

Economics of IPR
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Module - 01
Lecture - 04
Economic Perspectives on IPR

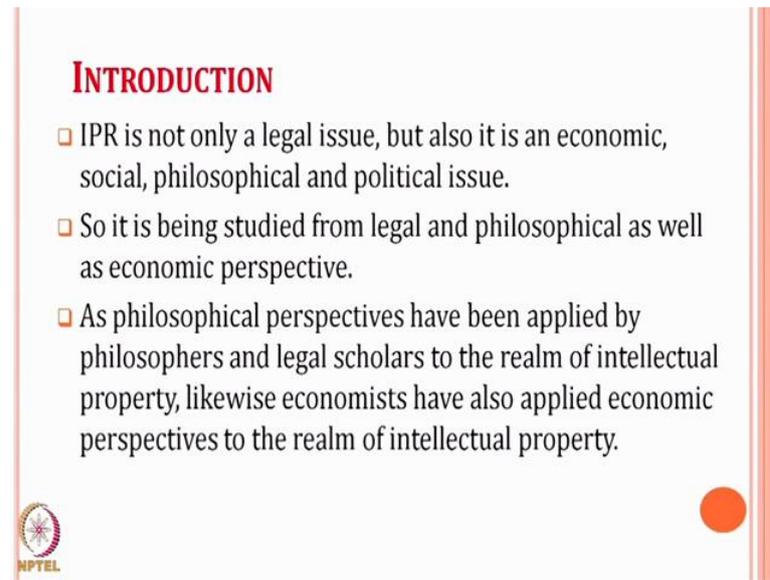
Welcome to the lecture on Economic Perspectives on Intellectual Property Right. In this lecture we will have a very independent discussion on how some of the economic theories are involved and some of the economic principles are involved related to the intellectual property rights.

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The outline of this presentation is the introduction IPR and economics of public goods, IPR and innovation, marginal cost pricing and intellectual property rights, and trade and intellectual property rights.

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INTRODUCTION

- IPR is not only a legal issue, but also it is an economic, social, philosophical and political issue.
- So it is being studied from legal and philosophical as well as economic perspective.
- As philosophical perspectives have been applied by philosophers and legal scholars to the realm of intellectual property, likewise economists have also applied economic perspectives to the realm of intellectual property.

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So, let me begin with introduction that as we have repeatedly discussed that intellectual property right is not only a legal issue, but also it is an economic social philosophical and political issue. It is been studied form legal and philosophical as well as economic perspective. As philosophical perspectives have been applied by the philosophers and legal scholars to the realm of intellectual property, likewise economists have also viewed intellectual property rights as one of the applied economic perspective to the realm of intellectual property.

So, what is basically this economic perspective involved any intellectual property rights?

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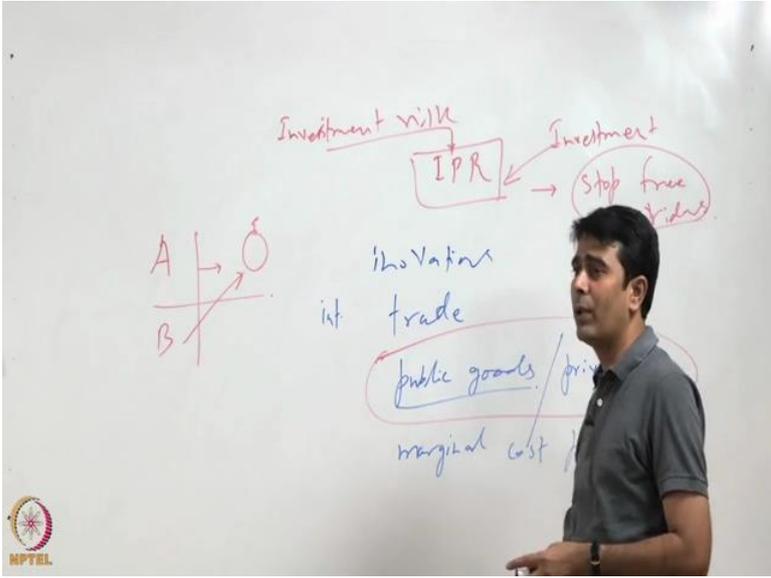
INTRODUCTION...

- Economists have tried to understand the complicated relationship between IP protection and incentive for innovation and diffusion.
- They relate IPR with various economic dimensions like, economics of innovation, trade, public goods, marginal cost pricing, monopoly, welfare, economic growth, economics of risks, economics of utility and cost-benefit analysis.



