Business Analysis for Engineers

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Lecture-23
Porter's Diamond Model

Good morning, class. In the previous sessions, I had made an attempt to explain, the concept of strategy, and provide an understanding on the basic definition, of what strategy is all about. More than the understanding, I think you should clear the misunderstandings on, what popularly people think, strategy is all about. So, if that misunderstanding is cleared, then I think, there will be more understanding on the concept of strategy.

The fundamental understanding that everyone of us have is that, it is about doing things differently and uniquely. As a result of which, an entity gains some advantage, which is competitive, and long-term sustainable as well. Now, we must also understand that this entity, need not necessarily be a firm, an organisation, but also be something, that is external to it. Now, that brings to this class, a discussion on the need for countries, to have that comparative, or I should say, competitive advantage.

The reason is that, it is not only that, firms or organisations should do things differently, to create that value. But also, it is quite possible that, the ecosystem around which, these organisations function. And, the aggregate of this ecosystem, if we call it as a nation as a whole, if that is able to generate some advantage, which firms and organisations can leverage, then there is a strategic source, in what I call as the, nation's competitive advantage. And, to understand this, with a very structured framework, Michael Porter provides this Porter's Diamond, to understand the competitive advantage of nations.

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And, there are different schools of thought, to this framework. The two major schools of thought, one looks at the nations competitiveness from an economic perspective, and the other from a management perspective. So, it is more on the management school of thought, that this Porter's Diamond has to be understood. Not that, the economic school of thought is not necessary. But then, the perspective with which we have to look at this model, needs to be more management than economics or trade.

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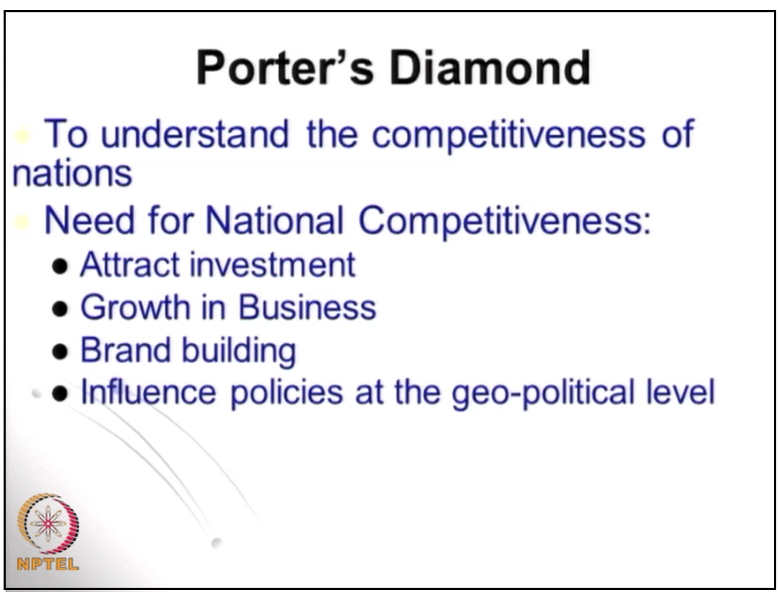

Now, let us ask this fundamental question, as to why should, nations be competitive. Today, just as different firms and companies compete against each other for market share, countries also compete against each other, for a different number of reasons. And, we are restricting our discussion for, the purpose of gaining an economic advantage. So, a country needs to be competitive, to attract investment. Investment from indigenous firms, investment from firms within the country, and also investments from firms outside the country.

Because, it is only these investments, that can spur some economic activity in a country, and generate. Because, it generates business. So, if there is investment, there is growth in the business. And, any country that has an economic strength, has this very strong brand of being, the most-favoured-nation, a powerful nation, from an economic perspective. So, the positive brand building of a nation, reinforces additional investment, and additional growth in business.

So, these are all intertwined. As a result of which, the combination of the propensity to attract huge investments, and generate enormous growth in business, and build a very strong brand for the country as a whole, makes a country very powerful at a geopolitical level. Where, decisions at the geopolitical level, are influenced by such powerful countries, which have a very strong combination of a favoured investment climate, good business potential, as well as a very strong brand.

As a result of which, such countries are able to influence decision making, at the geopolitical level. So, you need to understand that, it is definitely important that, countries also need to gain some competitiveness. So, it is not just that, strategy or competitive advantage is something, that is unique to organisations or firms doing business. But, also equally applicable to countries as well. And, if that is an accepted theory, then what model will we be using, to understand the different sources of such competitive advantage, that the country can get.

