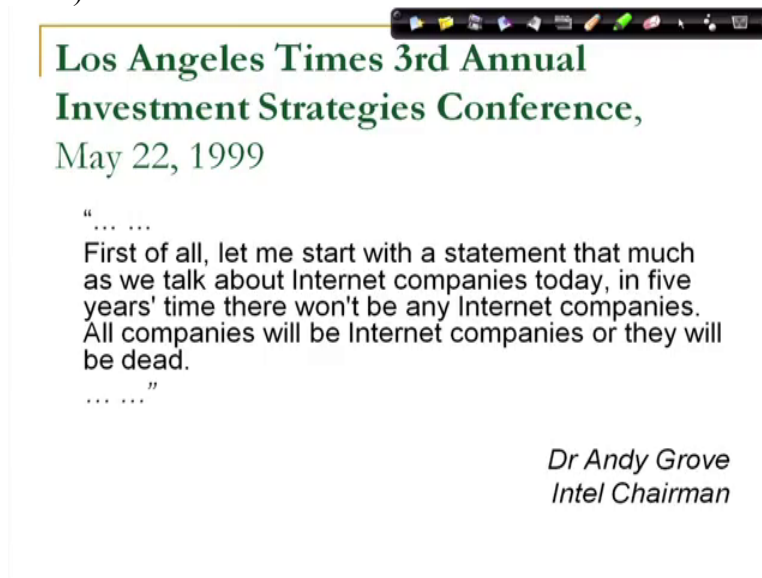


Course on E-Business
Professor Mamata Jenamani
Department of Industrial and Systems Engineering
Indian Institute of Technology Kharagpur
Module No 01
Lecture 01: Introduction to E-Business

Hi everybody, this is the 1st lecture on E business and I am Mamata Jenamani and for next 30 hours classes, I will be covering this course. To start with, can you imagine interacting with any company without looking at its website? No. The answer is no. Whenever we search for any product, any service and we would like to even contact any person in a company, the 1st task we do, we visit their website. However, you just imagine what was the situation let us say some 20 years back.

This was not the case. Do you think that when business was not running? Business was running very much and business was also making profit. Then what is this ICT intervention and why it was required as a primary strategy for every business?

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If you look at the what Dr Andy Grove, Intel Chairman then said in a conference in Los Angeles, he says, 1st of all let me start with a statement that much as we talk about Internet companies today, in 5 years time, there will not be any Internet companies or all the companies will be Internet companies or they will seems to be dead. What does it mean? So then he predicted, way

back in 1999 he predicted that in 5 years time, all the companies are going to have their own interface on Internet.

So these web-based companies are now everywhere. To start with, if we try to understand the word e-business, we start defining what is business. Now what is business?

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What is Business

(Oxford English Dictionary)

1. a person's regular occupation or trade.
2. work to be done or matters to be attended to.
3. a person's concern.
4. **commercial activity.**
5. a commercial organization.
6. (informal) a difficult or problematic matter.
7. (the business) (informal) an excellent person or thing.
8. actions other than dialogue in a play.



What is Business

Business is the social science of managing people to organize and maintain collective productivity toward accomplishing particular creative and productive goals, usually to generate revenue.

(<http://en.wikipedia.org/wiki/Business>)

A business (also known as an enterprise, a company, or a firm) is an organizational entity involved in the provision of goods and services to consumers. Every business requires some form of investment and enough customers to whom its output can be sold on a consistent basis in order to make a profit. Businesses can be privately owned, not-for-profit or state-owned. (<http://www.businessdictionary.com/definition/business>)



If we look at the dictionary meaning of business, business is a person's regular occupation or trade, a work to be done on matters to be attended to, a person's concern, commercial activity, a commercial organisation, a difficult or problematic matter and again, we can also say it is an

excellent person or thing, then actions other than dialogue in a play. However, when we talk about the business in the context of commercial activities, there are various definitions.

To start with, business can be called as a social science of managing people to organise and maintain collective productivity towards accomplishing particular creative and productive goals usually to generate revenue. So what is important here to mark is, besides doing the activity is in an organisation, the goal is to generate revenue. Another definition again from Internet from business dictionary. Here, a business is also called it is an organisational entity involved in provision of goods and services to the consumers.

Every business requires some form of investment and enough customers to whom its output can be sold on a consistent basis in order to make a profit. Now this business can be privately owned, it can be non-profit or it can be state owned. Now coming to the examples of privately owned businesses, either it can be very large business which is, can be a corporate house like that of Tatas and all. It can be a very small business, let us say a catering service, it can be a business can be non-profit.

