

**Indian institute of Science
Bangalore
NPTEL
National Programme on
Technology Enhanced Learning**

Copyright

1. All rights reserved. No part of this work may be reproduced, stored or transmitted in any form or by any means, electronic or mechanical, including downloading, recording, photocopying or by using any information storage and retrieval system without prior permission in writing from the copyright owner:

Provided that the above condition of obtaining prior permission from the copyright owner for reproduction, storage or transmission of this work in any form or by any means, shall not apply for placing this information in the concerned Institute's library, departments, hostels or any other place suitable for academic purposes in any electronic form purely on non-commercial basis.

2. Any commercial use of this content in any form is forbidden.



Global Supply Chain Management

**Lecture – 23
LI& Fung part2**

**Prof. N. Viswanadham
Department of Computer Science and Automation
Indian Institute of Science
Bangalore**

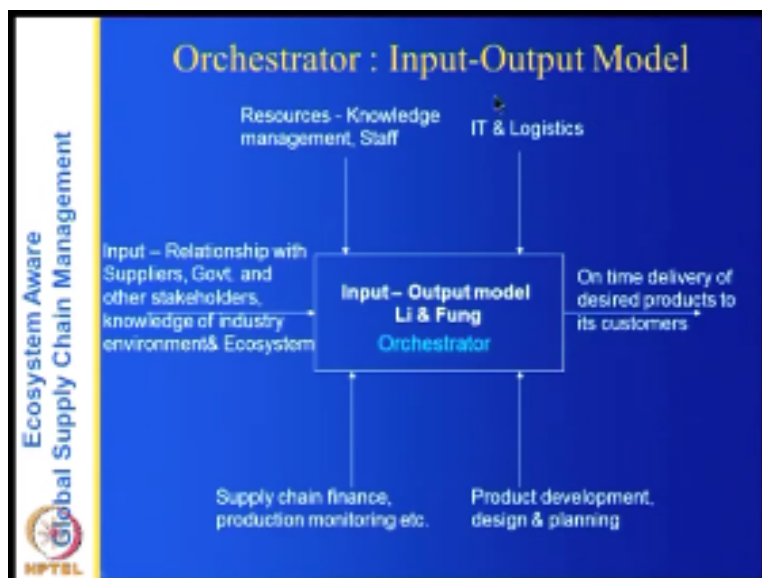
We are going to continue this lecture on daily and form and we will see complete the ecosystem model.

(Refer Slide Time: 00:23)

Ecosystem Aware Global Supply Chain Management NPTEL The Ecosystem model

We have seen will be and the previous case in the previous lecture one part of the ecosystem the service chain we have mapped the service chain and we will see the other part of the ecosystem and we will map the ecosystem as well.

(Refer Slide Time: 00:39)



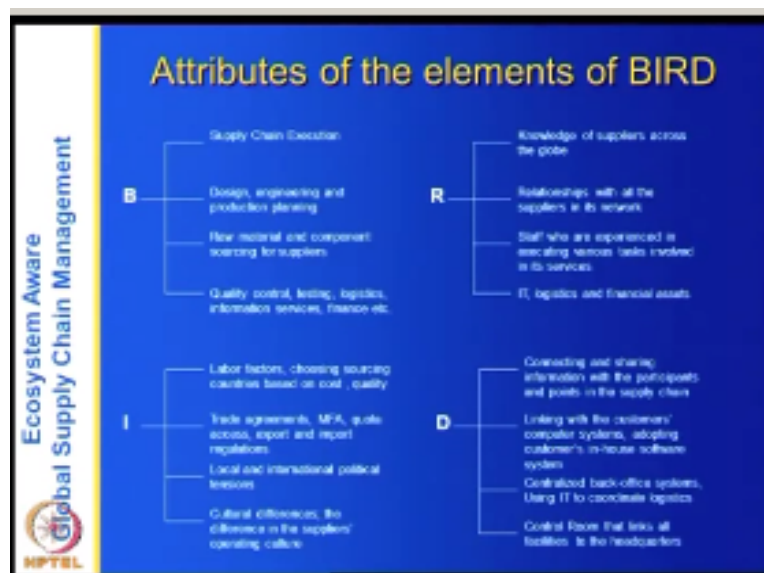
So before nothing let us look at the what is the input output model of the air phone you know you get the product development design and planning that is what lien from does for the customers.

Once it is approved it gets the supply chain finance and production monitoring etc it is inputs are as we see in the relationship with suppliers government and other stakeholders knowledge

of the industry environments and the ecosystem that is the input that it gives and other inputs are resources and knowledge management insurance of course it does this sourcing it does the factory sourcing and all that but this and also those are a part of product development design and the planning supply chain planning etcetera that without with model.

We have an input these are the five inputs that come from early and fall and the output is on-time delivery of these are products to its customers so if this you can clearly see that what are the kinds of that in things that are involved interest that are north are the it is required for any orchestrator.

(Refer Slide Time: 02:11)



But let us see these things more clearly now here if you look at a B that is a business or the service chain of supply chain there is the design engineering and production planning for our material and component sourcing from suppliers and quality control testing logistics information services and finance and finally supply chain execution.

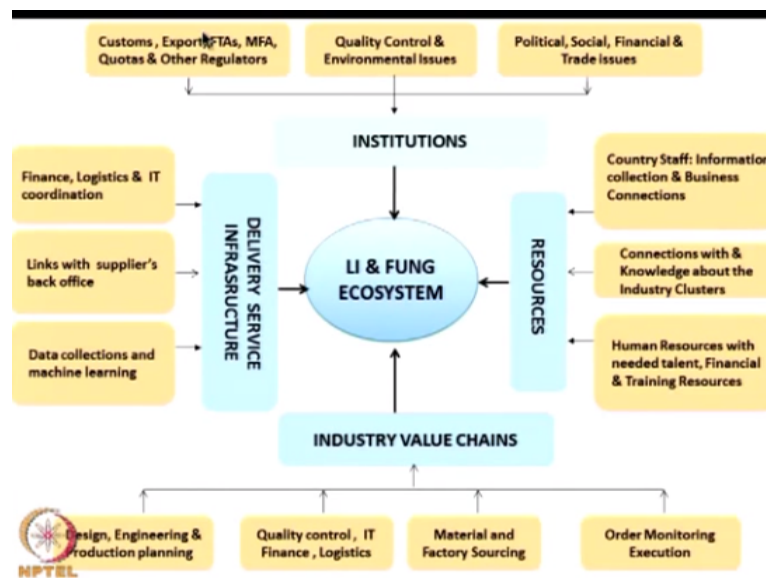
These are all the business functions of the service chain and we will call it mode because the obvious reason. I are the institution's what are the institutions that if the government's rather factors, choosing sourcing countries based on cost and quality trade agreements, multi-fiber agreement, what I axis export and import regulations more than an international tensions there could be some problems between the country or an internationally cultural references the difference in the suppliers operating culture so these are important about the quality these are the institutional factors and social factors and the resources knowledge and suppliers across.

