textile industry, to step up IT contribution to textile economy growth from 15% to 30%. Service of textile economic information network system will drive the improving of information level and productivity.

(2) Continue to construct and boost computer and network system of enterprise and make effort to have some break in construction of enterprise ERP system so that 200 textile key enterprises can apply the ERP system after five years effort and establish a micro-foundation of united industry information system. Making effort to spread CAD and computer aided produce system in more enterprise produce technology fields and to spread computer aided management system such as personnel, finance, substance and distribution system in management system..

(3) Step up the construction of textile EC system and develop EC operation with B2B as its core under the condition of building EC technology and business system, so as to gain 40 billion EC exchange rates in national textile industry in three years. At the same time, we should extend commerce and business service in the whole textile industry with information network.

The development principles of textile industry EC are catch hold of key point, erect

model, drive surface by point, actualize step by step and avoid repeat and short term passion.

Different produce, enterprise structure and market distributing have different demand, which is represented especially in the construction of ERP system. It is either the marked object of enterprise information technology, or the course of enterprise information technology construction. The course is divided into four steps as the figure shows below:

(1) Textile enterprise information system construction

1<sup>st</sup>、 We should build state level macro service system, which means that we should regard Chinese textile information center as a core to construct “Chinese textile economy information net (CTEIN)” under the support of some relevant department. On the base of it, the CTEIN globalization, socialization and digitalization course should be accelerated with open, creative and practical principles such as increasing invest according with the demand of textile industry information technology plan, so as to found nerve center of complex information system in textile industry. To build and perfect the information service system, work will be spread from three levels:

- providing accurate industry fundamental information and all kinds of market information and constructing the information source system.

- Providing significant increment information service to enterprise from classifying, processing and analyzing information.

- Developing and constructing textile industry IDSS and ES on the help of textile

specialist and other relevant specialists, and developing query decision service to satisfy actual demands of enterprise.

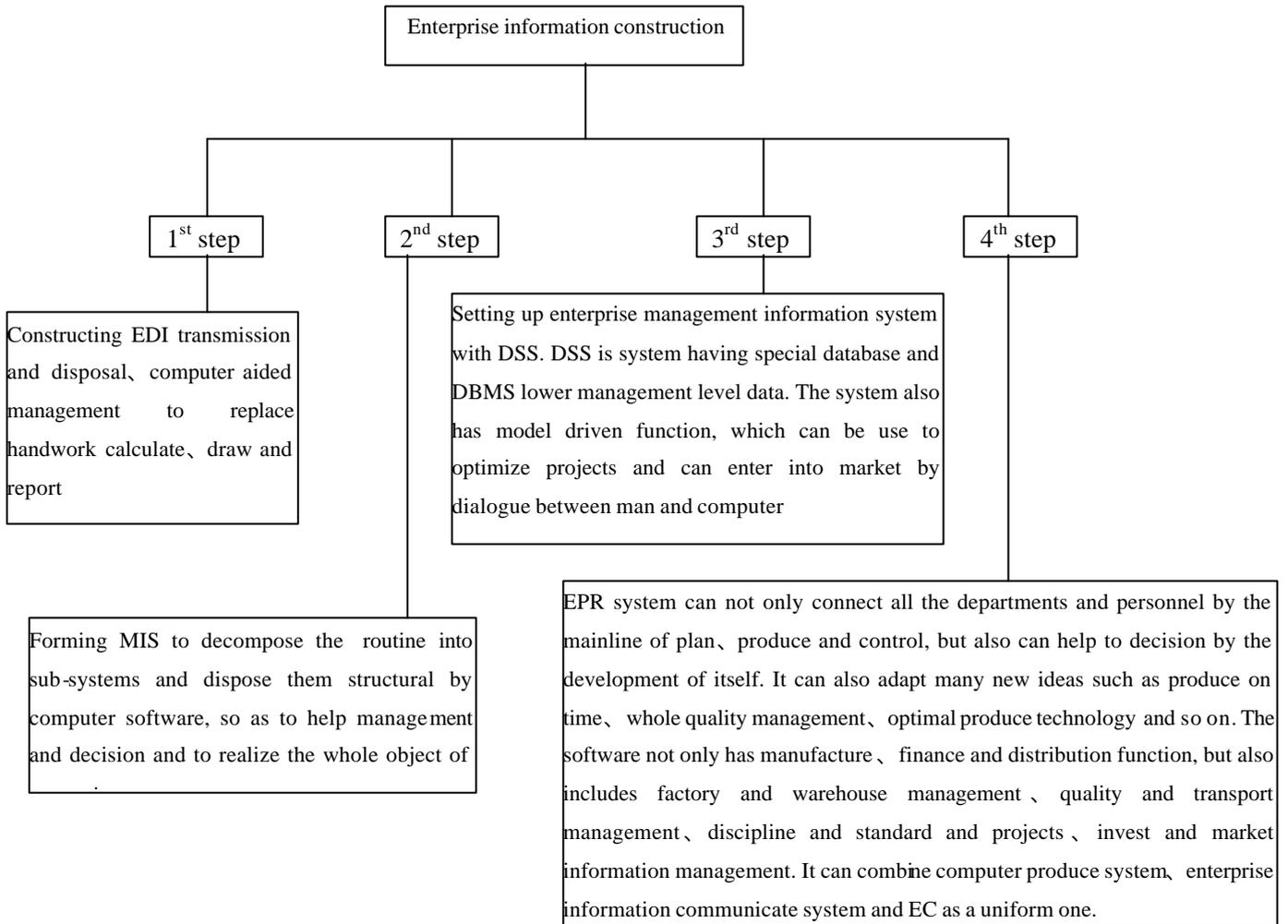
2<sup>nd</sup>、 In order to improve the macro decision and query service ability of enterprise, industry, region industry and country, all kinds of database, database management system, models and models management system should be built and perfected. It mainly includes information process standard, information collection and searches, transportation quality management and control and security standard, from which the information resource quality and efficiency can be assured. ERP engineering and EC should be step up and B2B mode EC should be tried in import and export field, backbone enterprise, international buyer and other enterprise having definite conditions in advance.