When we say a business can be non-profit, it does not mean that without the money, the company sustains. They generate, they have their own process of generating the money maybe through subsidy. But they do exist and they perform certain activities to achieve a common goal. Then it can be state owned. For example, let us say coal India. Coal India is a public sector company and it is a state owned company.

So businesses can be privately owned, it can be not-for-profit or it can be state owned. Again, come to another formal definition of business. A business is generally an organisational unit that has or that should have a defence strategy and a manager with sales and profit responsibility. This definition is by Ucker and Matt Locklin from strategic market management, a global perspective both. Now if we go by this definition, the word that is very catchy is here is the strategy for making sales and profit.

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What is Business

- A business is generally an organizational unit that has (that should have) a defined strategy and a manager with sales and profit responsibility.

David A. Aaker, Damien McLoughlin, Strategic Market Management: Global Perspectives

What is the purpose of a business

- To generate revenue
- By delivering value to the customer
- And satisfying them



You can say, in e-business, the ICT is used as a strategy to increase the sales and generate better profit or in other words, to manage the business well. Now the question is what is the purpose of business? From all these 3 definitions, it is clear that the businesses are about making profits. Okay. So they do exist to generate revenue but they cannot generate revenue or they cannot make profit by doing some random activities.

They have to deliver value to customers. And not only they deliver the value to the customer, they have to satisfy them. But here again, let us try to understand what is the meaning of customer delivered value.

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Customer Delivered Value (Kotler)

- Customer delivered value is the difference between total customer value and total customer cost.
- Total customer value is the bundle of benefits customers expect from a given product or service.
- Total customer cost is the bundle of costs the customers expect to incur in evaluating, obtaining, using, and disposing of the product or service.

We go by the definition given in the marketing management book by Kotler where he says, the customer delivered value is the difference between the total customer value and the total customer cost. For example, think of you are buying the washing machine. When you are buying the washing machine, you are paying some money. Money is going from your pocket. Right?

Your balance is getting reduced, still you are buying a washing machine. Why do you buy the washing machine? Because you are going to get sudden benefit. What is that benefit and how much is the benefit? That benefit is, I mean what is the value here? The value is the benefit that you are going to get out of it minus the cost that you have paid. So the utility that you are getting out of this washing machine is actually the value delivered to you.

Now this total customer value is a bundle of benefits to customer expects from a given product or a service. So when we talk about the bundle of benefits, it is not only the product itself, it is the product as well as the service associated with the product. Okay? Now the total customer cost is the bundle of cost the customer expects to incur in evaluating, obtaining, using and disposing the products and service. Right?

So every business do exist to give value to the customer and in the process, to make profit. Now simply if you provide value to the customer, that does not mean the customer will be satisfied. Now what is customer satisfaction then? The satisfaction is a person's feeling of pleasure or

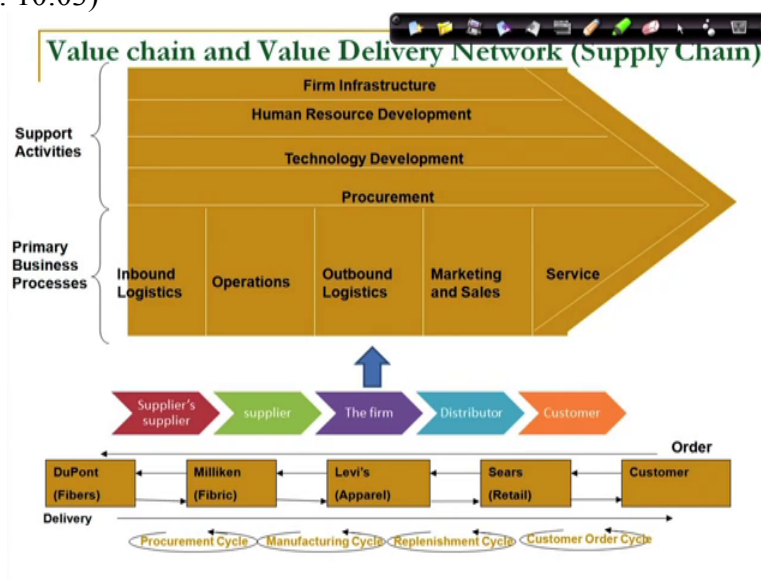
disappointment resulting from comparing a product's perceived performance or outcome in relation to his or her expectations.