The globe relationship with all the suppliers in its network staff we are experienced in an intuitive various tasks involved in the services IT logistics and financial assets and the delivery

mechanisms are it is not just logistics connecting understanding information with participants and points in the supply chain linking with the customer computer systems adopting customers in-house software system centralized back office systems using IT to coordinate logistics control them that links all the facilities to the headquarters.

This the only mechanism is the one that makes is aperture and execution possible we call this bird because these are the business functions I mean this is comes from the service chain and these are the resources and these are the nutrition functions so basically anybody has to get these functions done with the constraints of the institutions with the resources they have using the delivery mechanisms so you can see the importance of this these actors constructs these are the resources that you use here to perform these functions and these are the delivery mechanisms that you have.

(Refer Slide Time: 05:01)



So let us snap the re-inform ecosystem so what are the industry value chains as we have gone through there several times design engineering and production planning and you have another one is material at factory sourcing quality control. IT finance and logistics order monitoring and execution these are the four functions that we have seen they in the service chain that we have but what happens here is design manufacturing and production planning each of these functions will have another service chains and similarly when you are sourcing the materials you have to basically have another service chain so that whatever wherever you are sourcing in order to check the quality you have to choose the logistics provider and send it where it is it has a state 2 and so on so each of these have their own service chains.

In this left us were the resources the country staff each know that these are being found staff in each country information collection and business connections their functions is just to connect with people and also connect the information then pass it on to the headquarters and connections with our knowledge about the industry clusters there any clusters industry partners human resources with need a talent finance and training order sources financial and training resources but basically the resources ,that have yourself institutions customs export free trade agreements multi-fiber agreements quotas and other regulators quality control and environmental issues political social financial and trade issues.

So these are important social political and economic issues at trade issues are the ones that are important for the institution's delivery finance logistics and IT coordination links which supply us back-office and data collection and machine learning ,so if you look at the supply chain if you had drafted this or if you have drawn this then and now go back and see this one then probably any Orchestrator likely and some can come up with what are the kinds of what are the kinds of competencies that I should have and so on of course in this particular case. I am drawing this after.

So that you learn about lately and front us and you can map this and so on but on the other hand you have a very hypothetical hardest rated system that there's some kind of thing then you can still come up with the same kind of thing and generate what are the kinds of competencies that you should have what should be the core competency and so on so it is possible to do that the later Buffs direction also.

(Refer Slide Time: 08:10)



So let us look at what are the resources here.

(Refer Slide Time: 08:15)

The slide is titled "Li & Fung vs Traditional Traders?". It features a blue background with white text. On the left side, there is a vertical yellow bar with the text "Ecosystem Aware Global Supply Chain Management" and a small circular logo at the bottom. The main content is a bulleted list:


- Li & Fung has ties with more than 8,000 factories in 40 countries
 - Enables low cost, larger-scale manufacturing (Using more than one factory for an order),
 - Benefit of resilience (relying on a few manufacturers has risks of losing projects because of drop in quality, insufficient manufacturing capabilities, financial problems, etc).
- Connections with 8,000 factories, each with 500 workers, provides access to over four million workers!"
 - Through its network the company gets the benefit without having to manage 4 M workers

The resources that that lien from has even found has ties with more than a thousand factories in 40 countries so it has to manage people in 40 countries so it has to keep data about 40 countries. Their trade and regulations cultures and so on and also 8,000 factories it has to keep the data enables low-cost large-scale manufacturing using more than one factory for an order this way let us see even earlier that the capacity of the factory may not be enough, so if they use more than one factory in more than one country the benefit of any resilience relies on the lion feel manufacturers has raised solution projects because of drop in quality insufficient manufacturing capabilities and financial problems etc so one thing is value 8000.

So you should understand one thing when you have more number of this one you may have resilience in other words if one supplier factory closes down for some reason you have others who can do the same thing but you have the coordination costs of coordinating with all these factories and if it is in 40 countries then you have to maintain relationship with all these governments and customs and so on and also keep the information or whatever changes that are happening in various free trade agreements and trade relations and so on so there is a low cost manufacturing and there is the benefit of resilience.

That there is also the coordination cost that happens connections we take thousand factory seat with five thousand what this provides access to over 4 billion about the story network though its network the company gets the benefit without having to manage through its network to the company test the benefit without having to manage 4 million workers all this is 5 that there is the coordination that is required and their cooperation costs that are required and make awareness. Becomes the elements which we are going to see becomes more tough.

(Refer Slide Time: 10:38)

Ecosystem Aware
Global Supply Chain Management


Technology in the Service of Business

- Information based decision making is fundamental for Li & Fung business. Developments in IT & AI can be a threat
 - In 1997, B2B exchanges began to expand with the speculation that traders like Li & Fung will be disintermediated. Li & Fung started Stadis Direct which it shut down in two years.
- The relationship that LF seeks with its customers is narrow and deep. It is not a one point of contact but a multilevel issue-CEO to CEO, Manager to manager, shipping clerk to shipping clerk, etc.
- While technologies such as video conferencing, Internet advertising, RFID tags for supply chain visibility, etc can aid human decision making , human touch still remains an advantage

So what are the technologies and the service chain business information base station making our data base station making is so unity for me and some business developments in AIT can be can be a threat in other words you can easily get commoditized or their disruptive technologies that are happening in IT like big data and all that and it is very important that people the employees of Li & Fung get access to machine learning and big data techniques that are happening the coming in this otherwise someone will come to me yet.