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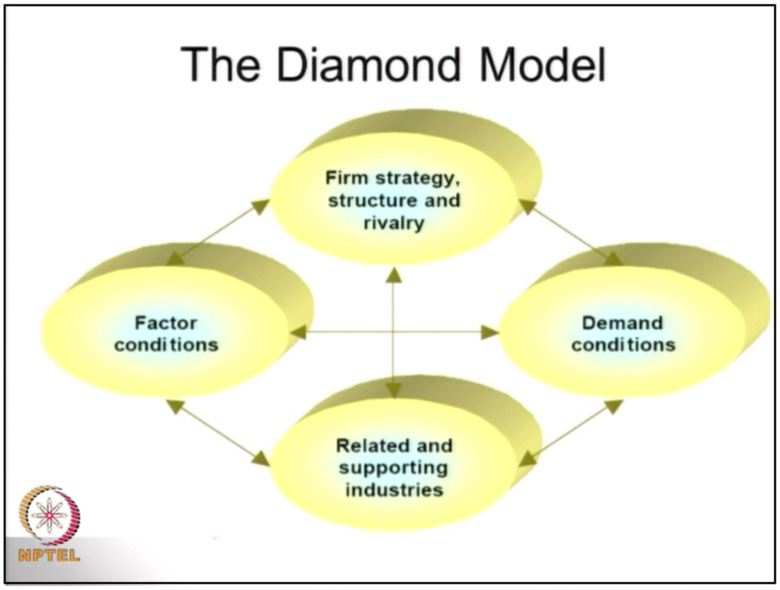

Now, Porter's Diamond identifies, four broad parameters or sources, that provide countries some competitive advantage. The factor conditions. The demand conditions. Related and supporting industries. And, the firm strategy, structure and rivalry. So, these four form the cornerstones, of the Porter's Diamond, that is used to understand a nations competitive advantage.

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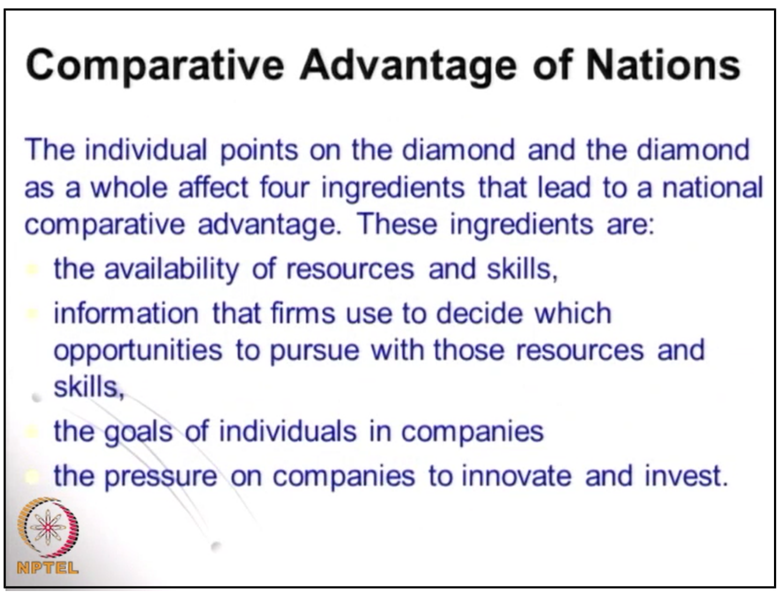

Now, different nations have different combinations, or different characters, in each of these four individual points. But, all of these will influence, some ingredients within a nation. Which, when aggregated together, provides that comparative advantage for a given nation. That makes one nation, better than a different nation. Not only individually, these four points, and as a whole, these four makes a very strong case to provide, a comparative advantage for different nations.

And, this advantage can be generated, either from the availability of resources, and the skill set available within a nation. Or, provides a warehouse of information, that different firms operating in different nations can use. Based on which, they decide on the business opportunities, that organisations need to pursue. And, what type of resources, or skills that they would be requiring. And, if adequately found in those nations, go to those nations. And, at times, a nations advantage also influences, the goal of individual companies as well.

And, it is also possible that, based on all of these ingredients, based on all of these parameters in the Porter's Diamond, companies will also be forged, or rather pressurised to innovate and invest, because of such influencing factors, which are not internal to the company, but then operate from an exterior. And, this exterior, I am talking about, is the country itself. The surrounding environment is influenced, in such a way that companies are pressurised, to innovate and invest.