Now again come back to the example of the washing machine. You expected the washing machine to perform in a certain way but it did not. So even if you are getting some benefit out of the washing machine, let us say you expected that your clothes will be some 90 percent dry but it did not happen. So you did not get the full satisfaction. You bought that washing machine from let us say from some company A, and you were not very happy with the company, that company because the your expectations are not met.

Do you think that next time, let us say suppose you buy some other home appliances let us say some oven, are you going to go back to that particular company? No. But if you are happy with the performance of the washing machine, the other consumer products that company produces, definitely you are going to buy. So the key to generating high customer loyalty is to deliver high customer value and to make him satisfied.

So therefore a company has to develop a competitively superior value proposition and a superior value delivery system. Now because we have talked so much about the value, let us just try to understand how exactly this value gets delivered to the end customer. To see this, we have to look at the value chain of a company.

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What exactly is the value chain and as management students, many of you will be knowing what exactly is a value chain. This is Porter's value chain and here, you have 5 primary business processes, inbound Logistics, operations, outbound logistics, marketing and sales, then services. Every company, whether it is a manufacturing company which manufactures products, whether it is a service company, everybody needs these 5 primary business processes.

Now in this, if you look at these primary business processes, through inbound Logistics, you get raw material for making certain products, through operations you actually produce those, then through outbound logistics, you try to give it to your, try to make these products reach your and customer and through marketing and sales strategy, you promote your work, promote your products and service and finally at the end, you provide after sales services.

Besides these 5 primary activities, we also have some supporting activities. The supporting activities are broadly of 4 types-procurement, so you might be thinking now because we have inbound Logistics where we are buying raw material, procurement need not be some activity which spans over all these 5 activities. No, it is not like that. Procurement is activity which spans over everything.

Do not you think while carrying out your, providing your after sales service, you do not do procurement? You do. Even buying some stationery is also procurement. So procurement is some activity which spans across all the 5 primary business activities. Then you have technology development, then you have human resource development and finally, you have to have the firm's infrastructure developed over the time.

Now the question is, if this is the value chain of a company, can the value chain is sufficient to deliver the value to the end customer? The answer is again no. Look at this diagram. Here we have, this is the firm and we have, the firm actually cannot exist on its own. For its raw material or inputs to the firm, it depends on its supplier. Now again, supplier also cannot exist on its own. He again has to depend on his supplier.

Similarly, after the firm makes its products, it depends on its distributor to distribute it to its end customers and end customers are the final entity which the firm is targeting to provide the value, in turn satisfy them and make profit. Now come to some example. Let us say Levis jeans

company, this example is again from Kotler. Levis is the jeans company all of us know and where from do we get its jeans? From some retail shop.

As customers, we get the jeans from the retail shop. And how this Levis products are made, it uses some fabric made by some other, some other company and that some other company again for making the fabrics, it requires fibre which comes from another company. So if you look at this, here when you deliver the value, or deliver the product in this case to the customer, the customer's order again flow. Okay?

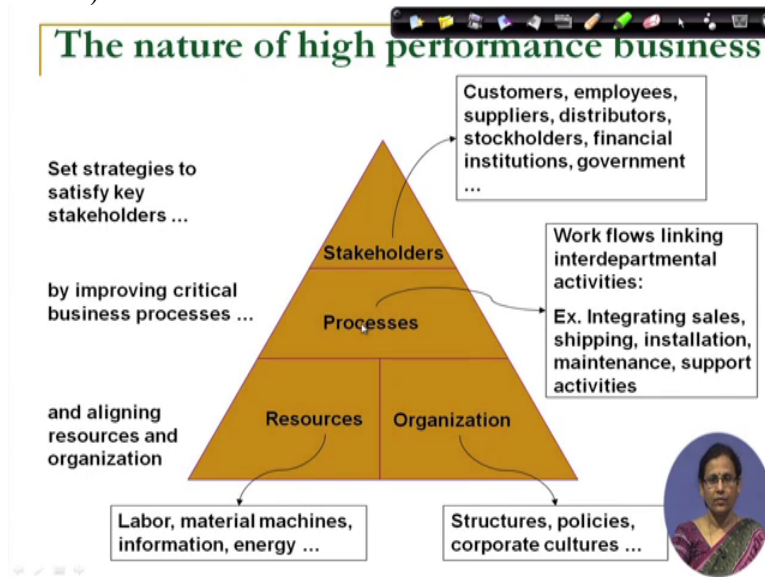
The customers order the retailer, the retailer orders the manufacturer, manufacturer to its supplier and so on. And when we talk about the order is flowing or the product delivery is happening, both are flows but the nature of the flow is actually different. How? The order is basically the flow of information whereas the delivery is the flow of the product okay?

