

Project Management: Planning, Execution, Evaluation and Control

Dr. Sanjib Chowdhury

Vinod Gupta School of Management

IIT Kharagpur

Week- 7

Lecture- 30

Welcome to the course Project Management. In this lecture, we will first discuss the strategic dimensions of outsourcing and decision logic of outsourcing. So, the concepts that will be covered in this lecture are why do firms outsource? We must prove it. Then strategic dimensions of outsourcing and decision logic of outsourcing - that is you know that do or buy analysis that is well known in the industry. And in the rest of the lectures, we will be discussing the rest of the topics in this module in the subsequent lectures. So, we start with outsourcing project work.

So, why do firms outsource? Is the basic question that comes to everybody's mind. And what are the strategic dimensions of outsourcing? These two aspects we will be deliberating in this lecture. So, all of you I believe have good knowledge or at least you know about what is outsourcing because it is nowadays rarely found that an organization does its complete project work, a big project, an important project work in house. Similarly, a segment of the project is or are outsourced to different parties.

So, that all of us know, but outsourcing nowadays is synonymous with business because the world is flat and no organizations excel in every aspect of the business. So, it is essential that you outsource your weaknesses - the activities which you are not good at - that you give it to the more proficient agencies who will do it in a faster and also cheaper and also expert way. So, all of us are aware of this, that the shift of this outsourcing, you know it is very prominent if you see the Hollywood or the movie film industry, say for Hollywood. In its golden era all of you know those big vertically integrated movie houses - those are MGM, Warner Brothers, 20th Century Fox - those companies were the behemoths and they used to employ thousands of employees - those are specialists in art, specialists in set design, cameramen, choreographers, costume designers, film editors, producers, directors - all those they used to have on their payroll. They used to be the permanent employees of the organization - thousands of people.

But even the actors like Humphrey Bogart, Marilyn Monroe - they were contracted for a fixed tenure, say 3 years and 6 films they have to do. So, these were the ways of doing the business, but if you see today how a movie, a film is made - the producer, director - they hire or outsource different parts of the project. Say individuals of special skills, they come in or small companies they come in and for the set design, for costume, for choreography, for editing, for camera - all those things they do a project in a timebound manner, 1 year or so, the film is completed then they disperse.

So it becomes very comparatively cheaper and faster and also you get the people who are the best talent in that area in contrast to if you have those Hollywood type, the big movie companies - they your talent is restricted to the people you have employed. So it gives you more flexibility.

So similarly, if you see this outsourcing in India, if you talk about it say it was not even 15-20 years back, you could have faced a lot of problems for outsourcing because trade unions will come in. They will not allow - I have seen and experienced that they say in the northeast region of India, you know there are say in a company which was exploring oil and gas they require that for drilling purposes for deep drilling, 50 ton crane but there were no 50 ton cranes available in the northeastern part of India, maximum was having that company 30 tons.

So they wanted to outsource and hire it but unions will not allow, whereas in the other part of the country at that point of time, so western region or the northern region, southern region - these were they could outsource. So it was but today if you see the scene is totally changed, that so now we will be talking about these two aspects. We will be talking about more in the subsequent slides.

Now if you see this outsourcing, this suppose this is an inventor, some mechanical engineer comes with an idea to manufacture a zero gravity reclining chair. So what the inventor, he or she approaches a catalogue company. This catalogue company in turn likes the idea, in turn contacts manufacturer, then the marketing firm, then the supplier, then marketing firms for this - because this catalogue company will lend its brand reputation and its distribution channels, you know marketing channels and all, distribution channels they will do.

So this manufacturer in turn they contact the tool and die firms for the design and die firms gives it to the manufacturer. Now other part suppliers also give them, then marketing firms they also subcontract the advertising firm, legal firms and all. So this catalogue company employs a project manager to coordinate all these outsourcers and to make the project happen. So this is, you see how the outsourcers - the making of a zero gravity reclining chair, how every part or component of the project is distributed to

different outsourcers. This is the order of the day generally - the business is done nowadays, projects are done this way.

Now if you see this example, say Wimbledon tennis ball production - of tennis balls, it travels over 80,000 kilometers in their supply network. It is amazing - if you see it travels 80,000 kilometers, it goes to 14 destinations, it moves to 14 destinations. Like materials - USA supplies the clay, New Zealand wool, UK gives the felt weaving, China petroleum naphthalene, South Korea sulfur, Japan magnesium carbonate and so on. Then Philippines, it provides the rubber for that. Then production is done at Philippines, packaging - the tins and all comes from - the packaging is done in Indonesia. Then it goes to the destination - the central court, the Wimbledon central court, it goes there.