So that as these types of technologies much earlier than they and Li & Fung then there is a net we can set right so in 1997 for example where in the first information technology revolution into the exchanges we got to expand with the speculation that trade is likely and found when the disinter mediated Fung started to do direct which it shut down in two years so they thought that is that in those days b2b exchanges or connections between companies and people are going to throw all of these exchanges.

So but then what - b2b exchanges does not provide and what people likely in front provide is the trust and use the confidential information about the suppliers and so on so you can still by using an exchange it is like going on the internet the relationship that Li & Fung seeks with its customers is narrow and deep it is not one point of contact but a multi-level issue see you were to see will manager to manager shipping clerk to shipping clerk etcetera. So that is the kind of relationship it maintains while technology is such as video conferencing internet advertising RFID tags for supply chain visibility etcetera can aid human decision-making humans touch still reminds an advantage.

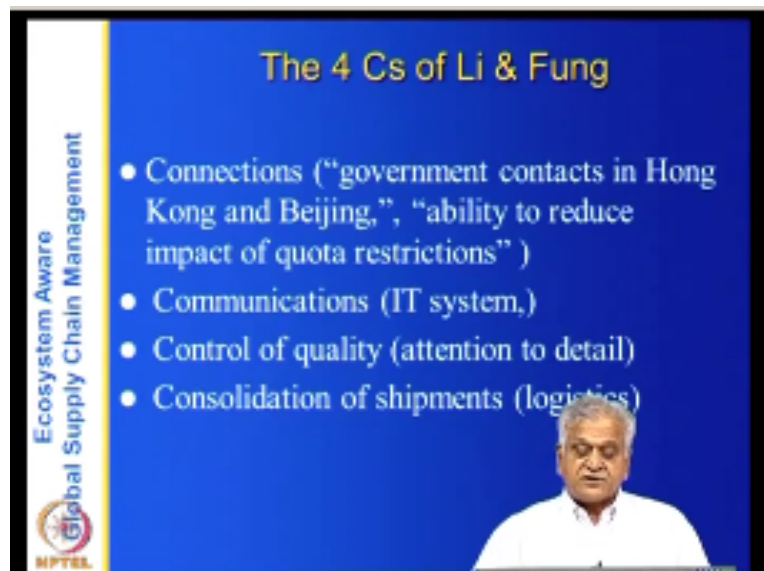
So that is the benefit that this one but another hand the unfound also follows and it also follows that keeps track of a disruptive technologies as they are happening Nike let it be video conferencing neglected WIFI or mobile and updates itself it goes.

(Refer Slide Time: 13:18)



So what they think and then we looked at the eco system left at the service chain unrestrained we looked at the resources and we looked at the survey we look at in our service delivery mechanisms what are the service learning mechanisms.

(Refer Slide Time: 13:31)



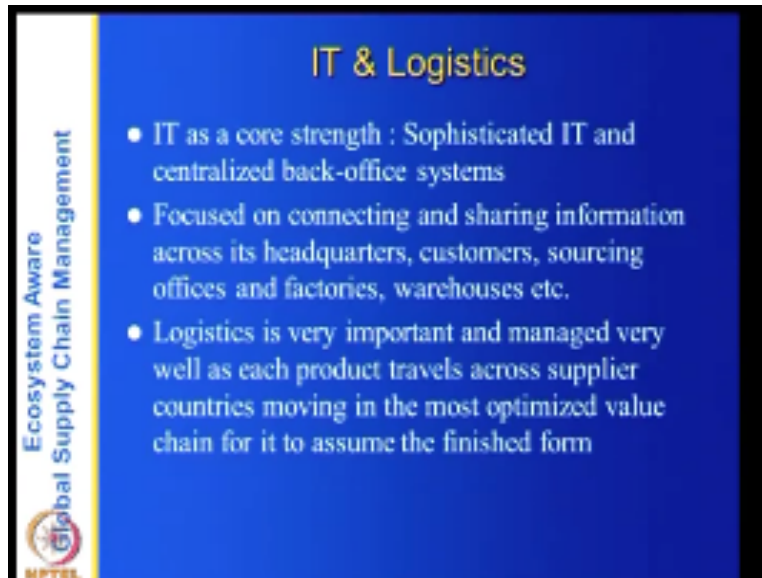
The 4 Cs of Li & Fung connections and we have been saying it is because that is one of the ticket is from this particular and Li & Fung is the that how important are the connections the government contacts in Hong Kong and Beijing the ability to reduce impact of quota restrictions and so on so there are several advantages of forming connections with the government well of course communications when you have you 8,000 suppliers or 40 countries and you want to collect information and you want to monitor what is happening and all this and the factories everywhere and also and in logistics.

In various trucks ,ships and so on it is important to have communication system and of course control of quality in terms of attention to detail and consolidation of shipments so one of the ways in which you hear that one signal and supplier signal manufacturer trying to get your this one your products supposing one big retailer wants to get products and it contacts all the suppliers that we in front has and get the shipment but then it has shipment is so low it may not have this scale to rest any consolidation so that it can go in several containers and so that to the transportation cost is cheap.

So that is one of the consolidation on shipments is an advantage that it says so once I look at 4 C's of connections communications control of quality and attention to detail and consolidation of shipments which is the logistics these are they form of all of them help in terms of the service delivery for example, the connections of course they are active the oil basically getting you know our customs are no the clearances quickly and a new subtype you say one your safety inventories as the stocks and so on their communications of course help in terms of keeping in touch with this one and of course.

We know that information can always replace inventory and there is cost saving and there is the attention cost of quality and the quality can be basically checked through videoconferencing and all that and consolidation of shipments of course there is a cost advantage so the these are the four things which are service delivery mechanisms which quality of service level in mechanisms.