And during this delivery, besides flow of the product, many documents also flow. That is again another flow of information. In fact, as you can recollect, the 3 things flow in every business transaction-information, material and money. 3 things flow. Now here because of this ordering process and delivery process, many cycles happen and that introduces the delay in the process.

When the customer orders the retailer, customer order cycle happens because the order will be placed, then the material will be made and it will be supplied. Then there is a replenishment cycle, there is manufacturing cycle and there is procurement cycle. Basically ICT is the strategy to reduce the delay in all these cycles. Now if we want our business to be of high performance what should be our goal?

We have to have a set of strategies to satisfy the key stakeholders by improving the critical business processes and aligning the resources and organisations towards it. Now when it comes to resources, what are various resources of the organisation? Resources are labour, material and machines, information and energy. And the organisation, it is structure, it has policies, and it has some corporate culture. And what are processes?

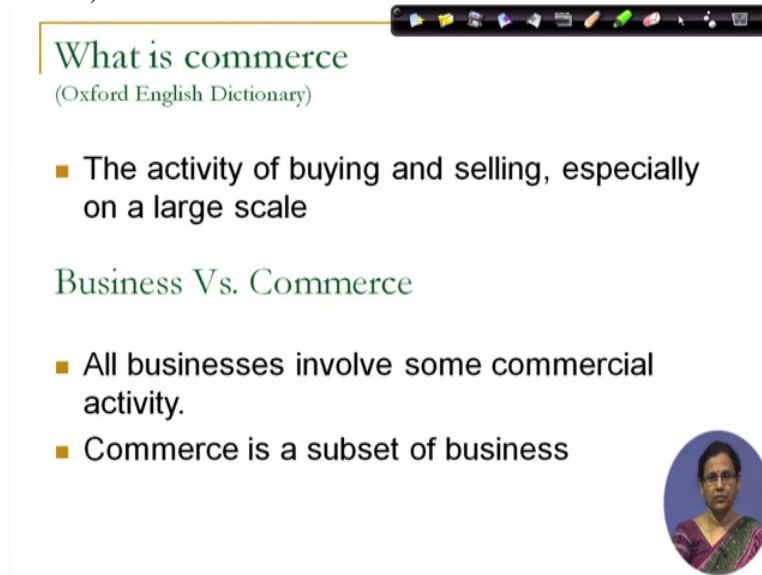
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Processes are the workflows that links the interdependent activities to carry out certain business activities. And there are many stakeholders of the company. Who are the stakeholders? Customers, employees, suppliers, distributors, stakeholders, financial institutions and governments. Now all these stakeholders are connected to the company and they also participate in this value delivery and all of them are connected to the company through some information system.

And this information system in today's world when it is Internet enabled along with many newer ICT strategies, they contribute to improving the business processes and that is how the e-business comes into picture.

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What is commerce
(Oxford English Dictionary)

- The activity of buying and selling, especially on a large scale

Business Vs. Commerce

- All businesses involve some commercial activity.
- Commerce is a subset of business



Now let us again one aligned term with business is commerce. What exactly is commerce? Let us go by the dictionary on, the definition from Oxford English dictionary again, it is the activity of buying and selling, specially on a large-scale. Okay? So therefore, almost all businesses involve some commercial activity. However, only the commercial activities do not make the business. For example, consider in your company, you have many employees and every month, you pay them salary.

Do you think any commercial activity takes place then? No. But you have business process. So besides commercial activities, there are other businesses processes as well. So therefore we can say commerce is a subset of business. Now we are talking about e-business and so far we have been talking about the business and commerce and what we have understood so far? We have understood that businesses do exist to make profit but they cannot make profit just like that.

They have to deliver value to the customer and not only to deliver value to the customer, they have to make the customers happy, they have to make the customer satisfied and for this process, they need the help of many stakeholders, they have to have their business processes work in a efficient manner, they must be utilising many resources to make the business make their business profitable and group.

And so far we have simply talked about that ICT is the strategy, when it is adopted properly in the organisation, this can actually change the way the organisation's work. Now when we talk about e-business, this is again the term E comes in. So we have talked about business and commerce. Now again the term E comes in. Now what is this E? E all of us know that E stands for electronic transactions. It is all about ICT technologies.

Now let us just try to understand how this ICT technologies has actually helped the businesses over the years Internet is a very recent phenomena, in fact actually from 1990 only Internet became commercialised and this e-business, e-commerce, those things have come up. But prior to that, information technology has actually changed the way the businesses work. Let us start from 1950 to 60.