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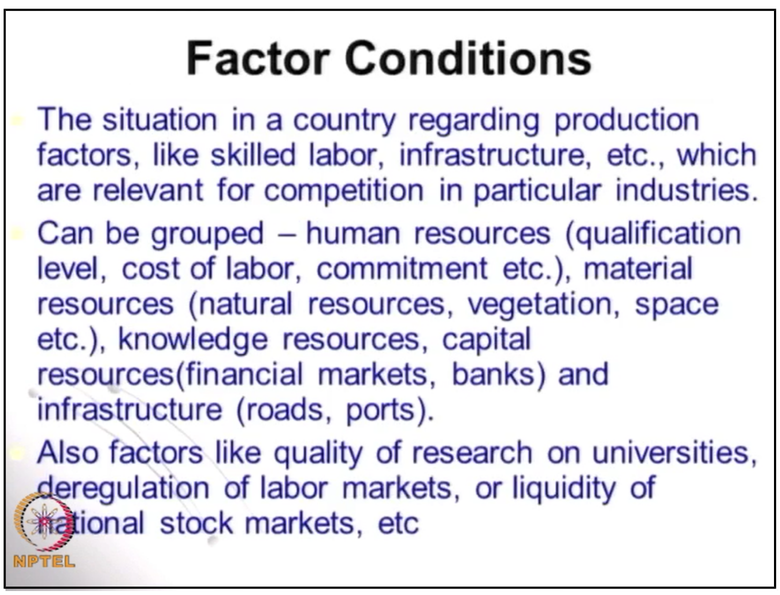

So, let us see each of these, cornerstones of these Porter's Diamond. And, I will try and provide some perspective to it, with some examples. So that, you understand this better. The first thing is the factor conditions. Now, the factor conditions is, more the local conditions. The situation that is, that characterises a country. And, this could be, regarding the production factors, which has got to do with the availability of skilled labour. Or, the infrastructure that is available, which is necessary for competition in particular industries.

And, the source of such factor conditions could be different. But, mainly can be grouped under some specific heads, where identical sources are categorized. For example, human resources. The qualification level. The cost of human capital, that is employed. The quality of the human capital, that is employed, which can be measured from the commitment level of the human resources. Or, the availability of material resources itself, like natural resources.

Or, we are talking about a different industry. Let us say, an agrarian type. The type of vegetation. Or, the extent of land itself, the space that is available. Or could be the knowledge resources, which could be the type of education system in a country. Or, capital resources. How advanced are these financial markets? Could be the stock market. Or, the banking system in the country, how regulated or deregulated it is. What is the access that, companies can get to financial capital? Or, even the infrastructure resources. Good roads, good ports, availability of power.

Now, these are all the factor conditions, that I am talking about. And, if countries are able to have, these factor conditions, positively influencing investment. Then, a country can gain some competitive advantage. Because, any firm or organisation would be more than willing to invest, in a country where human resource is good, where material resources is available, where knowledge resources is rich, good access to financial capital, good access to material flow by way of good infrastructure, by way of good roads, ports, power. So, these are factor conditions, that I am talking about.

And of course, I also made a mention about the quality of education institutions, or other factor conditions like, the quality of research in universities, that can be a good input to companies. Liquidity of national stock markets, which again is tied with the capital resources. So, we should understand that, such factor conditions, play a very important role, for countries to gain a competitive advantage. Because, these are things that directly or indirectly influence, the competitiveness of companies, of firms. And, these are conditions, which when favourably disposed will attract, some of the best quality investments into a country.

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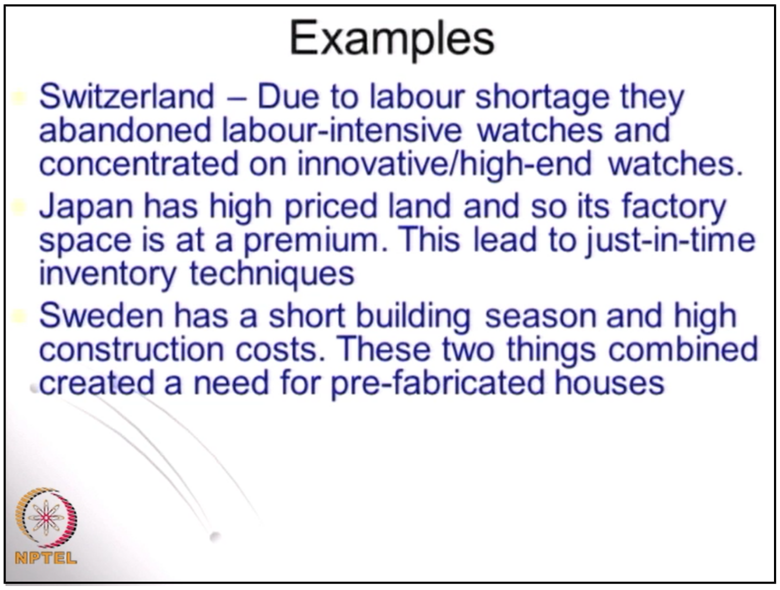

I will give you some examples, for you to understand this better. Take for example, Switzerland. Since, one of the factor conditions that I was mentioning, is the quality of human resource. Which also means, the quantity of human resource, due to labour shortage in Switzerland. It was because of this, that they had to abandon a labour-intensive watch making industry. And, that is one of the reasons, why they went to a niche or innovative high-end watches, which was not that labour-intensive.