(Refer Slide Time: 16:19)



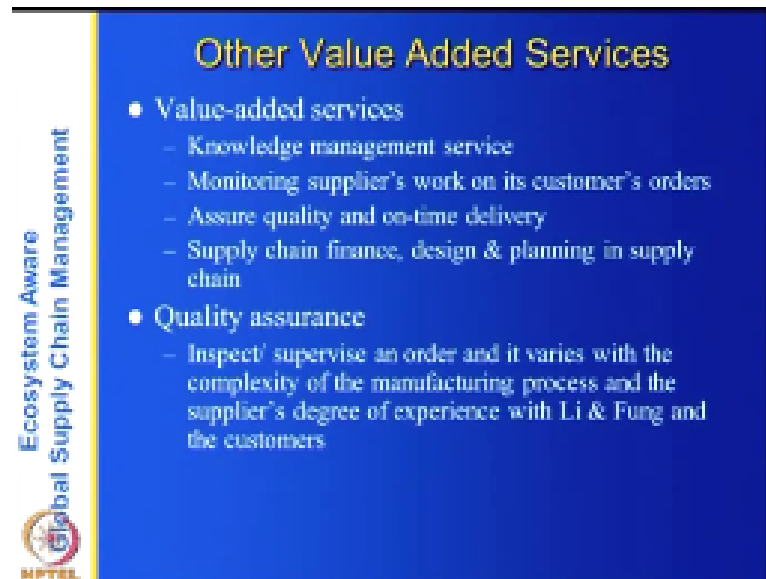
Which help and IT logistics IT as a core strength sophisticated IT and centralized back office systems. So any said this one for every order the front end and the back end all done in Hong Kong and the middle labor-intensive portion is dispersed over the globe for the Asia Pacific and there is all the superior intelligence appliance where there may keep in touch with the headquarters so there is a sophisticated centralized back of the system with a lot of data mining this one focused on connecting and sharing information across headquarters customers sourcing offices, and factories warehouses ,etcetera so there is an information transfer so information that goes out.

And this is basically the velocity of this particular information could be an information transfer could be very high and the volumes certainly are high and so the variety less the data it could be audio it could be telephone data it could be, it could be video, or it could be data, so this is basically a typical data where that was not in the IT and logistic scenario and that just exists very important is physical transfer of goods it is very important and managed very well as each private travels across supplier countries moving in most optimized value chain correctly assumed in the finished form.

You can see that then when you look at the example .I give that something is done in Korea and then it has her to Taiwan and then finally it goes to that I Thailand and so on so why is the starts are taking place and then is it took tokay to conventional wisdom it looks that it is it will be cheaper if it is done at one all places because their transportation costs involved they are loading a lot across and what that what nation costs are involved if I do know this if it is it still cheaper to do it at different places the answer is a big yes and why it is because half the logistics which it maintains.

So it basically the coordination and the logistics functions of Li & Fung are extraordinary and that is what makes the whole thing whole thing the rich you.

(Refer Slide Time: 18:55)



The slide features a blue background with a yellow border on the left. On the left side, there is a vertical logo that reads 'Ecosystem Aware' and 'Global Supply Chain Management' with a circular emblem below it. The main content area is blue and contains the title 'Other Value Added Services' in yellow. Below the title, there are two bullet points in white, each followed by a list of sub-points in white.

Other Value Added Services

- Value-added services
 - Knowledge management service
 - Monitoring supplier's work on its customer's orders
 - Assure quality and on-time delivery
 - Supply chain finance, design & planning in supply chain
- Quality assurance
 - Inspect/ supervise an order and it varies with the complexity of the manufacturing process and the supplier's degree of experience with Li & Fung and the customers

Whatever other values are there services that layered form this one that means in terms of the delivery mechanism knowledge management service, now one thing is to acquire knowledge and other thing is to manage the knowledge and pass it on to the people who are making the decisions so you have the country centers in each country we have collect information but that information needs to be transmitted to the people in Hong Kong who are the who are in charge of its customers so that then our customer order comes these people use this information to select the suppliers and also .I mean they select suppliers to product to each this one.

So that is the this collection of this information in T the three stages of the governance structure the first one is to collection of all the unspooling all the suppliers at all the places so that is a knowledge management service monetary supply us work and its customer orders however the supplier performing as I started it on time is the quality good or the resources available so this issue yeah sure quality and on-time delivery so basically know all suppliers have to deliver to you on time and you should deliver to your customer on time and of course the same quality products.

One thing is the Quality Assurance becomes a tricky issue because you are manufacturing across the globe and the same product is coming from several factories so several whether the issue becomes very important for a to monitor a supply chain finance design and planning in the supply chain so basically the supply chain finance events you know you basically finance your suppliers your logistics providers and so on because the supplier supposing the back and the supplier goes bankrupt and if it is them a critical product where the capabilities are rest only with that supplier then what do you do you have to finance them and then of course.

You will get it back when the product is sold so these are evaluating functions apart from the IT and logistics and so on and the Quality assurance is instruct supervise an order and acquire is with the complexity of the manufacturing process and if it is does if there is a left right that comes in and there could be some product recall so that may happen and suppliers degree is experienced with Li & Fung and discuss.

So basically the manufacturing process it is complex and the suppliers experience with Li & Fung no matter you have to inspect and supervises Jordan I think depending on the particular product I mean if you if you had an ethylene necessary it may not be very critical but if you are indeed in the softballs and so on soft grips industries then it may become an issue if they are the people pick things like paint or if we are in LCR in the food industry contamination or adulteration these are the kinds of good issues could be an issue here but of course for be L & Fung in the textile.


Business so this may not be a big issue but still the quality become is an important issues this.

(Refer Slide Time: 22:53)



So what are the institutions this one the other the government on doing.

(Refer Slide Time: 22:57)

Ecosystem Aware
Global Supply Chain Management


Institutions: Economic factors

- International division of labor
 - Allocation of production to least expensive countries (hence dependent on labor prices)
 - Frequent changes in the relationships between labor costs in different countries
 - Challenge always is to "chase productive, low-cost labor around Asia"
- Trade restrictions
 - Each country imposing different restrictions, such as tariffs or quotas, or imports from each of its trading partner (complicating the estimates of cost of manufacturing)
 - Most important being the Multifibre Arrangement (MFA) for textiles since textiles dominated its business
 - Yearly quotas for the amount of each textile product that could be exported by each lower-cost country to each higher-cost country

We cover some of these factors earlier but still let us put them together so what about cell division fiber orange like the Adam Smith division of labor across in the local sense now what early and found where the orchestrator does is to do the division of labor in the international sense so allocation of production to these two expensive countries and hence dependent on the level and the labor crisis and frequent changes in the relationships between labor costs in the different countries they are basically the another costs keep changing for example in China in India yeah well every year there is a there is a change.