So if you see and even after moving these 80,000 kilometers it is said that is the most cost effective way to produce this tennis ball of this standard, of this quality. So this is an example of global outsourcing of work.

Then if you see this, go through this photo or picture - so here this jacket, this jacket was produced by a Hong Kong garment producer called Lian Fan and he procured the materials from 5 countries. These are China that gives you the liner, then Taiwan that gives you the shell and fleece, then Germany which gives you the snaps, then Japan - it gives the zipper and its materials - and all it comes to Thailand where it gives the ringed hood and stitched at Thailand, and then it is marketed in the US market.

So this is another example of how global outsourcing takes place. And after doing all these, the garment producer Hong Kong they do the business virtually. They are doing it by email, web conferencing, through Zoom or Webex, then fax - all these virtual communication. And this is done in a very fast way and most cost effective way. This is another example of global outsourcing.

Now let us see - this is the globally dispersed production of Boeing 787 Dreamliner. If you see, different parts of this Boeing - these are sophisticated components - they are very sophisticated and is done at different countries and different renowned companies. Say wing tips come from Korea, fixed trailing edge comes from Japan, engine nacelles come from USA, Canada - then center fuselage is from Italy, forward fuselage from Japan and so on.

Then if you see - the engines come from USA, General Electric and Rolls Royce UK, and landing gear comes from UK, then center wing box comes from Japan and so forth. So the companies, the suppliers of components are also very sophisticated companies and very advanced technological companies. So this is also an example of global outsourcing.

Now if you see the iPhone, where does the iPhone come from? If you see, these are the different main components of the iPhone and these main components of the iPhone - the suppliers are all different countries, from different companies from different countries. Say - desired training and operating systems come from Apple USA, then flash memory and DRAM memory from Samsung Electronics South Korea, then application processors - they come from Japan and Taiwan, then Skyworks power management also comes from Taiwan Skyworks, some come from USA and there so on and so forth.

So these are the global outsourcing and after doing all these, these are said to be the most cost effective and also quality work, quality products. So you have got a good glimpse of outsourcing, how projects are - so similarly projects, different parts or segments of projects, or even the full project, the entire project may be outsourced and what are the advantages.

So we will be now talking about what are the advantages and disadvantages of outsourcing. Advantages of outsourcing - as all of you know and it comes to mind very commonly - is that it reduces cost because had you been, your company was doing it, it may be more costly than outsourced people who are doing that. That is why you find, you employ one US software engineer - by that you can, if you replace that you can employ 3 Indian software engineers. That is why offshore, the work - software work, IT industries and all - you will find they outsource offshore, that is in other foreign countries, to get these cost advantages.

Similarly if you see Apple, Nike and many other companies they are manufacturing at, or giving outsourcing manufacturing work at Foxconn and others to China, Taiwan - because cost advantage they get. Similarly faster completion - you are outsourcing your part of project or entire project or activity to people, to companies who are experts in this, who have expertise. So they do the work more efficiently and completion time is also faster.

Suppose if you do your IT, you are outsourcing your IT payroll or other IT job, you give to a company who is doing those jobs day in and day out. They have special skills in that and they can do it faster and cheaper than you. Similarly, you give outsourcing activity to high level expertise - those people - suppose ERP, you are giving outsourcing SAP - they are experts. They are doing those works, they can do it better than your in-house people. So they acquire that high level of expertise, you are leveraging that and it increases flexibility of company.

Otherwise if you had to do it in-house you have to put your resources, your best people will be involved in that, your capital will be locked, your manpower will be locked. Now when you are outsourcing these manpower are free so specialist can look after multiple

projects. You can take up multiple projects, multiple products and all. So your flexibility increases and you can concentrate more on your core areas, core competence areas.

So these are the advantages of outsourcing project work but there are disadvantages too, you must keep in mind before outsourcing. These are disadvantages: what are these? It may happen - coordination breakdown. Like when you are doing a project what you generally do - you have to coordinate with different entities, different parties, different groups. Suppose in case of an in-house project even then you have to coordinate with different functional groups and sometimes you know how difficult it is. And now if project is outside organization you are dealing with some different organization who might have different culture, different value system. And it is accentuated when it is offshore - if it is different country you are offshoring the job - so more chances of coordination breakdown and loss of control of project team. If it is in-house project they can have better control but when it is outside organization, outsourcer - outside country it is even more difficult. As I told you the different organizations, different people - they have different cultures, different organizational cultures, different value systems and all.

Then interpersonal conflict - you know, interpersonal conflict - when you are dealing with multiple agencies, outsourcers and all, conflicts are likely to happen because people are not sharing same culture of working, same work practices. They do not follow same structure of organization, they do not follow. So all these lead to interpersonal conflict. Then it will be very difficult. Then again security issues - before outsourcing work you must look at security issues very closely because outsourcing - security issues like your trade secret, your reserve data, your marketing data - many other things. And especially outsourcing agency - if they work for your competitors also then it is more vulnerable.