And, that is the reason why today, if you talk of high-end niche watches, it is the Swiss watch making industry, that is globally competitive. The reason is because that, Switzerland as a country could not afford to provide, as much labour as it is required for a labour-intensive watch making industry. And then, the company is decided to move up the value chain, and engage in non-labour-intensive, and premium niche high-end watches.

And, it is because of this factor condition, that companies were able to, were forced to rather provide these high-end watches, and not the low end watches. And, that explains why, Switzerland today is known more for its niche watches, than the conventional low end watches. Another example is, the high price land in Japan. Which means that, since land is premium, factory space is premium. So, Japanese manufacturing companies could not afford, to hold such premium space, just to store inventory.

As a result of which, this factor condition of land being priced at such a high premium, made Japanese companies to follow, what is today called the, just-in-time inventory techniques. So, if you go back and ask the question, what was one of the reasons for all these just-in-time, and these world-class inventory management practices. The single or the most important reason is that, the land price was so expensive. As a result of which, the Japanese companies were forced to adopt, these just-in-time inventory practices.

Because, they cannot afford to have, heavily priced, high priced land, just being used for storage. Another example for you to understand, how factor conditions also made countries, to develop some unique source of competitive advantages. Take the case of Sweden. Since, the building season was very short, and coupled with high construction cost, you find that, there was a need for prefabricated houses, which is very popular in the Swedish geography.

Reason. Because, building seasons are very short, and the construction cost is very high. And hence, prefabricated houses became the need, in the Swedish building construction industry. So, you can understand that, these factor conditions, which are unique to a nation, also makes companies to innovate, to come out with new strategies, that provides them, that unique competitive advantage.

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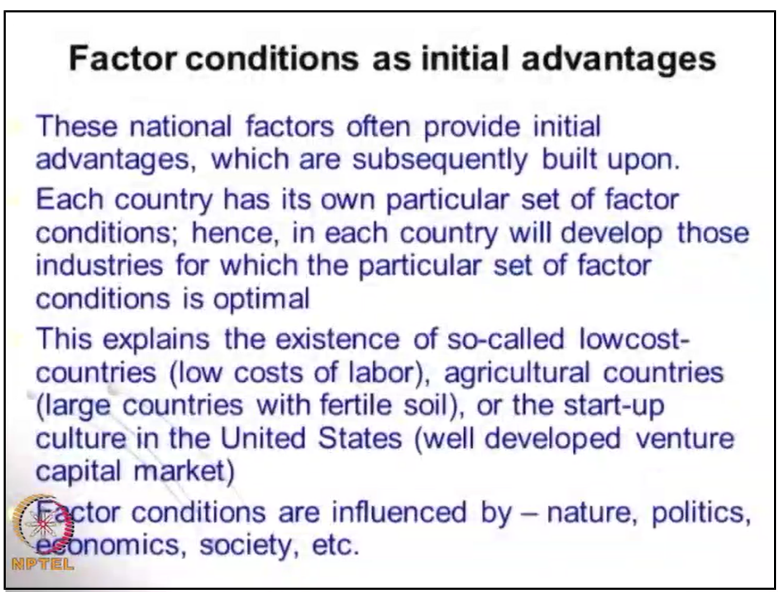

Now, what will happen over a period of time is these factor conditions, provide that initial momentum, that first mover advantage, which firms build subsequently, to generate a company's unique competitive advantage. Now, in the process we should not forget that, it was the nations factor conditions, that form the very foundation on which, companies build their competitive advantage. So, you should not forget that, each country will have its own particular set of factor conditions.

And, it is these factor conditions in each country, that companies use optimally to gain that competitive advantage, for a company's own competitive advantage. So, this will explain that, in low-cost countries, low-cost meaning, where the cost of labour is low, you find certain set of industries, being able to leverage such low-cost labour. And, you can characterise some countries to be agrarian, because of the availability of huge extent of fertile soil.

Or, you can understand the venture capital market, the Silicon Valley in the US for example, where the start-up culture is so predominant. So, that explains, why venture capital as a developed concept, is so popular in the United States. So, these factor conditions are influenced, not only by availability of natural resources, but also by the political establishment, the economics, or the financial capital markets, or the society as a whole, which I will be explaining later, when we look at different other factors.

So, the factor conditions of a particular nation, which is influenced not only by the nature, but also by politics, the society, the economics, provides a fundamental basis. And, this fundamental basis, has a source of competitive advantage, which provides that initial drive for companies, to build a company's own competitive advantage on it. So, you should understand that, the factor condition as, a nations competitive advantage, provides that first mover advantage for companies, on which they subsequently build, the companies own competitive advantage. But, do not forget that, these factor conditions provided the playground, for these companies to play.