In the air this one because they are just meant to the inflation adjust and also the same people if they are there then they require promotions and salary enhancements and so on and challenge always used to chase productive low-cost labor around Asia so what now happens is if you are sourcing from China and if the cost at one place of China is lost in other words if the logo becomes expensive in China and the power costs become expensive then you have to find some other countries.

You go to some other country to where it is cheaper to do the same to us so this choice productive low-cost labor around Asia this is an important thing but that is they look for so basically that is where there are frequent changes that happened in the countries sourcing this one and what about the rate of restrictions so nowadays after the financial crisis in 2008 countries have found protectionist countries like United States including Europe they have turned protectionist and so there is a huge countries imposing different restrictions such as tariffs or quotas or imports from each trading partner complicating.

The estimates of cost of manufacture so basically what happens is because of these restrictions supposing the tariffs have increased so that means your logistics costs increase once the logistics cause increase their product costs increases so and also if you are a trading partner from China and if we then the country approaches several restrictions on that then the cost from

China increases the earlier to a cheaper now it increases so it becomes you have to do some kind of online execution and as a selection of his partners because things are changing constantly most important thing being the multi-fiber requirement for textiles.

Since textile terminated its business this multi Fiber agreement is where as I said before is kasha system each country is allocated sub third quarter in other words of here in Vietnam can export either to Europe or us total so much so much of in Donna dollar terms so much as exports so then you know that is how does have to take at one place of this multi fiber equipment who can you may you may try to source it from China because it is cheaper that the per quarter is over so I will have to go to the next cheaper country so the constraints of sourcing come from not only the past not only the governmental questions.

But also the global ranking among arrangements likely multiplexer or fibrous cements so usually forecasts for the amount of each textile product that could be exploited by each low-cost country to each high cross country that is the multi fiber agreement so that also matters a lot for in terms of institutions they are the economic factors so when we were talking of the ecosystem when we are selecting a suppliers now selection of suckers depends on one thing is the cost of the level and also the cost of the trade with turtles also ricotta squatters come in as a as a constraint in your problem then you are trying to do.

This so this institutions play a very important role particularly when you are doing the sourcing of the factory sourcing of course this year people have used it to advantage if you if you have water then China's over them you establish a factory or help somebody to establish a factory in Vietnam Cambodia and so on and so it is it from there so because you can use the this one that you multi-fiber decrement in 2005-2006 there is a move to cancel this but the cancellation not been that effective okay.

(Refer Slide Time: 28:47)



Let us look at this one so what we did so far is to map the ecosystem so what will be a closed system ecosystem has the service chain which we dealt with this one from the customer order till the delivery to the customer the second thing is the resources that we looked at the resources delivery mechanisms of various kinds and also the institution solves this so we looked at the investment climate for the service chain and as I said before presented before we were looking at 40 countries and 8,000 suppliers and about 4 million employees and so on so basically this becomes a complicated thing.

So let us look at once in the ecosystem framework they use the ecosystem to do four things one is they get from what we call the governance mechanism and the second one is the risk what are the risks that it faces of course if you look at something like Li & Fung and want to write down all the risks from the ecosystem this one well you can get a lot of s from the supply office through to the government returning the protectionist risk logistics race and so on so basically how does Li & Fung mitigate these kind of less these are very common risks that can happen so if you if you can know.

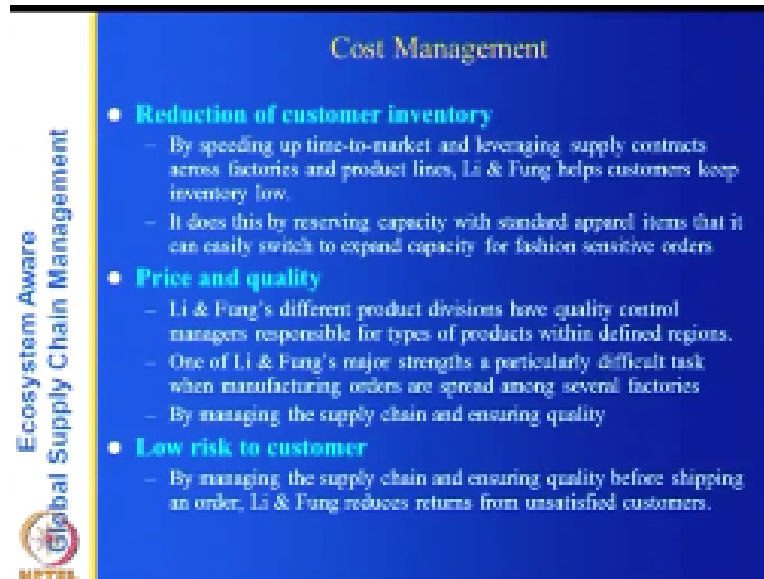
What to see how the Detroit changes in the countries is a risk to be in front but how does it metadata it with a bit rate set by having a thousand suppliers so here thousand me that men are men are do also in product but for each product there at least 10 to 12 suppliers in different countries and it is always under construction and the move to develop connections with suppliers and other new countries which are emerging so it is that move that Li & Fung makes it to mitigate the risk of any government changes that can happen and also.

In the equipment's in the catalyst and so on it also details the risk of the resource increases the prices of increases so on going to low-cost countries so the delivery mechanisms it tells its own logistics so in a year in Asia-Pacific however the logistics quality it has not affected this so you can see how nicely the risk is mitigated with a common production happen of course if there is

a tsunami or a big earthquake and the whole thing goes down then there is nothing that anybody could do but in normal times for deviations and small disruptions and also the ethic elements level at the social level at the resource level.

And at the service chain Li & Fung can manage the rest so let us look at the performance what is performance reduction of customer inventory.

(Refer Slide Time: 32:21)



Cost Management

- **Reduction of customer inventory**
 - By speeding up time-to-market and leveraging supply contracts across factories and product lines, Li & Fung helps customers keep inventory low.
 - It does this by reserving capacity with standard apparel items that it can easily switch to expand capacity for fashion sensitive orders.
- **Price and quality**
 - Li & Fung's different product divisions have quality control managers responsible for types of products within defined regions.
 - One of Li & Fung's major strengths a particularly difficult task when manufacturing orders are spread among several factories.
 - By managing the supply chain and ensuring quality.
- **Low risk to customer**
 - By managing the supply chain and ensuring quality before shipping an order, Li & Fung reduces returns from unsatisfied customers.

