Course on E-Business
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Module No 01
Lecture 05: E-Business Models
For Brick and Mortar Firms

Welcome back. Since last few classes, we have been talking about how e-business has affected the web-based businesses. In fact, how these web-based businesses emerged because of, how new business models developed because of Internet and the Web. In today's class, we are going to see, it is not that new business models have only developed and Brick and mortar businesses have also evolved their business processes, they have modified their business processes by taking advantage of this Internet and the Web.

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So in this introductory lecture, we will be talking about 2 such cases where we will be looking at 2 innovative models that organisations, different organisations have adopted for taking advantage of Internet-based commerce.

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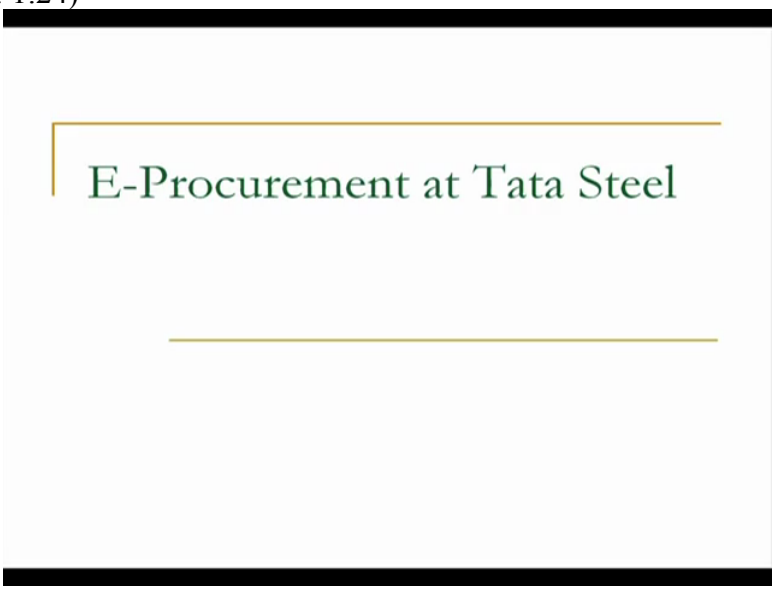

The 1st one that we are going to deal with is e-procurement at Tata steel. When we look at the procurement, procurement is a process which exists in every organisation. However, today we are going to see how this ICT technology, information and communication technology and specifically, this Internet-based commerce has changed E-procurement process at Tata steel. This, I would like to 1st acknowledge that this particular case I have adopted from some case study published in some journal and this case study is actually developed by some professor in (())(2:00).

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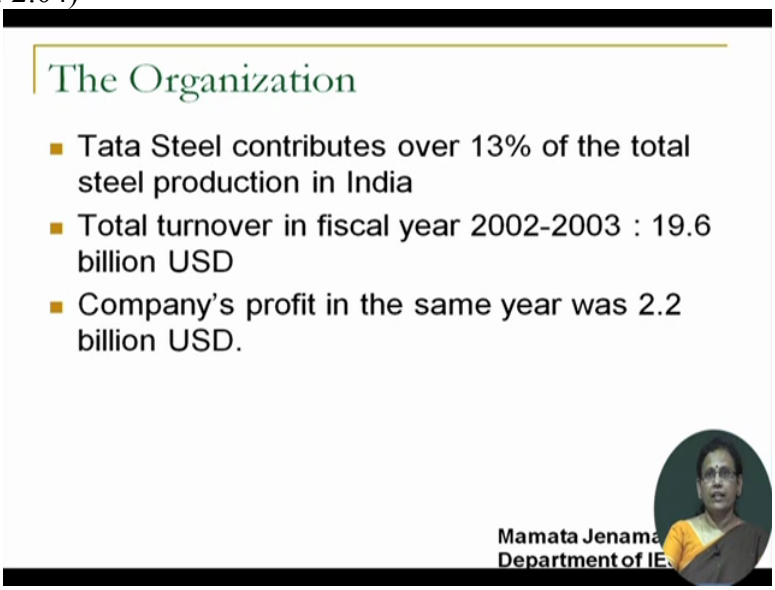

So let us 1st look at the Tata steel as an organisation. Actually, Tata steel's. This particular case study is made during 2004-2005 and during that period, Tata steels contributed over 13 percent of the total steel production in India. And the total turnover in the fiscal year 2002 and 2003, was 19.6 billion US dollar. The company's profit in the same year was 2.2 billion US dollar.

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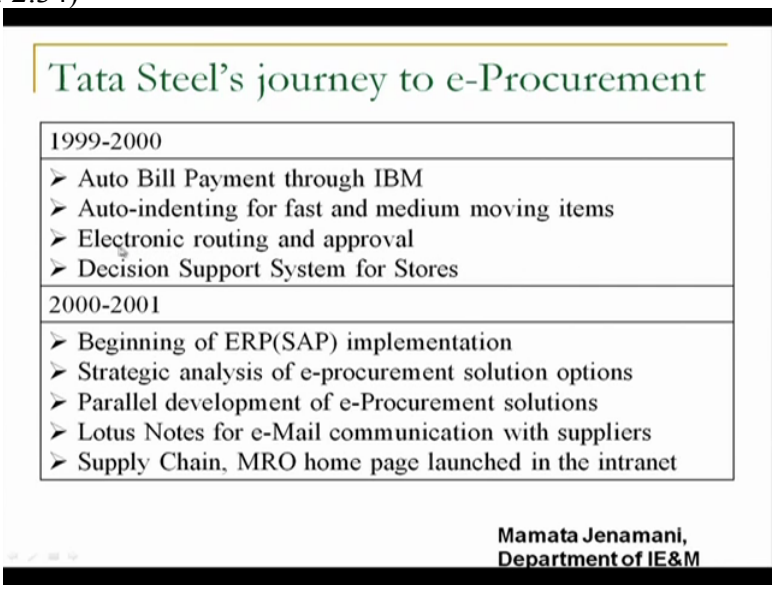

Now if we look at that, as I have already told you, procurement process is not new. But what Tata steel, what we are going to discuss today is how Tata steel has used this information and communication technology and Internet-based technologies in particular to change its additional procurement process. So let us look at the of Tata steel for e-procurement. So 1st of all, during 1999 and 2000, it made, it automated the bill payment services.

Then, auto indented for fast and medium moving items. That it also did electronic routing and approval. Then, it also made a decision support system for the stores. In 2000 and 2001, when it started implementing its ERP, what it did, it searched for various strategy solutions for e-procurement, for adopting e-procurement. So at this time, it developed this e-procurement solution along with its traditional process.

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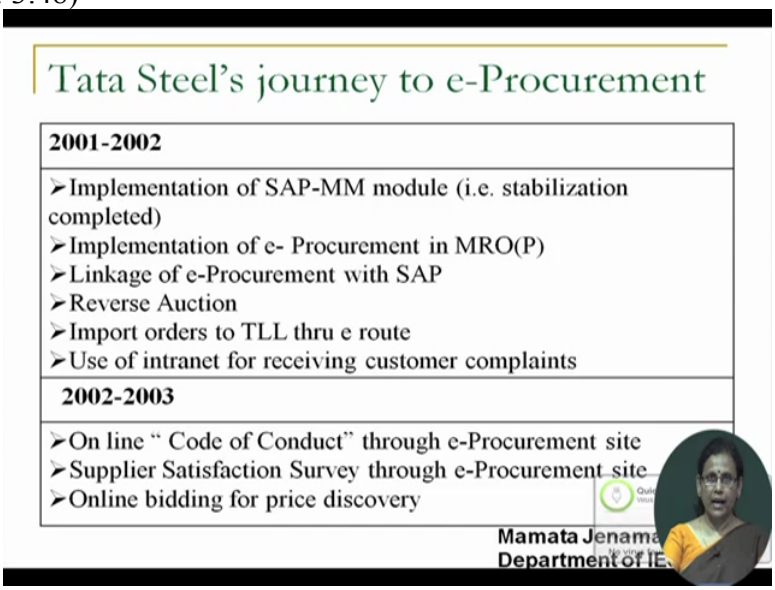

In 2001 and 2002, it implemented this SAP metal managements module and during this process, it also linked this, its e-procurement with that of SAP and it also adopted reverse auction. In fact, today we are simply going to look at how this particular journey of Tata steel has improved its e-procurement process. But the details about this e-procurement steps, et cetera, we will be looking in some subsequent lecture.