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The next is the demand conditions. The sophisticated domestic market in a given country, is an important element for countries becoming competitive. And, in the process, how when firms that operate in countries, where the domestic market itself is sophisticated, how they become sophisticated themselves. Because, when firms engage in a sophisticated domestic market, it is more likely that, they end selling superior products.

The reason being very simple that, the domestic demand itself is very sophisticated, that they will not settle for anything less, but of high-quality. So, if you are proximate to such consumers, then such firms are able to better understand, the needs of such customers. And, meet those high-end requirements, not because these are export requirements, these are requirements that the domestic market itself requires.

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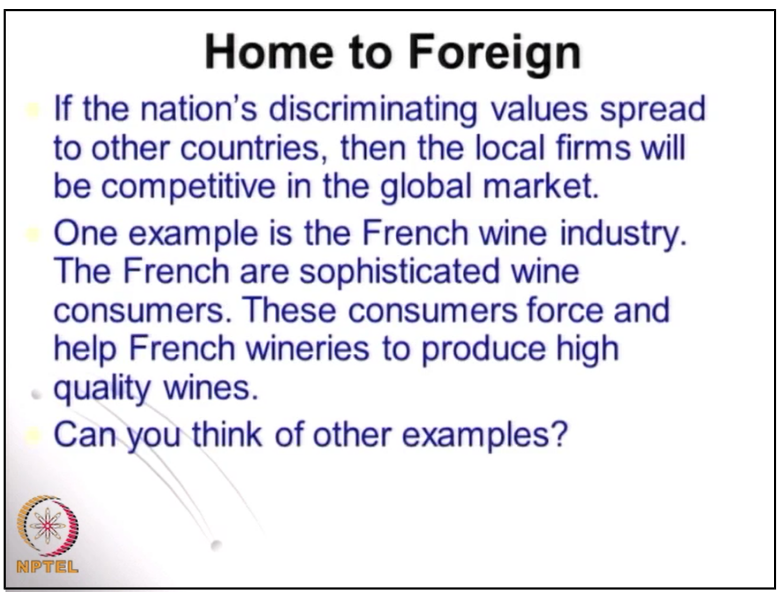
Now, what characterises the home demand, or the domestic demand. There is a mix of the customer's needs and wants, which is domestic. The scope and growth rate, within this domestic market. And, over and above that, the mechanisms that can, transmit these domestic preferences to foreign markets. Now, these characterise, the sophistication of home demand.



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Now, if this sophisticated domestic demand, spreads to other countries, and that it is already sophisticated at the domestic level, then there is every reason, that local firms will become globally competitive. I will give you one example, for you to understand this. The French wine industry. The French, they are sophisticated wine consumers. Now, being French, being local in

France, these consumers now force, the French wineries to produce high-quality wines.

So, you now understand that, the demand condition, which is characteristic of a particular nation, is driving companies in that particular industry, to meet that sophistication. And, in the process, they are not only meeting the local demand conditions, but also emerging to be globally competitive as well. You can think of other examples as well. For example, the fashion industry in Italy. The locals are very fashion conscious. As a result of which, you find today, the Italian brand is also globally competitive.

Because, it is meeting the sophisticated demand requirements of the local, or the Italian fashion industry. And, since this demand requirement is also becoming a globally competitive one, there is by natural default, that these companies become globally competitive as well. So, you should understand that, demand conditions at the local level, if they are very sophisticated, then there is a potential for companies in such demand environments, to also become globally competitive.

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Another important element in the Porter's Diamond is, the related and supporting industries. If you have a very strong set of related and supporting industries, that can support the competitiveness of a particular firm around which, these related and supporting industries operate, then there is a probability that, that particular industry becomes globally competitive. And, I am talking about the suppliers, and the related vendors to that particular industry. And, this usually occurs at regional level, as opposed to a national level.

Examples for that. The typical examples would be, the Silicon Valley in the US, or the Auto Industry in Detroit, or the Leather Goods Industry in Italy, or at our own Knitwear Industry in Tirupur. Now, these are all examples of, how at a very regional level, the presence of related and supporting industries, is providing some competitive advantage, which is a strong source for countries to gain a comparative advantage, when it comes to positioning them as a competitive tool.