So you have to keep this in mind and also - outsourcing jobs like payrolls, medical transcripts, insurance information - these are very very sensitive and privacy should be maintained. So these issues you must keep in mind. Then lastly, political hot potato - you know political parties - when jobs are outsourced to different countries, offshoring of jobs - they make a political agenda of it because under employment of that country might happen, might be a possibility. So they want employment in their country itself. So it is a political, you call it a agenda for parties.

So these are some of the advantages and disadvantages of outsourcing project work. Next we will be talking about strategic dimensions of outsourcing - the strategic dimensions of outsourcing. That is "do or buy" decision - you have to analyze whether you want to do it in-house or you want to outsource work, how do you come to this conclusion? We will present you now what are the decision logics for outsourcing one should do.

So "do or buy" - in-house. So actually you will find there are outsourcing can be done from two sides. Like it is two sides - a company can go to supplier side or demand side. So actually if you see vertically, when you are outsourcing - you are doing in house - you are taking decision of integrating vertically, integrated decision.

What is this vertically integrated decision? That is in which direction you will outsource - whether you will do in house or outsource. The direction of vertical decision may be, as I told you, backwards or forwards. When you go to backwards means supplier side - it is called upstream integration. When you go forward - demand side, customer side - if you go to customer side that is called forward integration or downstream integration. Like take example of Reliance - reliance in 1970s started with shards, textile shards. Only did them all, then they prefer to go to supplier side.

So how does shard, textile shard made? It comes from polyester yarn. So they started producing polyester yarn - supplier side - then how polyester yarn produced? It comes from PTA, purified tetra acetylene and methyl MCG methyl glycol. So started producing that, then how does MCG and TCA come? It comes from naphtha. Naphtha comes from petrochemical. They then started petrochemical business - they have their own petrochemical plant, Patalganga. Then IPCL they acquired. Thereafter they went downstream because naphtha, petrochemicals - product comes from downstream, refineries.

So after that they went upstream, oil and gas. So they went for backward direction. Now thing is, similarly external extent - how much you should go for vertical integration? Suppose automobile company goes for leasing, financing, car servicing - going towards customer - forward integration. Automobile company - if start producing components - come from manufacturer supplier - tires, engine - going backward - backward integration.

So to what extent vertical integration should be done? Crucial - cost benefit analysis, market study you have to do yourself. Another decision - balance among stages, different stages - whatever one stage produces should be absorbed by another stage - also important for "do or buy" decision.

Now I will show you decision logic of outsourcing - how decision logic goes? Suppose some long term strategic important is activity - has long term strategic importance to organization - generally done in-house, do not outsource. Organization has specialized knowledge of that activity - specialized knowledge may help develop future products, next generation technology products - unlikely organization outsourcing those activities, preferable to do in-house.

Then operational part - if company's operation performance better than potential supplier - company prefers keep in-house. Similarly, if company feels operation performance can be improved significantly, come to par with potential supplier - prefer keep in-house. If all negative - activity no strategic importance for organization or not require specialized knowledge or company performance not superior or no improvement required - go for outsourcing activity. So this is decision logic of outsourcing project work - I think clear.

Next, generic sourcing strategies - what is this? Two parameters: relative capability position of organization - resource, in-house resource capability. Take activity's contribution to competitive advantage you may get over competitor. Two dimensions - 2 by 2 matrix. Resource capability, relative capability position - when try to outsource project, first what you do? See internal resource capability, strengths, weaknesses. Strength - leverage, competitive advantage. Weakness - bundle out - overcome weakness - outsourcing.

Suppose no good transport fleet for distribution - competitive rate available from market - outsource, overcome weakness, performance comes up. These capability positions, competitive advantage. May happen - capability position weak/strong, competitive advantage critical/non-critical. Capability weak, activity contribution not critical - try outsource activity. Opposite - capability high, strong, competitive advantage critical - perform internally, develop products/projects. High potential opportunism - outsource, mitigate risk.

Similarly, capability weak but contribution competitive advantage critical - go judiciously, invest perform internally high potential opportunism. Strong capability, activity non-critical - outsource. Only keep internal no capable suppliers - otherwise outsource. This is generic sourcing strategy to follow.

So in conclusion, what we discussed: dealt with outsourcing project work, managing inter-organization relations, this chapter deals with that. Issues - why firms outsource, "do or buy" analysis, global outsourcing. Explained strategic dimension decisions, decision logic outsourcing, advantages/disadvantages, generic sourcing strategies. Some reference books to enhance knowledge further.

Thank you for attending this lecture.