Now, during 2002 and 2003, it actually, it not only i mean previously developed his e-procurement site and all, then it what it did? It actually used this site and it made trained suppliers for using this particular service.

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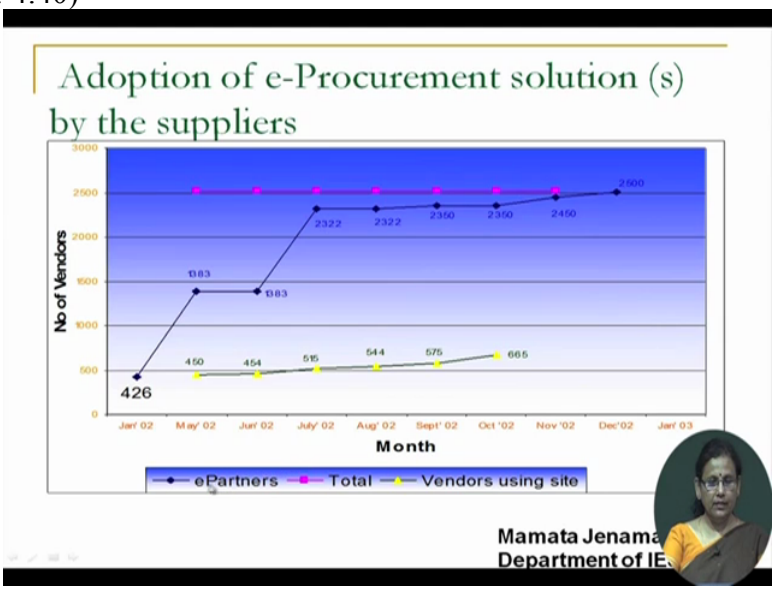

Now by this, if you look at this adoption of e-procurement solution by its suppliers, if you look at this graph, actually, actually its number of its e-procurement partners grew slowly over the years and if you look at that the number of vendors using site, it also increased. And the total number of and because of this increase, the total number of vendors who were not using the site and were using this site, of course it remained constant.

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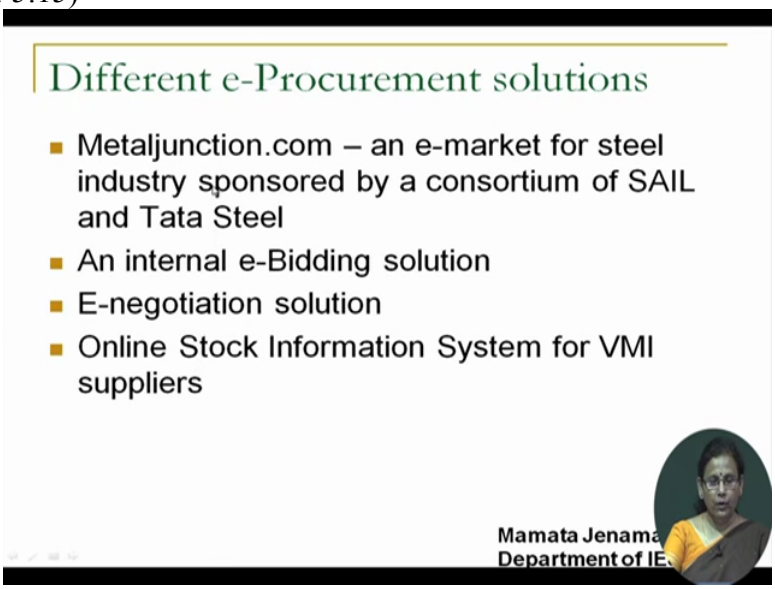

So now, it adapted a number of different e-procurement solutions. What it did? Insight we have already is discussed about metaljunction in the context of a service provider and we also

discussed at that point of time that metaljunction is a website which provides this procurement and selling services using auctions to many of the steel companies. In fact, it started this metaljunction started journey with Tata steels, along with Tata steels. So this metal junction is an e-market for steel industries sponsored by a consortium of SAIL and Tata steel.

And it is one of the approach for procurement solutions for Tata steel. Then Tata steel also has one internal e-bidding solution. It also had one in E-negotiation solution and it also had one online stock information system for vendor managed inventory VMI suppliers. In fact, about this vendor managed inventory where the vendor is takes care of the inventory of the manufacturer, we are going to discuss little later.

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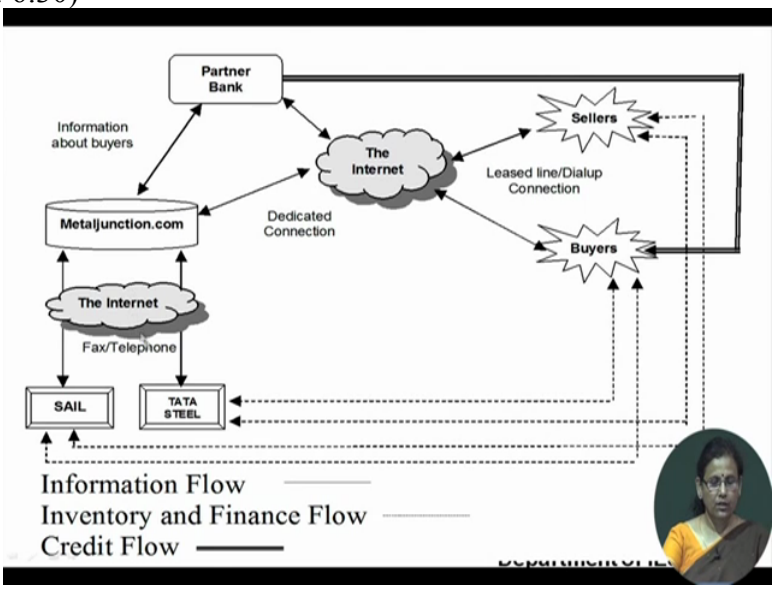

If you look at the information flow of Tata steel with that of the metaljunction, we can see that this metaljunction which takes, partially takes care of the of the procurement of Tata steel, not the strategic products but remaining products, what happens? This Tata steel, in fact metaljunction has one of its, one of its office in Tata steel's premises. What happens? It takes, here we are actually representing 3 types of flows. This dotted line is inventory and finance flow and this thin line is information flow and this double line is actually credit flow.

So here, we see that in this particular model, 3 i mean the many parties are involved, the Tata steel itself, then metaljunction, then the partner brand and the sellers and buyers. In fact, this

metaljunction takes care of both selling and buying part of Tata steel but right now what we are focusing at is the buying phenomena. So therefore what a concern to us is Tata steel is the buyer and there are multiple sellers.

So in fact, metaljunction provides a facility for Tata steel for hosting its requirement so that the sellers can respond over the web. And when the sellers respond over the web, the transactions take place and basically they use reverse auction for conducting this transaction. And at the end of the transaction, your, the inventories are actually sent from the seller to the Tata steel and the credit flows to the bank.