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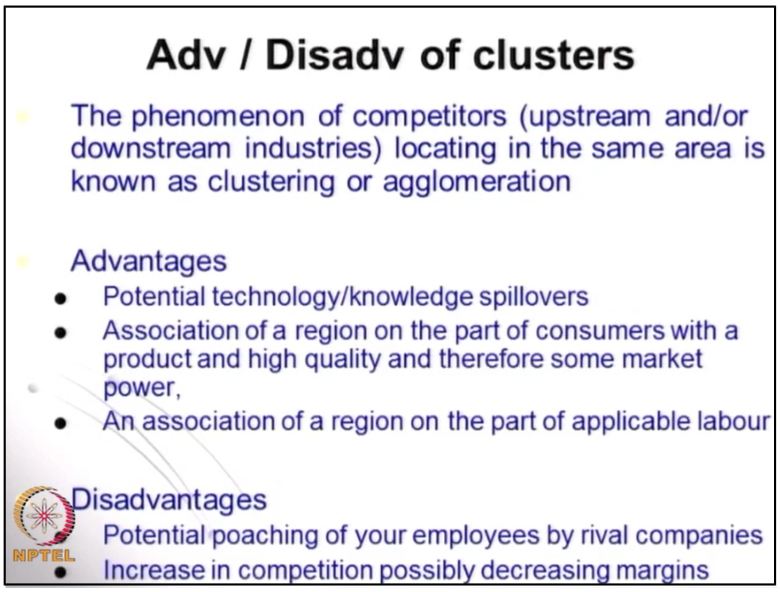

Now, there are advantages and disadvantages of such, cluster-based competitive advantage. Cluster-based meaning, locating upstream or downstream industries in the same area. And, we also call this as the, agglomeration. Advantage. There is a great potential, for technology and knowledge spill over across, the entire value chain. The potential to generate some market power. Because, we are able to aggregate, within a particular region, a set of crucial value elements, that start from the supplier level, and also reach up to the consumer level.

And, such association is also providing some advantage, from a labour perspective, which will also become a disadvantage. Because, that is also resulting in potential poaching, and also increases competition within the value chain, that might reduce the margins as well. But, by a large, the presence of such related and supporting industries, is by itself providing an inherent competitive advantage, to a particular geography.

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The fourth important part of the Porter's Diamond, is the firm's strategy, structure and rivalry. Let us begin with strategy. And, I will give you one example, beginning with capital markets. How, the characterisation of a domestic capital market, influences company strategies. Now, for example, some countries, where the capital markets, do not have a very long-run outlook.

For example, take the short-run outlook, that is typically let us say, it is American. Now there, industries where, investment is short-term. That will be very competitive. For example, the IT industry. I am talking about the hardware industry. Now, there you will find that, since the outlook itself is short term, considering that this is IT, you will find that the capital markets, in which potential investors are also looking only at short-term benefits, those will become competitive.

As against countries, where the investor class itself is characterised by those, who have a long-run outlook. For example, take Switzerland. In that case, industries that also required that long gestation period, also become competitive. And, that explains why? The pharmaceutical industry. For example, Novartis in Switzerland, is being able to be competitive. Because, it can generate. And, I am just talking about, from a capital market point of view, that it can raise capital from investors, whose DNA is of that being long-run.

And, as a result of which, industries that also have long gestation periods, become competitive. And, I gave you the examples of the, pharmaceutical industry in Switzerland. Another example is the individuals career choices, where an individual bases his or her career decisions, on the opportunities that are available, and also the prestige of being able to work for a particular industry. So, country where, you find that, a key personal holds, positions that are considered to be very prestigious, then that country will become very competitive.

Take for example, holding the position of CEO of an IBM headquartered in the US, or Intel headquartered in the US. And, a very key personnel holding that position, by a natural process also adds, competitive advantage to the country as a whole, because of this person holding a very prestigious. In this case, the CEO of an Intel, or an IBM, or a Microsoft.

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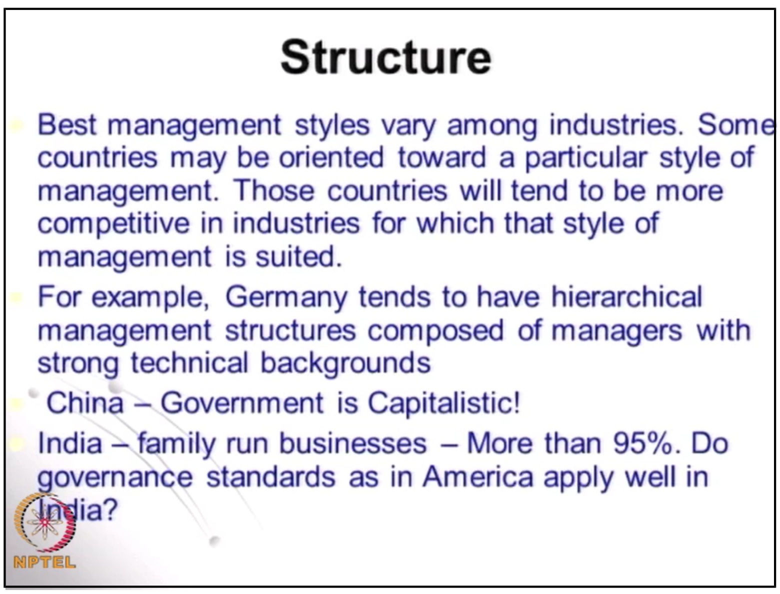