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In this era, basically the part of the business that got automated was the transactions where there is no business support. It is just everyday transactions and record keeping, it was got automated. And to start with, the very 1st thing that, the very 1st subsystem that got automated in any organisation is actually the payroll system. And if you look at the payroll system, what is the payroll system?

Payroll system is basically a set of very mundane transactions with definite rules. You do not have any kind of decision-making involved over there. So such situations, such kind of

processings are actually transaction processing. We are going to learn more about various types of information systems when we are going to learn about, we will be talking about transaction processing and other stuffs.

Then in the next 10 years, further change in form of not only automating the transactions but the data that is getting generated out of the transactions, summarising it and providing it in a more comprehensive manner to the managers for decision-making. So those systems are called Management Information Systems. And next era was bit more advanced where not only the very mundane tasks of summarization, etc happened but there again, what happened?

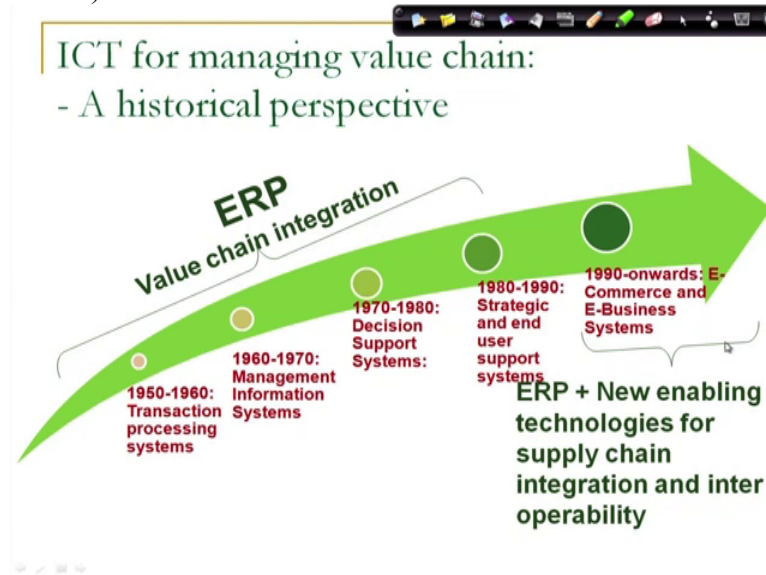
People tried to automate the decision-making process. Now when we say automating the decision-making process, what exactly it is? Every day we take decisions but by automating the decision making process we mean we have to have a model of the decision and if the decision has to be repeatedly executed, that model has to be executed repeatedly. Okay? So here we say such kind of systems to be decision support systems. Then next was the era where people started looking beyond decision support.

They tried talking about the expert systems where not only your mathematical models or data analytics models were implemented to provide decisions, they were also looking for artificial intelligence methods to apply and to make many kind of strategic Information Systems which gave them many competitive advantages. And as I told you from 1990 onwards, the Internet got commercialized and because of this commercialisation, not only we have one integrated information systems which combines all the subsystems of the business, we also wanted to connect information system of many businesses.

So we have to have now technologies which makes the Information Systems interoperable. By interoperability, we mean the Information Systems which of various organisations which have different kinds of technologies now they need to be integrated. Besides that we also and in the process we had this web-based systems, web services and cloud computing which is a more recent phenomena, mobile computing, use of RFID and GPS/GIS for tracking the products across the supply chain.

And more recently, Internet of things answers us which can actually generate the informations online and provide decision support for the businesses.

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Now to sum it up, from this historic perspective, from 1950 to 1990, the efforts were actually for automating intra-organisational business processes and a centralised information system was developed for that and that was called enterprise resource planning system, this ERP system but however, from 1990 onwards, with Internet becoming commercialised, we not only had ERP but we had many other enabling technologies for automating the complete value delivery network that is your supply chain.

So this, the technologies in this new era are not only the ERP but also the technologies which integrate the entire supply chain. Now coming to the definition of, specific definitions, so far we have defined the term commerce and business but we have not defined what is e-commerce and what is e-business. Now what is e-commerce? E-commerce is about buying and selling of goods and services through digital communication network which uses the Internet technology and web in particular.