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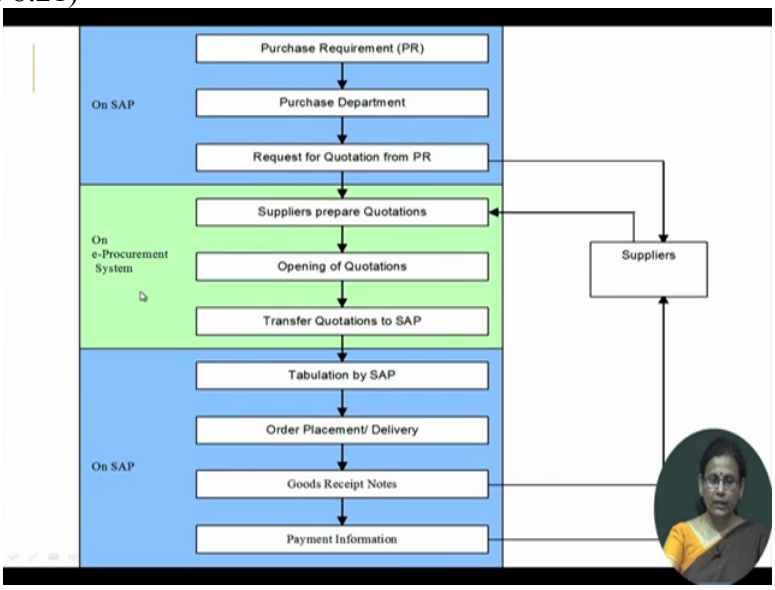

The 2nd as I told you, Tata steel has various options for procurement. One was through metaljunction and another one was through its own e-procurement system. This as I have already told you, this e-procurement system was developed indigenously by Tata steel and that point of time when it was implementing SAP, parallely it was getting developed. And during that time, SAP was not providing a solution e-procurement solution directly to the company where it was getting implemented.

So what they did? They in between two SAP modules, they implemented their own e-procurement system. So what was happening? On the SAP, the purchase requirements were raised by the purchase department and the request for quotations were raised. Then through the

e-procurement portal, the suppliers were asked to i mean it was sent to the suppliers and the suppliers were asked to submit the quotation and they were submitting the quotations through this e-procurement portal.

And then the opening of the quotation was taking place. Then after the quotations were opened, it was again transferred to another module of SAP. So SAP is basically the ERP system which they were using. So then it was getting tabulated by the SAP and the order placement and delivery was taking place and good received note was made and it was sent to the supplier and payment information was sent to the supplier. So the basically what I'm trying to tell is, because of this Internet, this Tata steel could actually make its own e-procurement portal and it started using it along with the SAP that is its ERP solution.

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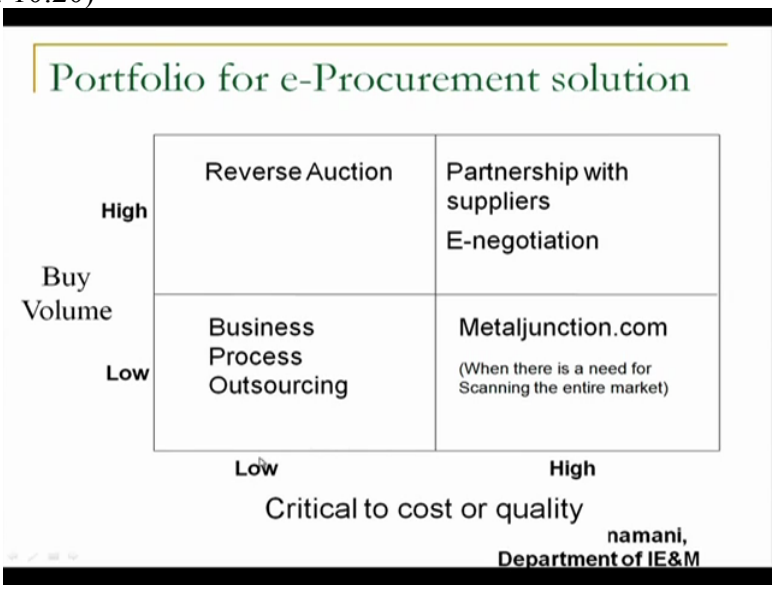

So if you look at the portfolio of e-procurement solution, e-procurement solutions taking care of looking at the buy volume and the critical to cost or quality ratio of the item, so when the buy volume is low and the item is not very critical, they were actually using this business process outsourcing. So again, when the buy volume was high and the criticality item was low, they were going for reverse auction. And when the buy volume was low and criticality to cost and quality was very high, they were using metalJunction. And when both of these were high , and this was basicallyfor the items for the strategic items they were actually using this e-negotiation.

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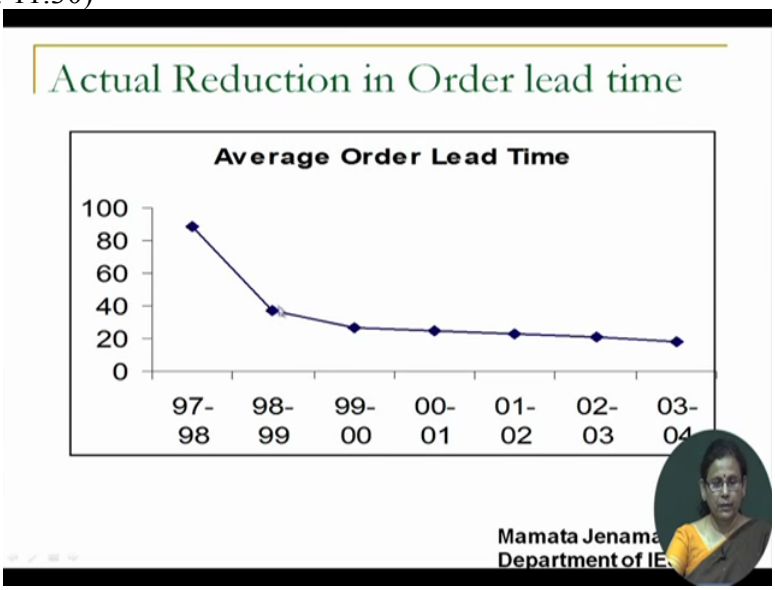

Now let us look at the benefits that are still obtained through e-procurement. So looking at these benefits, if you can see, their lead time can actually decrease over the time. In fact, if we take it as a let us say around 99 percent in the beginning, it was actually decrease to 20 percent.

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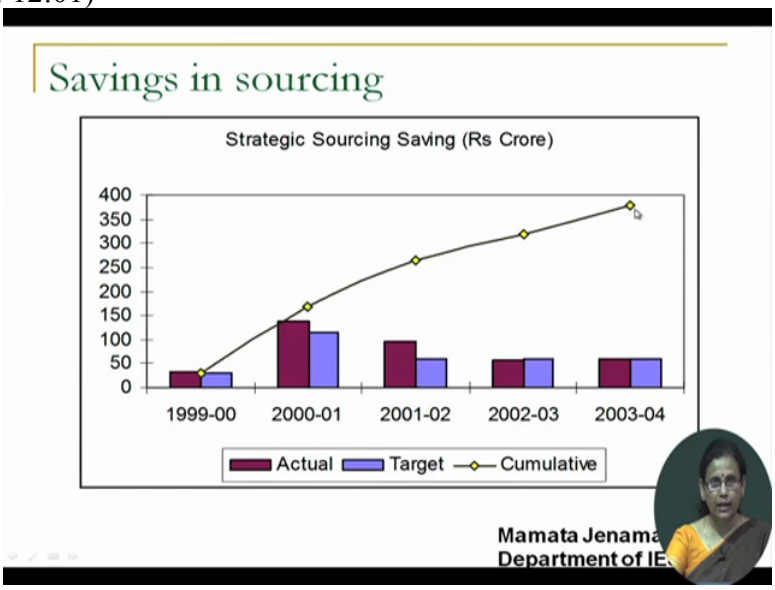

Then their strategic outsourcing saving also increased over the years and the increase was quite notable. It started with a very low amount, around let us say, some less than 50 crores and it increased up to more than 350 crores. And that was a reduction in the inventory cost as well where the cost over the years from starting from 2002-03, it consistently reduced in 2004 and 05.