Economists have tried to understand the complicated relationship between intellectual property, protection and incentive for innovation and diffusion. So, they relate intellectual property with various economic dimensions like economics of innovation.

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The whiteboard contains the following handwritten notes and diagrams:

- Investment with IPR
- Investment
- Stop free riders
- Innovation in trade
- public goods/private goods
- marginal cost pricing

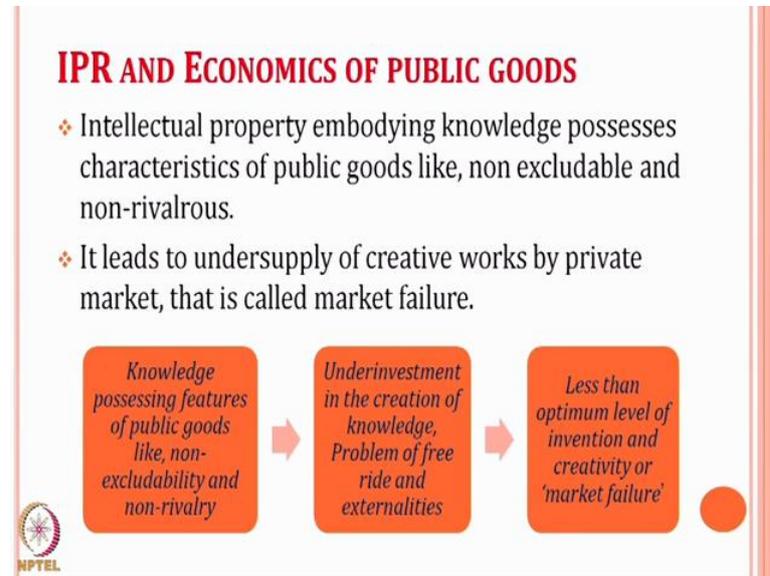
A small diagram on the left shows points A, B, and O with arrows indicating relationships between them.



Economic of innovation, issues related to the trade international trade, international trade issues related to the public goods I will try to give you the idea that what is public goods and how it is different from the private goods and marginal cost pricing, marginal cost

pricing and economic growth welfare, monopoly economics of risk economics of utility and cost benefit analysis.

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So, but here let me first begin this particular discussion with the term public goods a what we mean by the public goods and what how it is different from the private goods, when we say public goods there are two merits of public goods one is the non-excludability and other one is the non-rivalrous consumption. So, what is non-excludability? When we say non-excludability it means that when a two consumer is consuming the product when it is excludible product when consumes a product suppose an apple is consumed by consumer a. So, when this particular apple is or the fruits is consumed by a b cannot consume this because it is this particular product is non-excludible in nature. So, the movement is he has consumed b has lost the opportunity to consume this.

But the point is intellectual property rights is having the characteristics of the public good, the private goods are those goods which is excludable in nature a I gave you the example of an apple which is consumed by person but it will it is not by the person b. So, this particular example is example of public private goods while the a street lights in the city a is the example of public goods when street light is used by anybody any one consumer it cannot be a excluded for the consumption of the other consumers or other person living in the same city a because a the public goods cannot be excludible like the

defense countries defense, if the defense is provided to the citizens of country we cannot say that defense is as only provided to citizen A B C and it is not provided to D because the non excludability involve in this.

And then in the private goods we have rivalry consumption who say about will be the first will consume they will be the first one consume to it and the people who are not ready to be on time and not punctual to get the product they are not really a real a beneficiary in terms of consumption. So, suppose here a student is open a till 9 o'clock in the evening or 10 o'clock in the evening the person who is reaching at 10:30 or 11:00 they might be not be the person to get the consumption because there is rivalry in reaching the restaurant and there is rivalry in consumption of the food one cannot really think to go there after a certain time.

So, the private goods and public goods are having two, this particular two points makes a product private as well as makes the product different from the private to public. So, the public goods are having this merit of non excludability and non rivalness, its leads to the undersupply of creative works especially intellectual property rights a which is knowledge process characteristics of public goods, it just like the public goods because it leads to undersupply of creative works by private market that is called market failure. So, if you see here the inter linkage a knowledge processing features of public goods like non excludability and non rivalry this underinvestment in the creation of knowledge, problem of free ride and externalities and because of this less than optimum level of invention and creativity or market failure.