The next thing is structure. Sometimes, best management styles vary across industries. Not only industries, across countries as well. Some countries may be oriented towards, a particular style of management. And, those countries will tend to be more competitive in industries, that require that style of management. So, if there is a natural sync between, an industry's required style of management, and that particular management is also the characteristic of a particular country, then it makes things a little easier.

For example, Germany. Germany tends to have hierarchical management structures, composed of managers with strong technical backgrounds. And, that explains why? German companies are technologically the management structure, is more towards people having a technological mind set. And, as a country as a whole, nurtures that management structure. Then, companies that require that technology leadership, become competitive.

Or, china. Today, the government itself is, a little capitalistic. So, you can understand the transition, that it is making today. Or, India for example. Dominated by, family run businesses. And, I don’t know, how many of you know that, the majority of successful Indian corporations are family run, where the majority stakes are held within the family. And, you can extend this, also in other decision-makings.

One example is the governance standards. Whether governance standards in US, where it is not family, where it is not owner lead business. Whether they apply in India, where it is an owner lead business. So, you should understand the structure, which is essential for industries to be competitive. And, if a particular structure, is the requirement for an industry to be competitive. And, if that structure is also epitomised by the country by enlarge, then it is easy for the industry to synchronise with a particular country.

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And also, the rivalry. If there is intense competition, then the competition itself is an inherent source of innovation. And, that explains why in Japan, there is fierce competition. As a result of which, innovation as a key for growth, is now a DNA of most of the Japanese companies. And today, we are looking at it, in the Indian software services industry as well. There is a fierce competition. The social networking. Take the example of the Facebook, or the Orkut, where there is intense competition. As a result of which, there is a lot of innovation. And, if that happens within a country, that disperse such competition, then there is more innovation.

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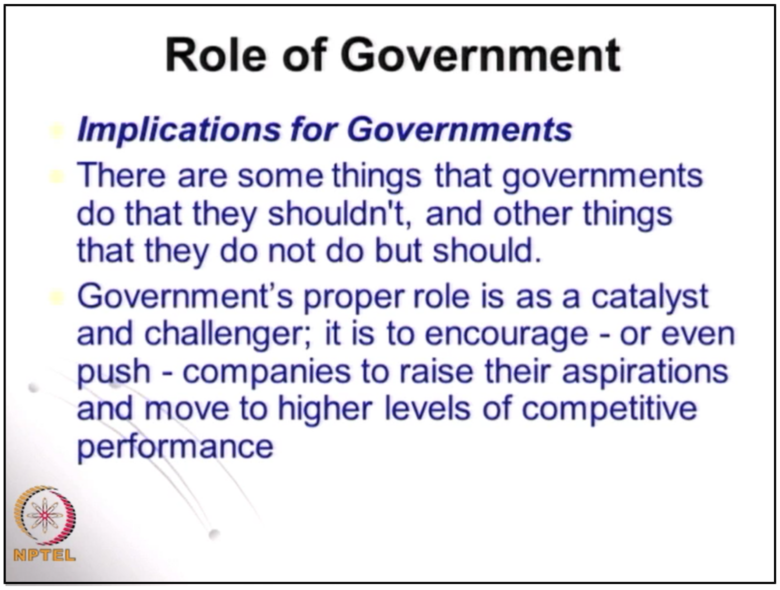

Now, where does the government fall, into the Porter's Diamond. Now, we will have to look at it from the perspective of, what would be the implications of government. And, at times, you will have this feeling that the government, they do some things, that they should not. And, other things that they should be doing, they do not.

And, if you ask this question from this perspective, we should view the role of government, to that of being a catalyst, to one where it encourages, or pressurises, forces, pushes, companies to raise their ambitions, to raise their aspirational levels, and move to the higher levels of competitive performance. And, the government should, be the tool, be the capitalist, that makes these companies to do things, this way.