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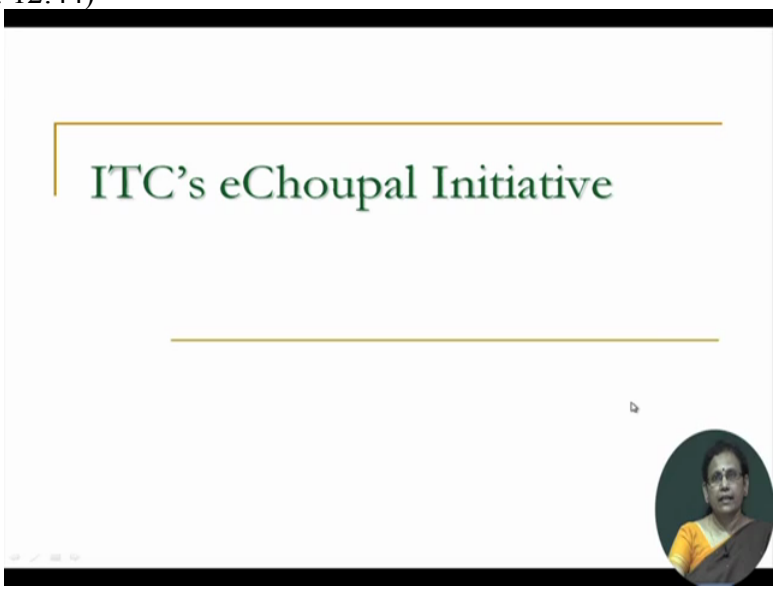

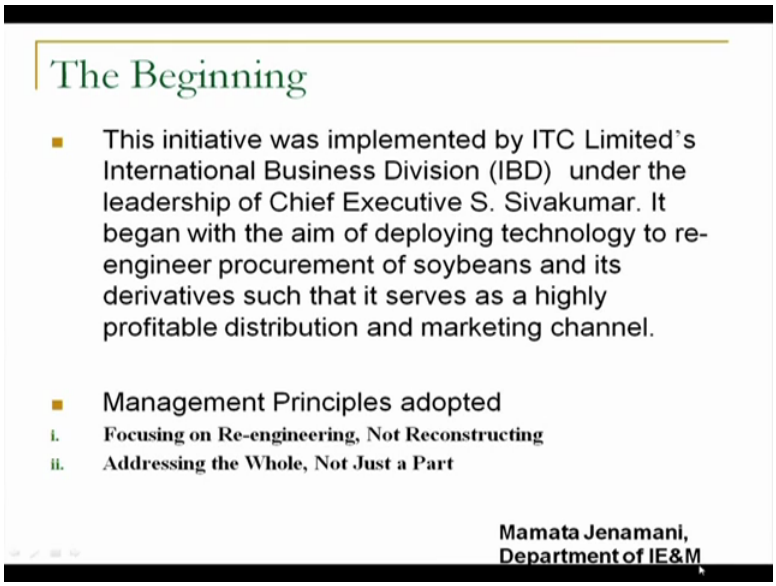

The 2nd case that we are going to learn is actually ITC's eChoupal. This in fact, this EChoupal, you cannot say this is there is any kind of business model involved in this but this is a very innovative approach were actually ITC used Internet for getting more business . In fact, this initiative was implemented by ITC under the leadership of Chief Executive S. Sivakumar. It began with the aim of deploying technology for re-engineering, procurement of soya beans and its derivatives such that it serves as a highly profitable distribution and marketing channel.

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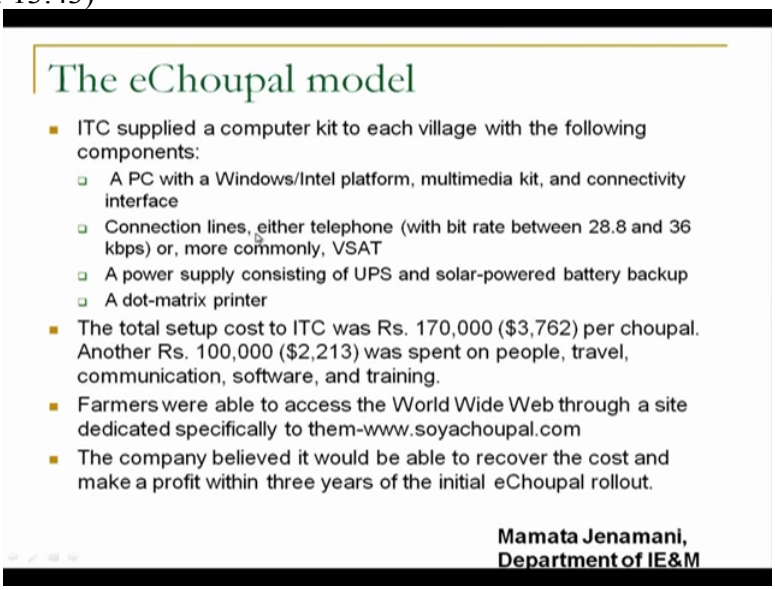

Now look at this EChoupal model. This ITC supplied a computer kit to each village with the following components- A PC with Window or Intel platform, multimedia kit, and connectivity interface. It also had these connection lines they also provided connection lines eitherthrough telephone or through VSAT. And they also provided this power supply consisting of UPS and the solar powered battery backup and a dot matrix printer.

This total setup cost for ITC was was around 1,70,000 for Choupal and another 1 lakh was spent on people, travel, communications, software and training. The farmers were able to access the World Wide Web website dedicated specifically for them and this website is wwwsoyachoupal.com. This company believe it would be able to recover the cost and make profit within 3 years from the initial rollout.

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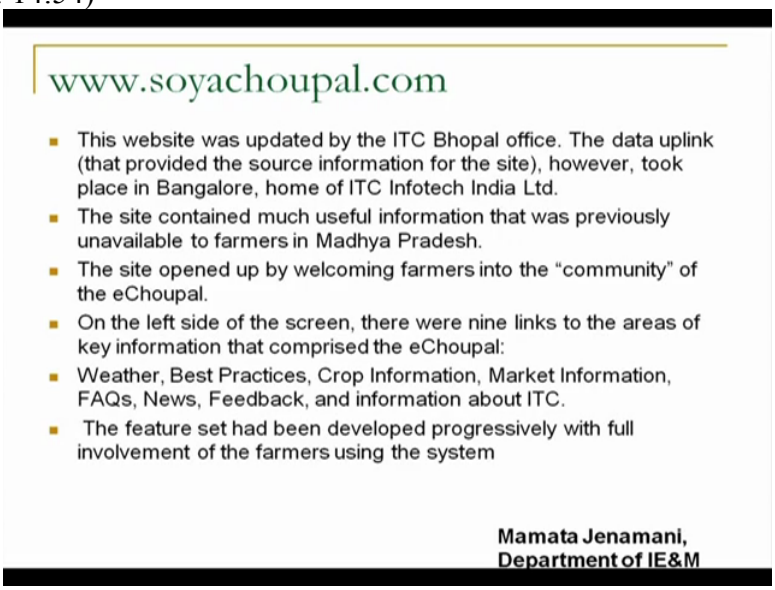

Actually, this particular website was updated by this ITC's Bhopal office and this data uplink that provided the source information to the site was dumped there. However, it took place in Bangalore, the home of ITC Infotech India Ltd. This site contained the number of useful information that was previously unavailable to the farmers in Madhya Pradesh. In fact, right now, they have replicated this model in many parts of the country but it initially started in Madhya Pradesh. And as as I told you, in various places, they have their Choupal with some cost implemented.