So, everybody does not want to invest in intellectual property sector, why? Because the movement you are investing in IPR sector intellectual properties sector, when we are investing investment in if there is a certain investment in IPR sector you have a system to a stop the free riders. If you do not have any system to stop the free riding or free riders in intellectual property right system then whatever investment you are having that entire investment is facing the risk that is the investment risk - investment risk involving IPR. So, the movement you are investing you want incentive on that investment, but the point is your investment is at high risk because there is a chances for the free riding, it is a chances for infringement, there is chances for piracy and a small piracy may give you a big loss, may provide you big loss.

So, this particular aspect the public goods and IPR just like the public goods because everybody wants to consume it, but everybody do not want to pay for it this is a specially happening in the sectors like a music, books and especially copy right sectors are facing this problems also the patent items pharmaceutical industries are facing tough time today because they are having huge R and D expenditure, but ultimately all these expenditures not going to give them a better return because lots of piracy and parallel industries are working together and they are not really having the patent rights or the license to produce such medicines and pharmaceuticals.

So, that way we find that it is a very tough time for the owner of intellectual property rights to continue with economic game because there are certain risk involve in the protection of intellectual property. So, investors are not really keen to invest and that creates the problem of market failure because you have lots of demand for such products, but the supplier for such products are not in plenty because investors are not ready to invest, everybody do not want to become the investors in the IPR sector because of the high risk involved and the way these products are like the public goods.

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IPR AND THE ECONOMICS OF INNOVATION

IPR: as an incentive for innovation	IPR: as a restriction for innovation
<ul style="list-style-type: none">□ IPR protects and stimulates innovations and inventions.<ul style="list-style-type: none">A. by giving return on the innovator's investment,B. by disclosing knowledge and information. It plays a significant role in innovation system.□ It protects innovative firms from spillovers.	<ul style="list-style-type: none">□ IPR impede innovation :<ul style="list-style-type: none">A. by restricting use of knowledge,B. by generating monopoly power,C. by imposing short run costs,D. by creating difficulties in the determination of boundaries.□ It also leads to distortion in the pattern of innovation.

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So, the second point which I would also like to discuss here the economics of innovations included in the intellectual property rights. So, IPR as an incentive for the innovators, one side you can find that how IPR is an incentive for the innovation and other side we are finding that IPR as a restriction for the innovations. So, how it is

incentive for the innovation? When we say incentive the IPR protects the and stimulates the innovations and inventions by giving returned on the innovators investment, by disclosing knowledge and the information it plays a significant role in invention system.

It also protects the innovative its firms from spillovers, but when we say the second aspect second part of this IPR intellectual property rights and its relationship between innovation we find that IPR impede innovations by restricting use of knowledge, by generating monopoly power, by imposing short run costs, by creating difficulties in the determination of boundaries and that leads to the distortion in the pattern of innovation.

So, innovators once innovated something is not free to disclosed information, innovations when it is in the umbrella of intellectual property rights they are supposed to preserve that knowledge and restrict that knowledge with their own, and at the same time it really provides the monopoly power to the innovator for some years a by imposing certain cost involving it and by creating difficulties in the determination of the boundaries of boundaries.

And there are certain boundaries, there are certain restrictions, there are certain rules which every owner has to follow. So, innovators, innovators are not really not really free to have their; not really free to think and to act whatever they feel, but they have to basically act in they have to basically work under a very limited set up they cannot really have their thinking or their innovations without any bondage. So, this is the second perspective on intellectual property rights.

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ECONOMICS OF INNOVATION...

- The trade off between the social benefits of improved innovation and the social costs of restricted uses of innovation determines the optimum level of patent protection.
- There are abusive and anti competitive uses of IPR.
- Problem of distortionary finance. Revenue doesn't go to finance for research.
- Drug companies spend more money on advertisement and marketing than they do on research.

For further details, please go through
https://www.youtube.com/watch?v=DBmzjZ_hTQo&list=PLRkCjvWSrxbt-xBXScjzTr4pE0SZ-plOf&index=1

Thus the base part of this innovation IPR relation is the tradeoff between the social benefit of improved innovation and the social cost of restricted uses of innovation determines the optimum level of patent protection for example, in patent and there are abusive and anti competitive uses of IPR problem of a finance, problem issues related to finance is one of the issues and revenue does not go to the finance for research a drug companies spend more money on advertisement and marketing then they do on research these are the issues which come up based on the recent a discussion on intellectual property rights and you must watch a some of the video link which is available here.

And why we want to bring these issues here because when we say the economic prospective on intellectual property right we cannot really ignores some of fact which is really connected with current business model of the various companies and we see that lots of cost and advertisement and lots of activities are really happening and that is not really favoring the innovators and the innovations, innovation sector, but that basically directly gets the benefit to the businessmen who really launching the IPR products to the world market today.