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E-Commerce

- Buying and selling of goods and services through digital communication network
- Use of the Internet and the Web
- May includes electronic payments systems

E-Business (coined by *Lou Gerstner*, CEO of IBM)

- The term "e-business" was A superset of e-commerce activity
 - Not limited to buying and selling
- Includes other business activities such as
 - Servicing the customer
 - Collaborating with the business partners or other stakeholders
 - Supporting internal transactions
- In general conducting all business activities online.



Now it may include electronic payment systems and what is e-business? As we would know that business, commerce is actually a subset of business. So in e-business which is a superset of e-commerce activities, it is not limited to buying and selling. It includes other business activities such as servicing the customer, collaborating with the business partners or other stakeholders, supporting internal transactions and so on.

Or it is in general conducting all the business activities online. And to tell you little bit more, this particular term E business was actually coined by Lou Gerstner, CEO of IBM and this is a more recent than that of e-commerce. Now it is a more formal definition of e-business, e-commerce.

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Defining E-Commerce & E-Business

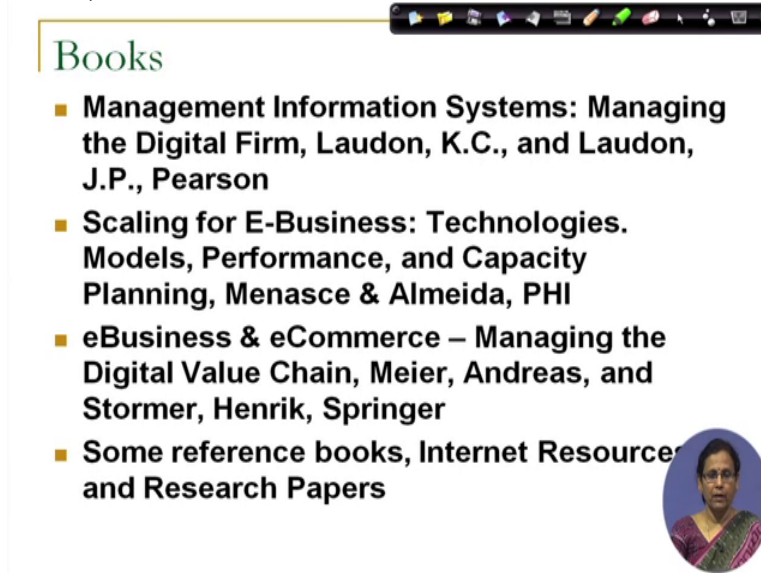
- **Electronic commerce or e-commerce** consists of the buying, selling, marketing, and servicing of products or services over computer networks. The information technology industry might see it as an electronic business application aimed at commercial transactions.
- **Electronic Business**, or "e-business", may be defined broadly as any business process that relies on an automated information system. Today, this is mostly done with Web-based technologies.
- **E-business is more than just e-commerce.** It involves business processes spanning the entire value chain:
 - electronic purchasing and supply chain management,
 - processing orders electronically,
 - handling customer service,
 - cooperating with business partners.



Electronic commerce or e-commerce consists of buying, selling, marketing and servicing of products and services over the computer network. It is the use of information technologies that actually made this electronic transactions over the Internet possible. Now coming to e-business, electronic business are e-business. It may be defined broadly as any business process that relies on automated Information Systems.


Today it is mostly done with web-based technologies and to summarise it further, e-business is not e-business is more than just e-commerce. It involves business processes spanning the entire value chain which includes purchasing, supply chain management and so on.

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Books

- **Management Information Systems: Managing the Digital Firm, Laudon, K.C., and Laudon, J.P., Pearson**
- **Scaling for E-Business: Technologies, Models, Performance, and Capacity Planning, Menasce & Almeida, PHI**
- **eBusiness & eCommerce – Managing the Digital Value Chain, Meier, Andreas, and Stormer, Henrik, Springer**
- **Some reference books, Internet Resources and Research Papers**



Now in this course, these are the books which we will be using. As you know, this e-business is actually an offshoot of Information Systems. So we will be using mostly the Information Systems books. The 1st book that we would like to refer is Management Information Systems: Managing the Digital Firm by Laudon and Laudon. Then Scaling for E-business which basically talks about the technologies and various models and all. That is by Menasce and Almeida.

Then we will be taking, considering another book, e-business and e-commerce. This is a book from, this is a book by Meier and Stormer and this book is from Springer and besides these, as you know we will be going little beyond what is there in this Information Systems books. We will be going little more depth into the technologies because without understanding of the technologies, making corresponding decision support systems will not be possible.

So we will be referring many reference books and Internet resources as well and some research papers. And whenever I refer anything outside these 3 books, I will just let you know. Thank you very much.