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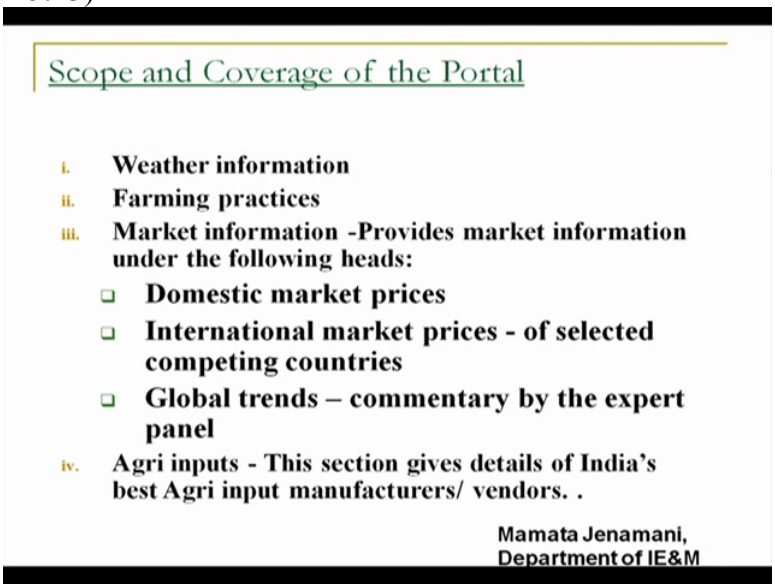

Then what exactly they were showing in that portal, that EChoupal portal? They were showing weather information, farming practices, market information and this information included the domestic market price, international market price of selected competing countries, global trends in terms of commentary by experts and it was, there was also one agri input section and this section give them the details of India's best Agri input and manufacturers and vendors.

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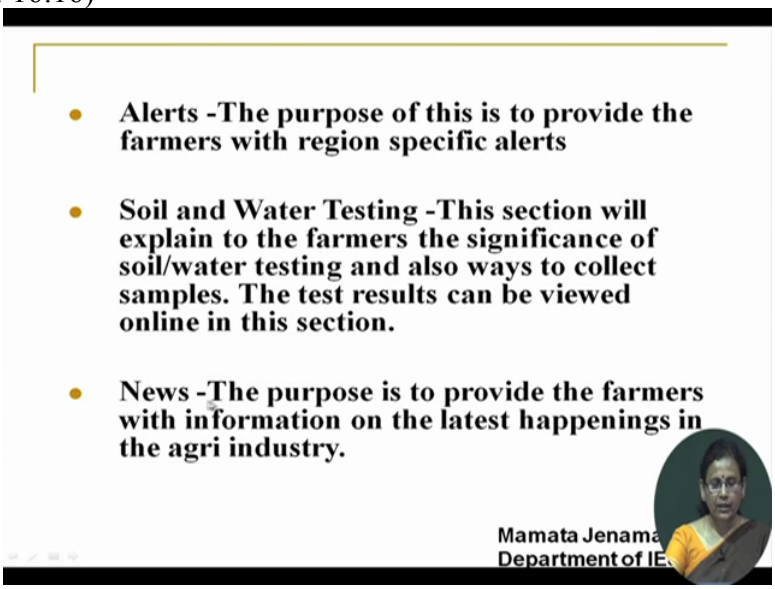

They also provided various alerts. The purpose of this was to provide the farmers with region specific alerts. Then, there was soil and water testing detail. This section explains the farmers about the significance of soil and water testing and also the various ways to correct the samples and so on. They were also providing the news and the purpose was to provide the farmers with the information on the latest happening in the agri industry.

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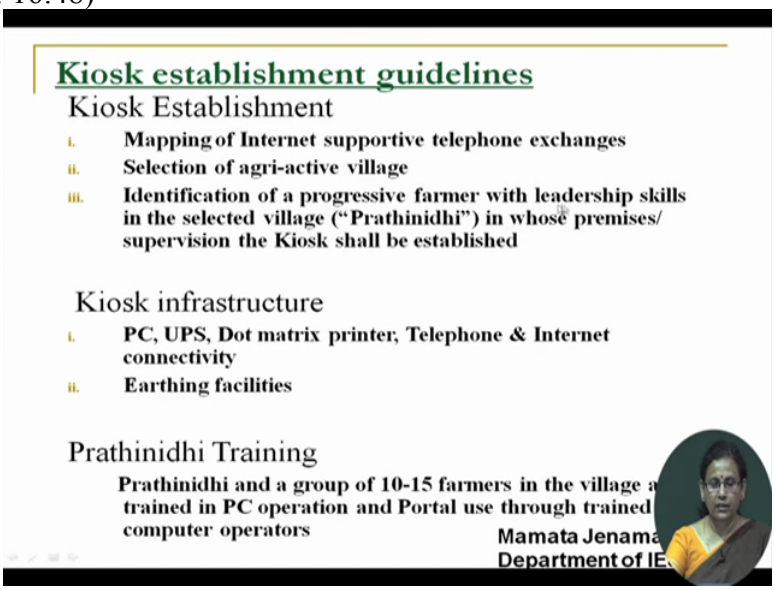

Then this kiosk that was implemented in various flags, there was various guidelines for that. 1st of all,, for kiosk establishment, there was a mapping Internet supportive telephone exchanges and they went through this selection of Agri-active villages were done. Then, identification of the progressive farmers with leadership skill in the selected villages was made and they were actually leading this kiosk. And kiosk infrastructure we have already talked.

It was PC, UPS, dot matrix printer, telephone and Internet connectivity and so on. And then this Pratinidhis , the leaders were called actually the Pratinidhis. These Pratinidhis were leading a group of 10 to 15 farmers in the villages who were trained in the PC operations and the the portals use through trained computer operators.

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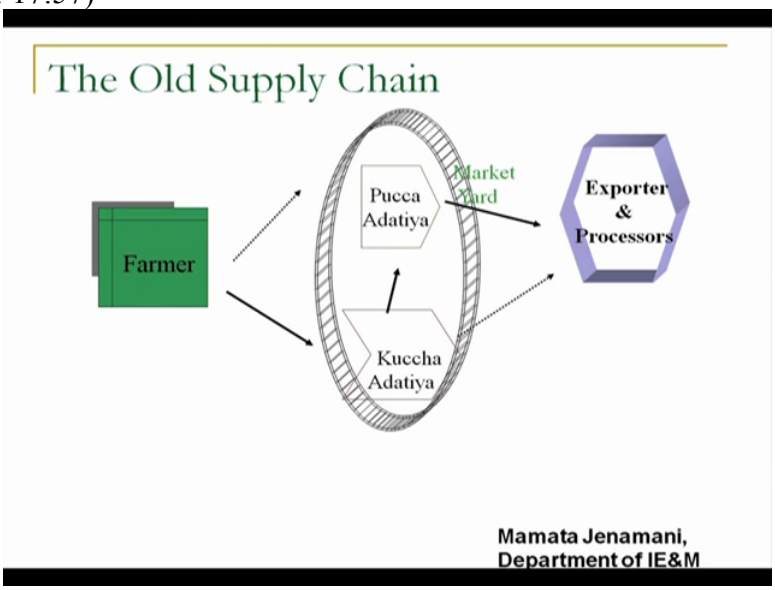

Now what happenned? What they were targeting at? See, look at this, they were actually not directly asking the farmers to sell their produce to ITC. What they were doing is that they were inducing inducing a mechanism through which they can actually get the support of the farmers and ultimately get their produce if the farmers like. But they were not forcing them. But they were providing them with so many this kiosk facility with so much information that the farmers were becoming aware of the actual market so that they cannot be exploited by the third-parties who buy the items who buy the produce buy the soya beans from the farmers at a very low price and sell it at a very high price in the other market.

So in the traditional market what happens? The either the farmers used to take their produce to the market yard and and from the market yard, they were sent to these exporters and these exporters and processors used to take them.