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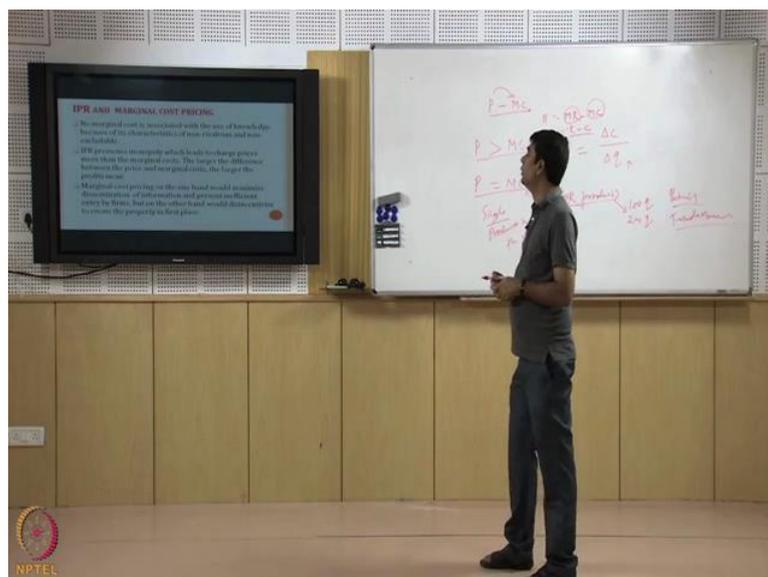
IPR AND MARGINAL COST PRICING

- ❑ No marginal cost is associated with the use of knowledge because of its characteristics of non-rivalrous and non-excludable.
- ❑ IPR promotes monopoly which leads to charge prices more than the marginal costs. The larger the difference between the price and marginal costs, the larger the profits incur.
- ❑ Marginal-cost pricing on the one hand would maximize dissemination of information and prevent inefficient entry by firms, but on the other hand would disincentivize to create the property in first place.



So, when we see here the IPR in marginal cost pricing we find here that every unit of the new product especially the products related to patent or product related to a trade mark is not really a having a new cost of intellectual property, even if we add something it is not like we are adding now new marginal cost to the, new marginal cost of intellectual property.

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$$P = MC$$
$$P > MC$$
$$P = MC$$

Single Product

100% Profit

20% Profit

100% Profit

20% Profit

So, what is basically marginal cost? When we see here marginal costing is nothing except the delta change in cost divided by the delta change in to quantity. So, if we have,

if we included one unit in our production what is basically change in the cost of the production that is basically the marginal cost; so when we see here no marginal cost is associated with the use of knowledge because its characteristics non rivalness and non excludability. So, if you see the IPR products, if we have IPR products launched in the market and we if we are adding more quantity here instead of 100 if we are producing 200 quantity of IPR products it does not add much value especially much value of IPR cost for the producer because once you have patent you have trademark, the registered trade mark once you have patents in trade mark or rather intellectual property rights.

Even if you have changing the quantity it is not going to really change the marginal cost of having the intellectual properties in your hand. So, intellectual property for a formula for design, for a product, for a medicine these things intellectual property for many years for you to produce at much at you want to produce. So, there is no additional marginal cost of intellectual property for your product. So, IPR promotes monopoly which leads to charge price more than the marginal cost. So, the price of the product the price of the product will not be equal to marginal cost why? Because you know that you are the single producer in the market, single producer in the market.

The moment you are the single producer in the market; you are the single producer in the market, so you are not basically having any competition in the market. That patent, owner is not having any competition in the market for some restrictive years. So, price is going to always higher than the marginal cost as it happens in the monopoly. So, when the price is going to have marginal, higher than the marginal cost the larger the difference between the price and marginal cost. So, whatever the difference price minus marginal cost whatever difference you are having the larger the profit incurred, so will always have a profit.