Now they are spreading speeding up the time to market they Li & Fung time to market from design to delivery this five to six weeks in other words if the spring table starts an hour fall starts and September first then July 15th the production starts so and also the customer can change the order before July 15th so because of the speed entire market and beverage and supply contracts across factories on production Li & Fung customers keep inventory low so you need not have to keep any matter because it is a very fast delivery usually textile supply chains take the six months to one year and here is the case they are highly customized products are produced and delivered within five to six weeks.


So you can see the advantage of inventory you need auto cheap safety it meant the maximum inventory were to keep is five to six weeks not even that if you test this button serving capacity in standard April items at you can easily switch to expand capacity for fashion sensitive orders and then the few points are higher at Li & Fung this one is standard apparel orders you know you make blankets you make shirts it is bed sheets whatever first time of this one and sometimes make would be fashion sense to others like you know you want everybody likes red color everybody want stripes and so and so then I bet there is this one they this is they know the suppliers.

You can switch the capacity even days where is away my capacity they can switch either standard items or fashion sensitive items so that is the reduction in the customer in event and whatever price and quality here in France different product divisions have quality control managers responsible for types of products within defined regions in other words these are Rapid Eye product so that ladies children or men is the quality or if it is doing soft goods like baby dolls and so on so for each of them the managers are responsible one of the in France measure stands a particularly difficult task.

When manufacturing orders are spread among several factories so this is the disappear agent strength of this one is the price and quality now managing the supplier and ensuring equality no risk to the customer now managing the supplier and attention and quality before shipping and order Li & Fung reduces returns from unsatisfied customers so there must be something in the until lines between the contract that if the customer is not satisfied with equality then he can return it but by managing the supplier and inertia inequality and before shipping and order the autumn reduces the returns from unsatisfied sucks.

So in other words were three this one and one is cost than their performance and that performance one is the leap and second one is the cost and third one is the flexibility and fourth one is the quality ,so you have here you can see that the cost is low because production of customer inventory and price and quality is all maintained because across this chain the quality is monitored and that is latest to the customer because by managing this up with a supply chain and ensuring quality before shipping order.

(Refer Slide Time: 36:37)



Cost Management

- **Delivery**
 - Li & Fung consolidates shipments to different customers in the same market achieving economies of scale
- **IT network**
 - Through proprietary extranet clients to look up project status
- **Trade financing to Suppliers**
 - By providing them with financing, Li & Fung can prevent delays due to problems of financing and speed up time-to-market.

We produces the records and delivery Li & Fung consolidate shipments to different customers to the same market achieving economies of scale so basically you know it is like Wal-Mart having a shift byte for itself and so on so Li & Fung has these shipments to United States and

Europe so you can consolidate all this and get advantages of scale and of course to politely exonerate crimes to look for project status.

So basically IT network is super this and today basically they use this to get the project status of each of these slides 12 financing to suppliers and providing them with finest financing they Li & Fung can prevent delay due to problems of financing and speed up time to market this is as I said before out of the 8,000 suppliers if there is a critical suppliers and we are cannot deliver on time because of some financing problems or the later of creditor and so on so then Li & Fung finance system.

So if you look at the cost management the cost management that actually reduce the inventory you into actuality you ensure the price and we deliver you through consolidation and IT Network use it for this one and you trade finance so because of all this you can manage the cost you can see how closely get the process is monitored Li & Fung so this is this is like an execution expert in the process not only planning may take the institution as we said earlier the government's has three steps the first step in determinants is selection of your partner's getting all the partners and getting it after the network.

The second one is the planning for each order for each order selecting your partners and third one is the execution so you can see in all the three this one we will inform excels.

(Refer Slide Time: 38:59)

Total orders	\$10,000,000
Cost of maintaining Hong Kong buying office	
Estimated office manager	
Salary	\$100,000
Benefits (primarily housing)	\$200,000
20 staff @ \$50,000/year	\$600,000
Rent for 3,000 square feet	\$180,000
Other expenses (travel, phone, supplies, etc.)	\$300,000
Total	\$1,380,000
Commission paid if orders placed through Li & Fung, @ 7%	\$700,000
Savings from using Li & Fung	\$680,000

Note: Customers could not achieve the same level of service using their own buying office as they could get from Li & Fung. For example, a Hong Kong buying office would not provide easy access to suppliers in other Asian countries.

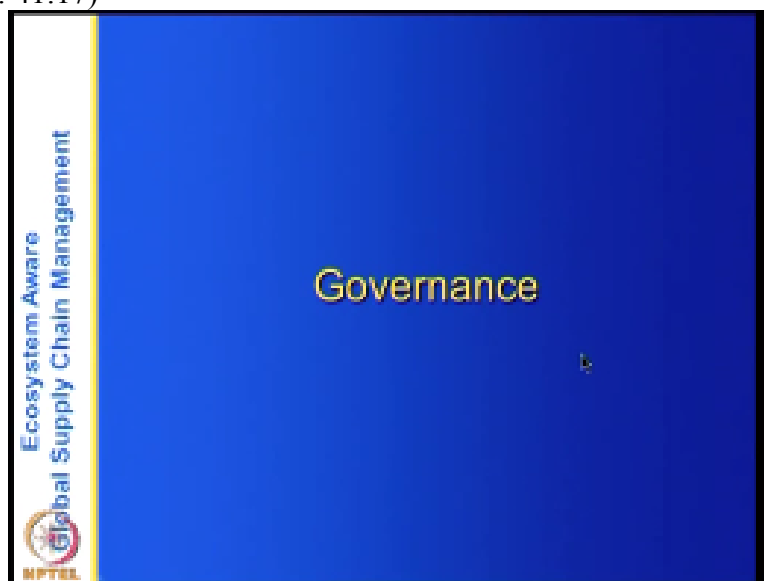
So you can see one of the things that we were talking about is can Li & Fung be decent remediated in other words can somebody take over what is it supposing there is a an order for 10 million right so cut a commission paid if a displaced thoroughly Li & Fung at 7% say the end one get 700,000 so this for 10 million go to pay 700,000 at 7% the supposedly that fellow says . I do not want to play 700,000 is just this one that I want to do everything by myself if

this fellow wants to do everything replicating whatever lien from des is constant maintain a Hong Kong masses and expecorate office manager and salary benefits 20 staff at one thirty thousand a year rent and other expenses.