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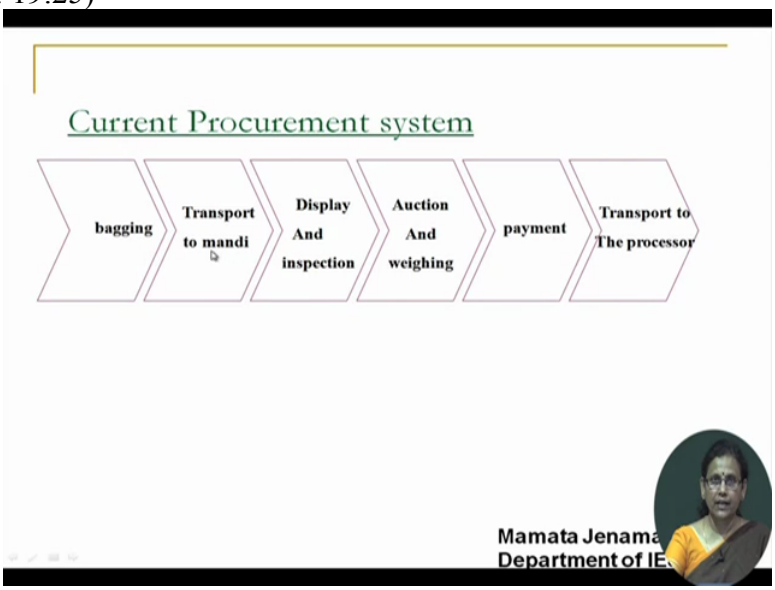

So their current procurement system was like this. 1st, the farmer will be bagging, then the farmer will be transporting the items to the mandi, then the in the mandi it will be displayed and inspected and there will be auction and weighing of the items. Then payments will be the made to the farmers and they, the items will be transported to the processor.

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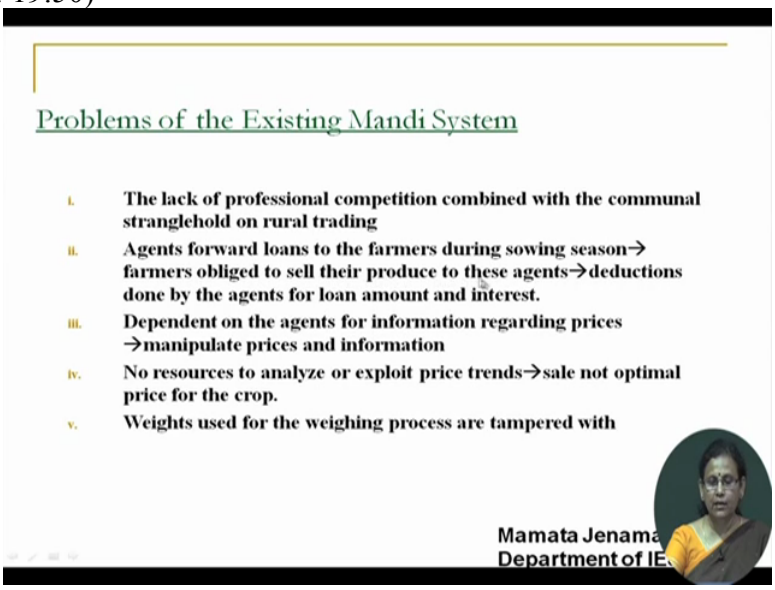

Now the problem was the problem with the existing Mandi system was the lack of professional competition combined with the communal stakeholders on rural trading, then agents forward loans to the farmers during sowing season and the farmers were obliged to sell their produce to

these agents and in the process, the this the loan which was rendered to the farmer were getting deducted by the agents at the time of selling. Then the dependence on the agents for the information regarding the price was happening and these agents were actually manipulating prices and information.

There was no source to analyse or exploit the price trend or selling the items at optimal price. Then the weight used for weighing process were tampered with.

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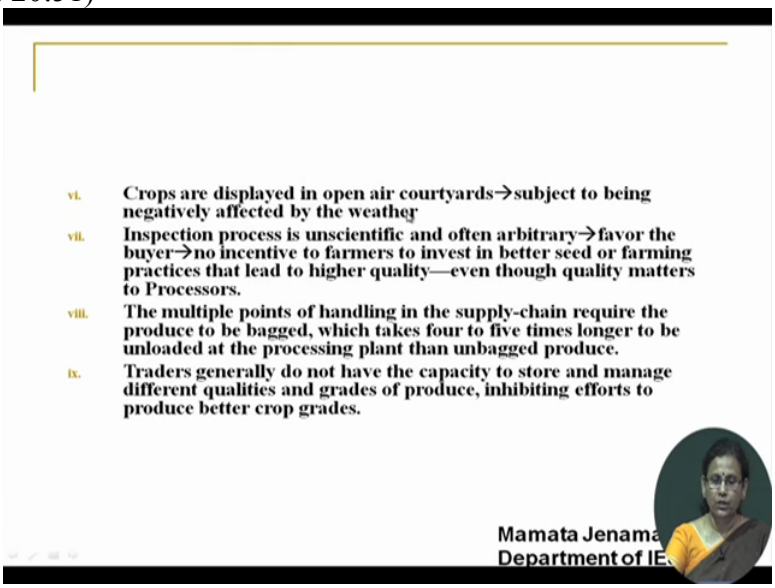

Then the crops were displayed in the look now the farmer was actually caring crops to the crop yard and it was getting displayed over there. And it was being subjected to various weather conditions and it was getting destroyed. Now inspection process was also not very scientific and it was arbitrary and it was done in a manner so that it was actually covering the buyers and there was no incentive to the farmers to invest in better seeding or farming practices that lead to higher quality even though this quality mattered a lot to the processors.

Then at multiple points of handling in the supply chain, requires the produce to be bagged which takes 4 to 5 times longer to be unloaded at the processing plant and then unbagged at the produce. These traders generally do not have the capacity to store and manage the different qualities and grades of produce, and thus inhibiting efforts to produce better crop grades.

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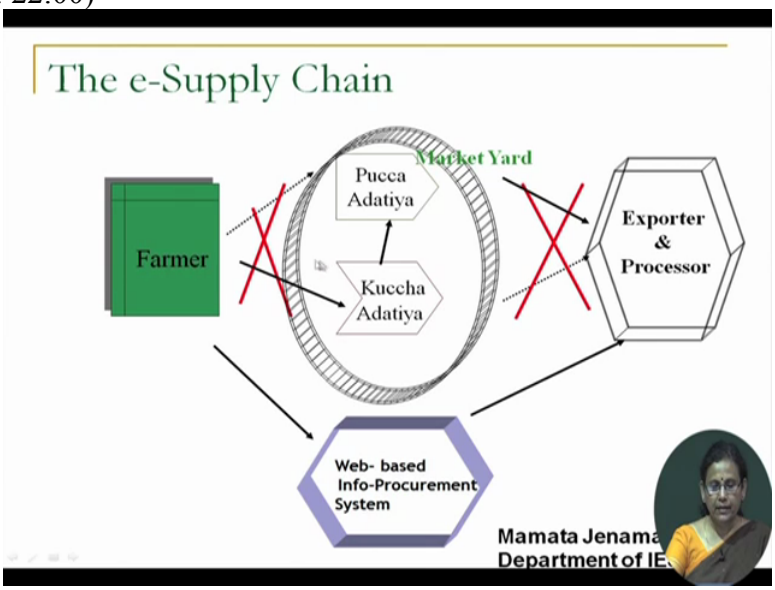

So what happened? Now the situation with the introduction of this EChoupal, this particular traditional way of taking it to the market yard and showing it to these agents who were called the Pucca Adatiya and Kuchcha Adatiya, those agents and sending it to the processor through the agents, now got replaced through the web-based system, web-based information procurement system.

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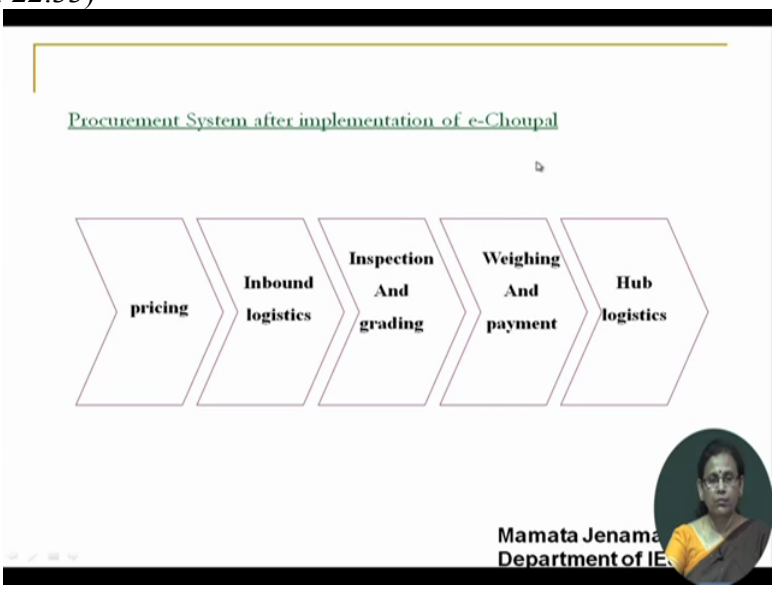

Now in case of procurement through , so as I told you, they were not forcing the farmers but looking at the price trend etc, and the prices to be offered by ITC, the farmer can come forward

for selling. And what they were getting? They were getting this pricing information and they were getting facilities for inbound logistics. This inspection and grading was done by ITC and it was done in a proper manner, then weighing and payment was made immediately and this hub logistics was also managed by the ITC.