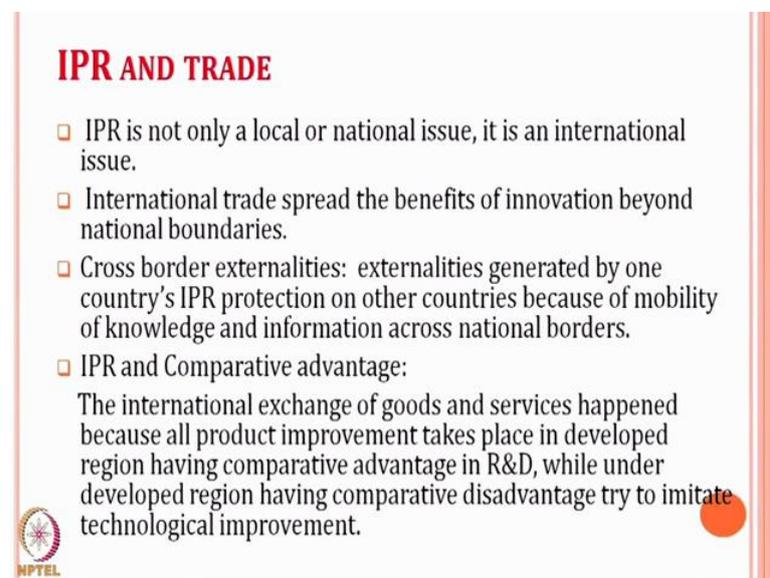
So, profit is nothing is except the marginal revenue minus the marginal cost or may be the revenue minus cost. So, whatever or unit of revenue you are having and per unit of cost you are having that is the profit which your earning, more you have the difference with the marginal cost, more you have the difference with marginal cost more the price is higher from the marginal cost you are having more greater benefits and profits.

So, marginal cost pricing on the one hand would maximize dissemination of information and prevent inefficient entry by firms, but on the other hand would disincentives to

create the property in first place. So, it is not so easy to produce as we have discussed in our first slide that intellectual property investment in intellectual property rights are not so good, not so easy because intellectual property rights are similar to the public goods or having the nature or are basically having the characteristics of public goods and there is not any scope a to protect those intellectual property rights if the legal set up of that particular economies is not really not really strict.

So, the incentives are very much less compared to other industry where compared to other sectors where you do not really need very tight intellectual property protecting system. So, this is another prospective of on intellectual property.

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IPR AND TRADE

- ❑ IPR is not only a local or national issue, it is an international issue.
- ❑ International trade spread the benefits of innovation beyond national boundaries.
- ❑ Cross border externalities: externalities generated by one country's IPR protection on other countries because of mobility of knowledge and information across national borders.
- ❑ IPR and Comparative advantage:
The international exchange of goods and services happened because all product improvement takes place in developed region having comparative advantage in R&D, while under developed region having comparative disadvantage try to imitate technological improvement.

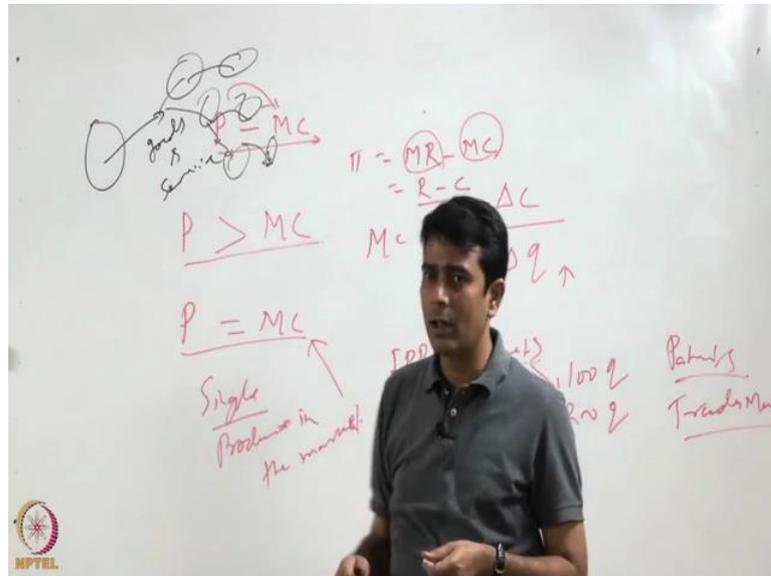


The next one is the trade and intellectual property rights. So, when we say trade, a trade is exchange of goods and services when we say trade international trade, international trade includes the exchange of goods and services among the countries between the country and at the at the cross national level.

So, international trade is spread the benefits of innovations beyond national boundaries because the movement you are going out from the country, the movement you are breaking the domestic boundary and the your goods and services are reaching outside the economy, you are reaching other countries of the world your extending the benefits of your trade to other part of the economy your market is extended to other economies of

the world. So, you are not inside the domestic economy, but you are basically targeting outside the domestic economy.