It will come to 1 million three hundred and sixty thousand this is the day where the real costs at that time and so you serve eighty thousand so we like weights savings from using Li & Fung is this and on the other hand even if you spend all this 1 million you are not sure of your quality because you have to basically spend any time and worry about the quality and all that that by giving seven percent to Li & Fung we are not only saving six hundred eighty thousand which is almost like half of what you spent.

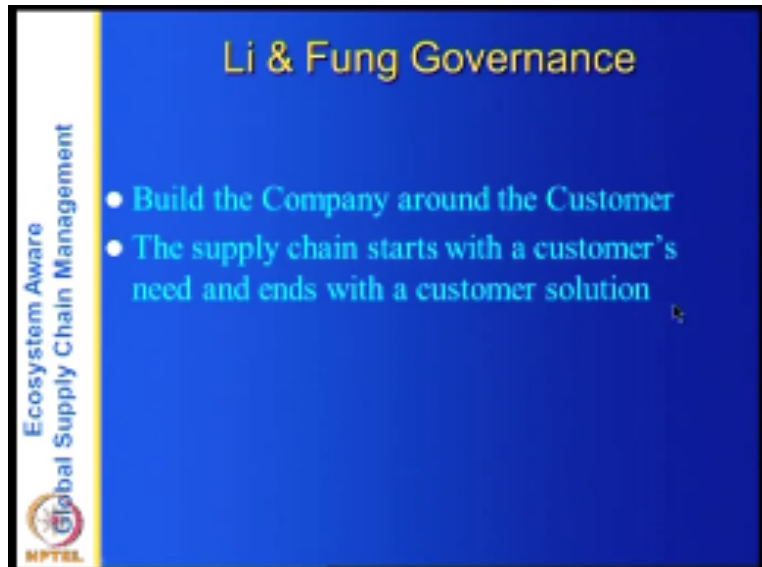
We are also assured of sense of the that product quality and time delivery and so on so that is the kind of advantage that Li & Fung from this one that gives so if you want to beat Li & Fung then you have to be you had to bear all these costs and see how you can reduce it to seven hundred thousand and so on.

(Refer Slide Time: 41:17)



So let us look at touch about the cost and the performance and quality and so on so finally the final one is the that we are looking at with the governor's so as I said government's as we see it as our in the previous three chapters it has previous serve this one it has.

(Refer Slide Time: 41:41)



Li & Fung Governance

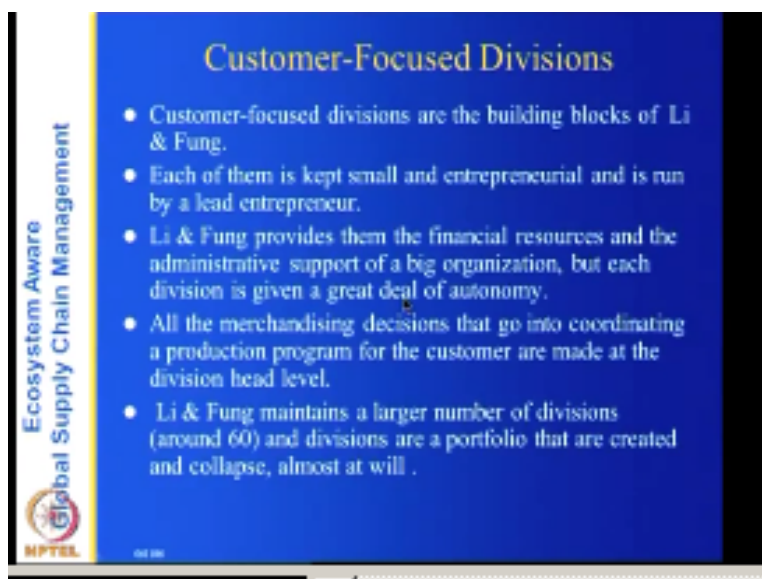
- Build the Company around the Customer
- The supply chain starts with a customer's need and ends with a customer solution

Ecosystem Aware
Global Supply Chain Management
NPTEL

Three things one is the selection of partners and second one is a supply chain planning where for each other use you select your suppliers and logistics providers and so on and third one is the execution so let us see the Li & Fung follows the following governance model build the company around the customer now you can see that the customers are fully and fung own business this one so there are big customers so each customer warms the ones attention to them so that is there is a customer oriented company so for each customer there is a manager and so on.

The supply chain starts with the customers need and ends with the customer solution so that is the governance model that it follows.

(Refer Slide Time: 42:35)



Customer-Focused Divisions

- Customer-focused divisions are the building blocks of Li & Fung.
- Each of them is kept small and entrepreneurial and is run by a lead entrepreneur.
- Li & Fung provides them the financial resources and the administrative support of a big organization, but each division is given a great deal of autonomy.
- All the merchandising decisions that go into coordinating a production program for the customer are made at the division head level.
- Li & Fung maintains a larger number of divisions (around 60) and divisions are a portfolio that are created and collapse, almost at will.