EC in textile should be constructed as three steps:

1<sup>st</sup>、 Constructing EC model and exploring commerce cooperation channel and trying to operate it.

2<sup>nd</sup>、 Enlarging and perfecting the function of EC and spreading its operation fields

3<sup>rd</sup>、 Realizing integrate service of EC and making it one of the primary models of textile trade and trying to gain 40 billion EC exchange rates per year in national textile industry after three years effort.

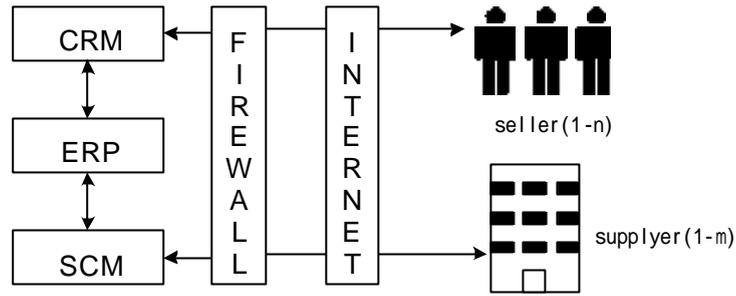


**Figure 1 textile industry information course sketch map**

Textile dress industry has a wide range, so we should research EC model with its own characteristic according different industries. For example in textile industry, the raw material is simplex such as cotton, wool and chemical fiber while the application trench is also simplex such as state cotton enterprise. And produce arrangement and plan dispatch is intricate and the distribution channels are

simplex relatively such as printing and dyeing factories and export enterprises. The characteristics indicate that EC in textile must mainly depend on ERP and with SCM and CRM as its accessories. Textile EC needn't use B2C model, for there are nobody buying coarse fabric. Therefore, textile EC model should be: **ERP+SCM+CRM+INTERNET**

Figure 2 is its sketch map.



**Figure 2 E-commerce Model in**

Industry of knitting, printing and dyeing and dress can build EC model with their own characteristics.

### 6、 Conclusion

EC is the development trend and will get great benefit if it is developed early enough. We should discuss and research EC model in textile actively so as to realize EC in textile industry as soon as possible.

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