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So, cross border externalities you are getting externalities generated by one country IPR protection on the other countries because of the mobility of knowledge and information across the national boundaries. So, IPR and comparative advantage intellectual property rights are placing a very new framework of competitiveness. We have seen in our previous lecture that when we were having intellectual property rights protected at the domestic level the value of those intellectual property products were limited to that economy only, but when we have a global system of intellectual property rights today our products are not only protected at local level, but it is protected at international level at the same time our products are not only a challenged at domestic level, but it is also challenged at international level.

So, we have global challenges and we have global a global opportunities and global competitiveness today. So, international exchange of goods and service happened because all products improvement takes place in developed region having comparative advantage in R and D, while under developed region having comparative disadvantage try to imitate technological improvement. So, we find that as we have discussed in our other lectures also that every country is not at the same level of intellectual property rights and they are not having the equal level playing field today.

So, the innovations and incentives and the competitiveness is also not at the same level, they differ in their quality of the product, they differ in their protection of intellectual property rights and so they differ in their incentives and innovations. So, the international trade the opportunities involved in international trade today places IPR products on a very differenced stage and every country is now aware, every economy is now aware that how much a country can really earn with protection of intellectual property rights, but all depends on the R and D, all depends on how secure your investment in intellectual property rights and how secure and how safe you are having the intellectual property system.

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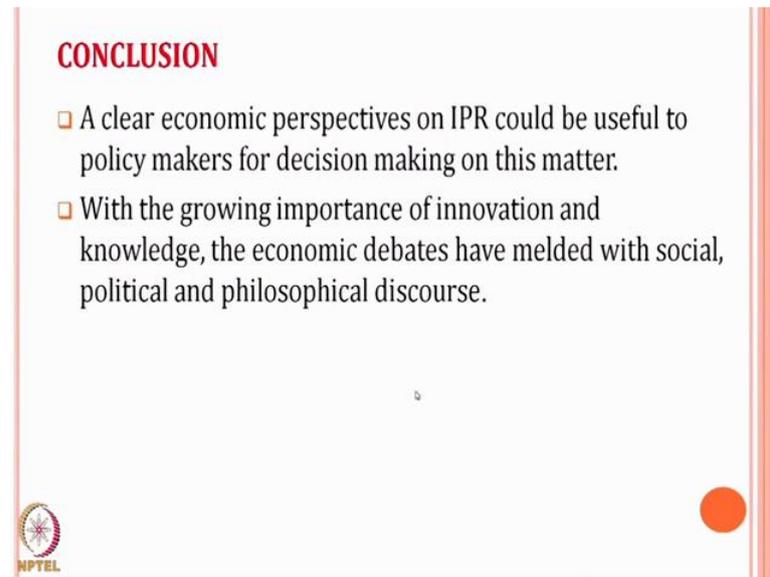
IPR AND TRADE

- ❑ IPR and Factor endowments: Generally, developed countries having greater capacity of innovation because of more skill endowments and technical know how produce high technology goods and services, while developing countries produce low technology products because of having less skill and technical know how.

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So, IPR and factor endowments generally developed countries having greater capacity of innovation because of more skill endowments and technical knowhow which produce high technology goods and services while developing countries produce low technology products because of having less skill and technical knowhow.

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CONCLUSION

- A clear economic perspectives on IPR could be useful to policy makers for decision making on this matter.
- With the growing importance of innovation and knowledge, the economic debates have melded with social, political and philosophical discourse.

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So, a clear economic perspective on IPR could be useful to the policy makers for decision making on this matter. When we see that different economic perspectives are involved in intellectual property rights in terms of public goods, in terms of trade, in terms of innovations, in terms of economics related to marginal cost and the difference between price and marginal cost we find that intellectual property right sector is one of the challenging sector and this sector has lots of risk at the same time this sector is having lots of benefit because it allow you get more and more price of your product if you are in the condition to bear the risk.

So, while the growing importance of innovation and knowledge the economic debates have basically melded with social political and philosophical, philosophical disclose, but the economic disclose and discussion is going to lead all these discussions because most of the firms the intellectual property rights has the business implications it has the trade implication today and so most of the firms who basically wish to lead the world who basically wish to monopolize the world the forms which really wants to become the leader in the market they are trying hard to protect intellectual property rights and they are really looking for those countries and those economic were IP, a better intellectual property regime exist and they are trying to really protect interest of the investors in such economies.

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I hope this perspective is going to give you a brief idea about how some of the economic points, economic concepts are included in the intellectual property rights today and one cannot really forget the economic perspectives involved in intellectual property right.

Thank you.