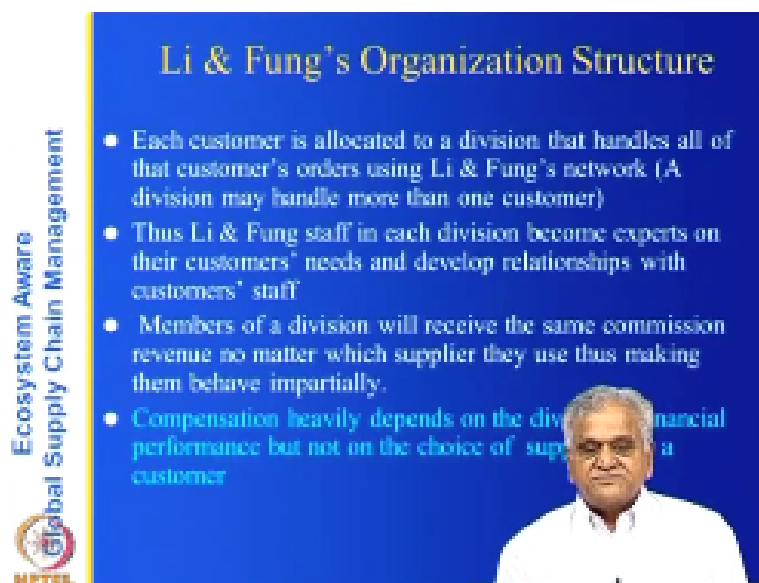
Ecosystem Aware
Global Supply Chain Management
NPTEL

And customer focus divisions and the building blocks of Li & Fung this one each of them is kept small and entrepreneurial and is run by a lead entrepreneur Li & Fung provides financial resources and administer to support of a big organization that the each division is given a great deal of autonomy in other words the so called in a manager of the 8th division once he gets the order he calls to be the service chain and the design settles they decide and gets the product development team this one and decides everything and from there selects the suppliers the logistics providers they delivery and all that is in the hands of the lead entrepreneur who is in charge of this section.

So you can see all the Li & Fung is I is a company by itself the execution and other thing the selection the supply chain planning and execution or in the hands of these customer divisions and the money they make is basically based on this and whatever they serve in the soft \$33 is goes to this particular division the merchandising decisions that go into coordinating with production program for the customer or made at the division head level Li & Fung maintains a large number of divisions around 60 and divisions our portfolio that are created and collapse almost at will in other words there could be if there is a customer.

This one from the US they can create it is very says suddenly some rays of customers from Middle East they may create division for Middle East and once they demand subsides their closet so it is a basically very customer based divisions and the part when you are activated and they can collapse at will and they can create a net and remove these things at will but those functions are the same their functions are whatever salary service chain and deliver the products to the customer at the right place at the right time and at the right place.


(Refer Slide Time: 45:07)



Li & Fung's Organization Structure

- Each customer is allocated to a division that handles all of that customer's orders using Li & Fung's network (A division may handle more than one customer)
- Thus Li & Fung staff in each division become experts on their customers' needs and develop relationships with customers' staff
- Members of a division will receive the same commission revenue no matter which supplier they use thus making them behave impartially.
- Compensation heavily depends on the division's financial performance but not on the choice of supplier for a customer

**Ecosystem Aware
Global Supply Chain Management
MPTTEL**



So what if your organization structure. Which customer is allocated to a division that handles all of the customer orders using Li & Fung network a division may handle more than one customer does Li & Fung stand you wish to vision become experts on their customers' needs and develop relations with customers staffs so as I said before they receive what to see you or manager to manager to clerk record so and so that kind of relations happens both with the customers leave customers as well as with the suppliers yes and a number of division will receive the same Commission revenue no matter which supplier they use thus making them behave impartially so the point here is it is not the question which supplier.

Your using a question how much are you making in the staff 3 in the staff dollars how much are you serving so you can use anybody as long as you deliver the quality products at the right time at the right place at the right price and also you make money for the country compensation heavily depends on the divisions financial performance but not on the choice of supplier for a customer so that is the kind of Drive that it has where the compensation is heavily dependent all the divisions financial performance so there is no preference for suppliers in any country or any particular suppliers in a particular country.

But it is only on financial and also professional in the sense is the performance sensitive performance in terms of cost which means inventory, which means the speed of delivery and so on and also in terms of the quality of the product, so that the customer could that in the end should not return the product saying that it is a low quality product, and also in terms of relief types because everything is done within five to six weeks they are delivered so if it is a fall or a summer is one it has to be delivered on time to this one satellite support services freeze traders from the rich work.

Now if I will show you each I will show you the diagram which shows this one now while this cost is it is customer centric there are some services, which I said today the front and back and services the financial services organization of logistics and other kinds of things and whatever information that country heads provide to this one consolidation of all that is all done by at home Hong Kong by the office so these people the customer centric centers not only concerned about the product design product manufacturing and product delivery they are not concerned about other things like finances payment and so on and all that.

(Refer Slide Time: 48:44)

Li & Fung Governance Structure



So let us look at the diagram. So usually the managing management of Li & Fung they are soft goods hard goods and services and soft goods are the client account managers and the several them several of them you know will set their safety accounts at any point in time and which manager is responsible for procurement logistics quality and delivery these are the four things that each manager is responsible for each client then if this have left them through this so these are all the managers of this off course and the hard goods the same thing that there is this is a service center which I was talking about which is based out of Hong Kong where we manager services of financial HR ITES and all other services having countries and turns.

To connect information and data mined and all that information and this passing on to them all these services are done in Hong Kong they are all centralized so here you can see the governance structure here the managing director has all these services these are all independent of the products whether the soft goods are hard words but these people they take the information as they need about the country and that will enable them to make the additions and so on so if you call it data based information based decision making or information based nation making or a real-time version making you can call it whatever you like but this is the kind of organization structure.

That enables we might have used an information based - and making a real phone case so what we did so far is the main fall is an excellent example of orchestration so these can be followed in lots of other service industries in agriculture and so on but if you detect other contribution to this yes we will, in the eco system framework and we were able to map the activities current activities of Li & Fung into the ecosystem so what is the advantage of using the ecosystem framework and that - clearly an Orchestrator we have so you can now generalize these things and you need a care system framework and see.

What are the important factors that an Orchestrator should do in the ecosystem and what are the kinds of things the capabilities that are - should build up and as we search the connections knowledge database station making these are all the learning's that we got from this particular thing so we should it is a non-trivial learning that we have got from this particular case and it is possible for someone who is interested to generalize all this and write a thesis or a paper an artist rater and what should be the qualities.

And what are the decision making methodologies that you can use and of course here big data cloud computing because all this data and other information everything can be stored on a computing for all when a cloud for all the 8,000 partners and for all the countries and they can be accessed and processed and you can use a machine learning algorithms for data based decision making for each of these suppliers at least you can build decision support system which will help the use of these customer based managers in their patient making so thank you and then we will see later.

Programme Assistance

Guruprakash P

Dipali K Salokhe

Technical Supervision

B K A N singh

Gururaj Kadloor

Indian Institute of Science

Bangalore