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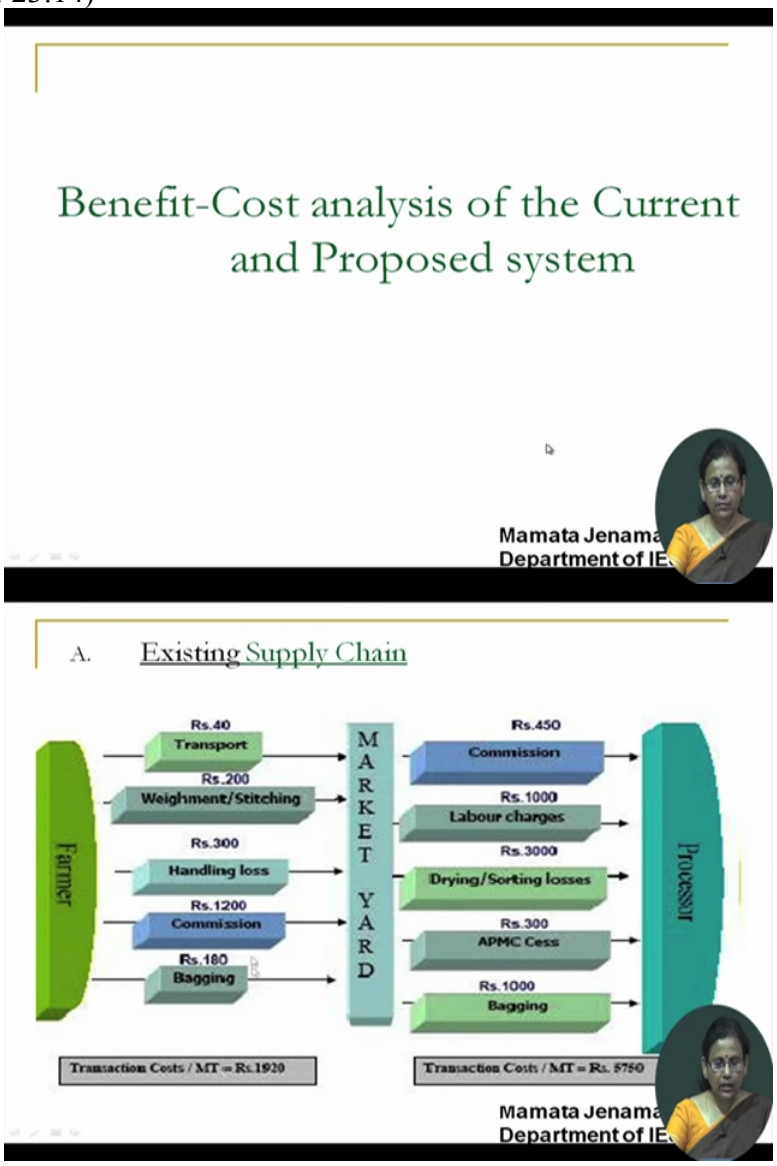

Now if you look at the benefit of cost analysis of the current and proposed system, we can see that in the existing supply chain looking at the latest components, the total cost was at that point of time was around 1920 and that was took for bringing it to the market yard and then for the

transaction cost from market yard to the processor considering various components such as commissioning, labour charges, and so on, it was total 5750.

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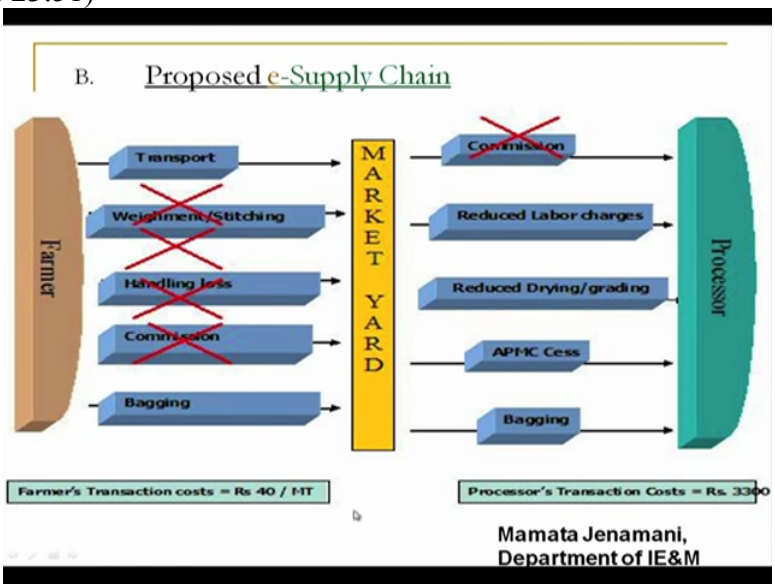

So the total money has now reduced in case of this proposed e-procurement system where the farmer was not incurring the other costs, it was only incurring this baggaging and transportation cost which was actually reduced to Rs. 40.

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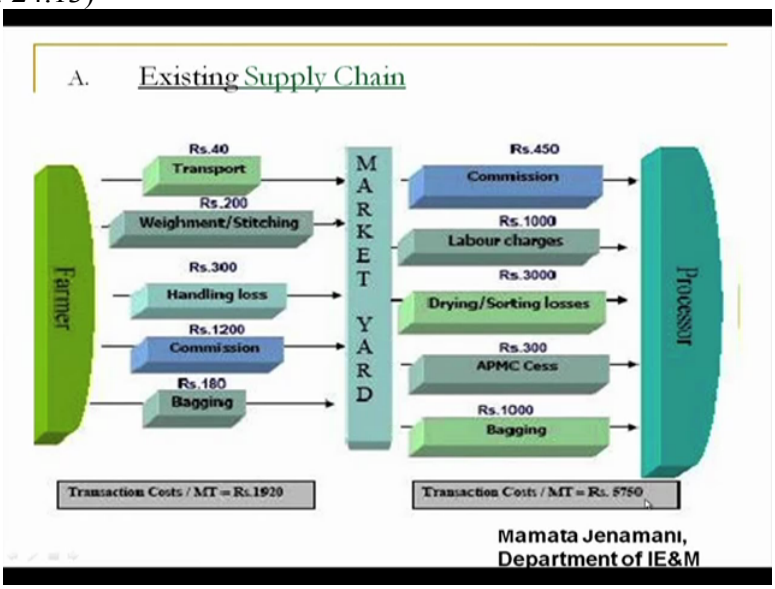

So if you go back, it was from 1920 to it got reduced to Rs. 40 per meter ton. And similarly, here some of the cost also got reduced and the processors, the transaction cost also got reduced and earlier, it was 5750 and it got reduced to some 3300.