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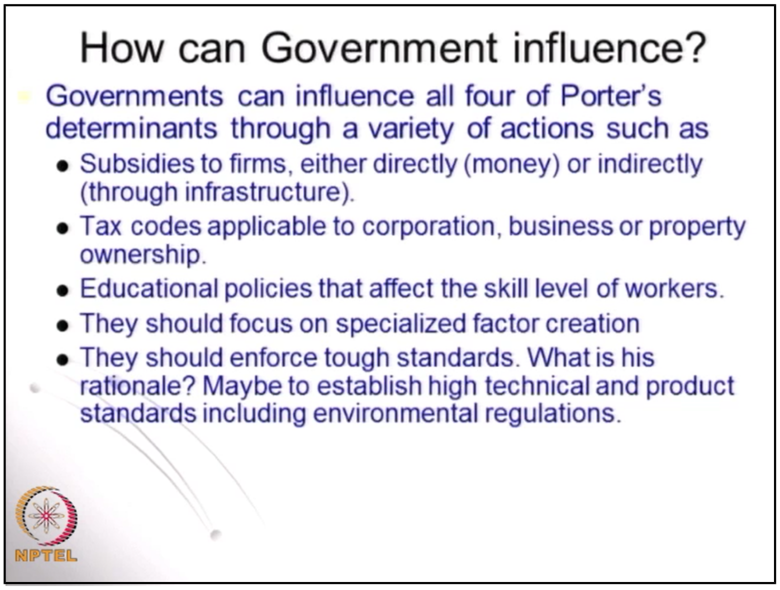

And, how can they do that. And, they can do that in all, the possible four parameters of the Porter's Diamond. They can subsidies monetarily or not, or even indirectly, by creating infrastructure. Or, by tax provisions. Or, by generating, a highly talented intellectual pool, through its educational policies. Or, they can focus on, specialised factor creations. Today, the Indian software services industry is catering to, a non-Indian specialised IT requirement.

The reason is because, the sophistication, in terms of the requirement of software as a service within India, is not that high. And, that explains why much of the revenues comes, from different countries, not in India. So, if we are able to specialise, and create a focus to growth, in the software as a sophisticated requirement locally, then you will understand, how much is the business potential for the IT services, the software services companies.

Another area, where the government can influence by just enforcing, tough standards, may be high technical and product standards, environmental standards. Because, then we are pushing, organisations to achieve these, or meet these high standards, that the government is setting through its policy-making.

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I will just give this very popular example, of the Japanese Fax Machine Industry, that illustrates, that best epitomises, the Porter's Diamond for national advantage, that I am talking about. Beginning from the Japanese factor conditions. You know, Japan has a relatively high number of electrical engineers per capita. So, that is the factor condition, that I am talking about. And, the demand condition is also very complicated. Because, the Japanese language is a little different from, the conventional English language.

So, you can understand how high demanding, that the fax machine industry, is because of the need for a specialised text. And, the large number of related and supporting industries, in this case, I am talking about the hardware industry, the miniaturised components. And, also the fact that the mind-set of being less in space, explains also the miniaturisation, in the technology sense. And, the intense competition within the Japanese, that explains the extent of the domestic rivalry, that the Japanese fax machine have.

As a result of which, all of them were pushed to innovate, and result in cost reductions. And, how the government, in this case, a government-owned company, the NTT, which is the state-owned telecom company, changed its cumbersome approval requirement. And today, it is more general and friendly. So, if you look at the entire Japanese fax machine industry, of course each companies, they have their own strategic advantage, technology superiority. They have their own market share.

But, if you look at it from a very bird's eye perspective, from a nations perspective, and split it to understand it from the Porter's Diamond, then you will understand that the factor condition, that it had a number of electrical engineers. The sophisticated demand condition that, it is because of this Japanese text. And, if we are able to provide a fax machine, that can transmit Japanese script, then it is easy to do with English language. And, that explains why, the Japanese fax machines become globally competitive.

And, also the presence of the related supporting industry, the hardware industry. And, the intensity with which, there was domestic competition. Now, this explains why, the Japanese fax machine also became globally competitive. So, you understand that, nation's competitive advantage, is not only advantageous for the nation, but also for companies participating in such geographies, because it makes them globally competitive. And, you can do this, by picking many countries, adopting these Porter's Diamond.

And, ask this question, how companies, which leveraged, which encashed, on these four ingredients, were also becoming globally competitive. And, there are many examples, that you can take to do this. You can take the, as I explained before, the Italian Shoe Industry, or the Tirupur's Knitwear Export Industry, or the Malaysian Poultry Industry. So, these are all different industries, and different countries, that you can take as examples, and check the applicability of Porter's Diamond. And, in the process, you will understand, why certain type of products became globally competitive.

So, the Porter's Diamond gives you an understanding, how even countries can gain that competitiveness, and get that absolute cost advantage, that companies will get out of a nations competitiveness. The next class, just as we have a model, to understand nations competitiveness, we also have another model, that provides the understanding of how, an industry can be attractive. And, that you will understand, when I explain to the class about the Porter's 5-Forces Model, to understand the industries attractiveness. We will see that, in the next class. Thank you.