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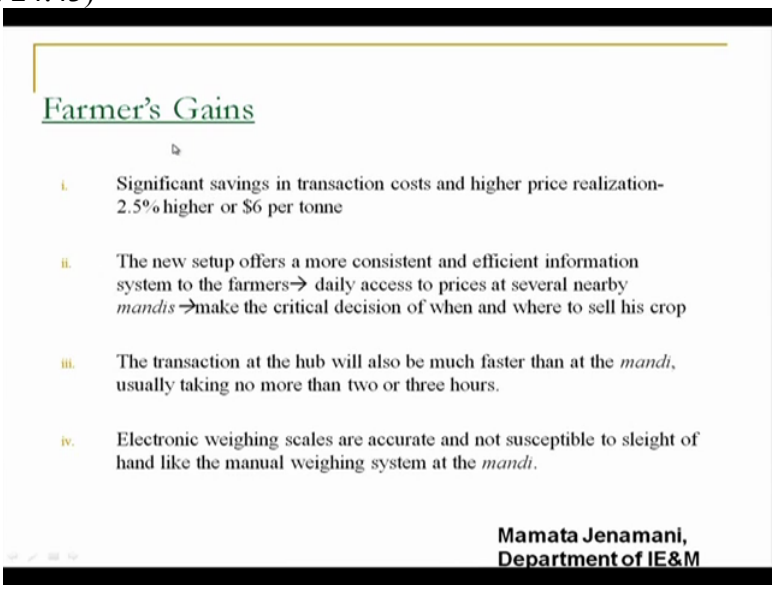

And farmer's gains were significant. There were significant savings in the transaction cost and higher price realisation. It was almost 2.5 percent higher or in terms of dollar, it was 6 dollar per tonne. Similarly, the new setup offers a more consistent and efficient Information System to the farmers and there was a daily access to the price at several nearby mandis. This means the critical decision when and where to sell the crop.

Again I remind you, they were actually not forcing the farmer to sell but they were offering a price in comparison with the prices available elsewhere so that the farmers were inclined to sell their products. Then the transaction at the hub was also faster than that of the Mandi. Usually it was not taking more than 2 or 3 hours. These electronic weighing scales were accurate and were not susceptible to any kind of manipulation.

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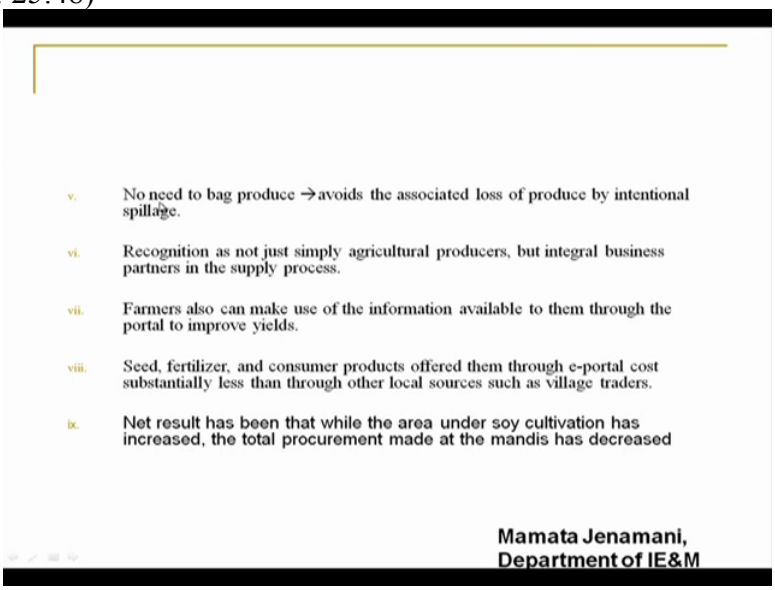

There was no need to bag produce which avoids the associated loss of produced by intentional spillage. There was a recognition as they recognised as not just simply agricultural producers but they are integral business partners in the supply chain process. Then farmers can also make use of information available to them through the portals to improve their yield and this seed, fertiliser and consumer products offered by them through e-portal, substantially actually reduce their cost and the net result has been that while the area under the soya cultivation has increased the total procurement made at Mandis got decreased.

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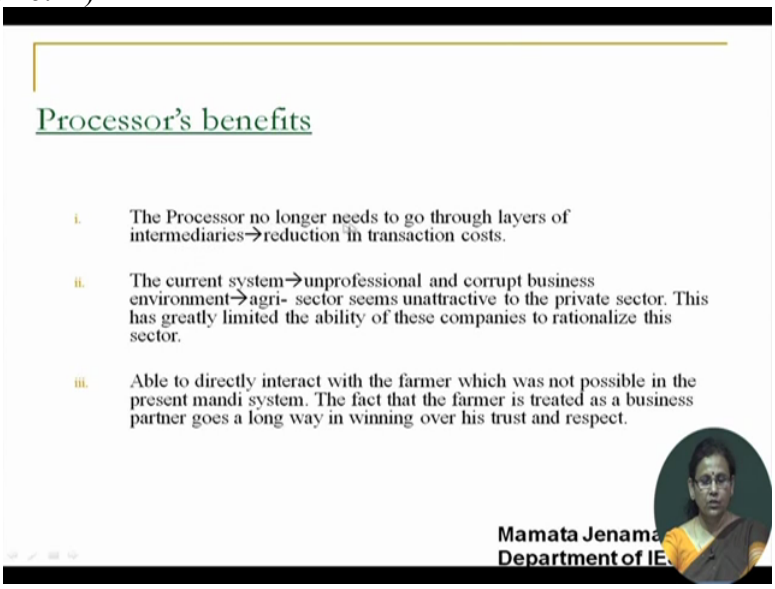

And what was this processor's benefit? The processor no longer need to go through the layer of intermediaries. Now who is the processor here? The processor here is the ITC itself. Earlier, what ITC used to do? ITC is too dependent on a number of agents. This Kuchcha and Pucca Adatiyas, they used to depend on them and the farmers used to bring their produce to the market and through the agents, it was getting sold. But now processor got a number of benefits.

The processor no longer needs to go through a layer of number of intermediaries which automatically reduces his transaction cost. The current system was little unprofessional and there were corrupt business practices which got reduced. And this processor that is ITC got a chance to directly interact with the farmer which was not possible in the present Mandi system.

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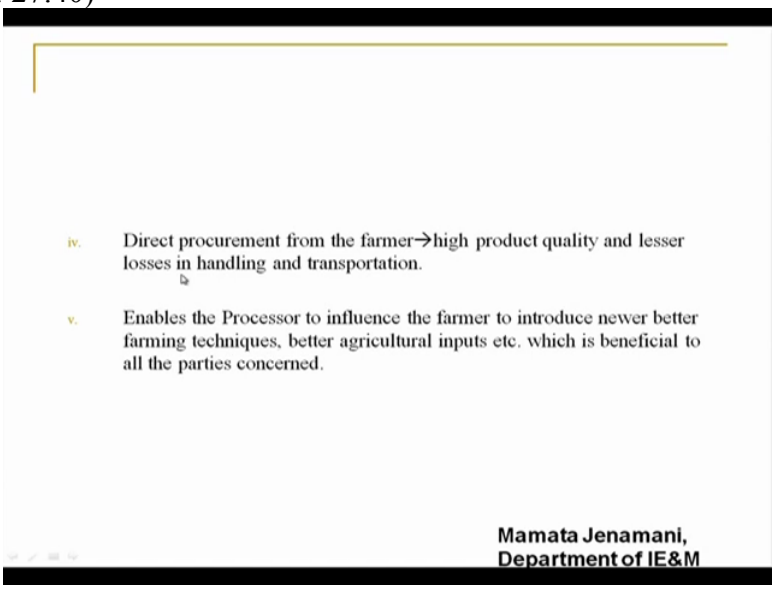

And this direct procurement, because of this direct see earlier what was happening? The farmer was taking the items the Mandi and it was getting exposed and there it was displayed for the inspection of this 3rd parties and what they will do? In the process of it was getting exposed to, exposed to various weather conditions and it was getting the quality was getting degraded. Now because of this direct procurement from the farmers, the products quality also was detained and there was less loss in terms of handling and transportation. This enabled the processor to impress the farmer this process actually enabled what is the process? The process that I am trying to tell is the processor showing this information through EChoupal, actually influence the farmer to sell their produce to the processor directly by bypassing these 3rd parties. Okay, thank you very much.