PROSPECTS AND VIEWS ON TO STRENGTHENING INTELLECTUAL PROPERTY RIGHTS (IPRS) IN DEVELOPING COUNTRIES, WITH SPECIAL REFERENCE TO FOREIGN DIRECT INVESTMENT (FDI).

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ABSTRACT:

This paper supports in assessing the impact of intellectual property rights (IPRs) in developing countries, in the context with the World Trade Organization’s Agreement on Trade-Related Intellectual Property Rights (TRIPS) and the development of TRIPS-plus standards with special reference to Foreign Direct Investment (FDI).

The crux of the paper is to examine the effects of intellectual property rights in developing countries with main emphasis on Foreign Direct Investment. The prima facie motive of the paper is to understand role of IPRs in attracting foreign trade and FDI as well as fostering a country’s potential to export and invest abroad and proposing different channels as to how to strengthen the IPR to attract FDI and thereby increase the economic development of the developing countries. For developing countries, IPR and FDI are key sources of new technology, particularly in regions where the domestic research and development (R&D) sectors are underdeveloped or non-existent. This Paper will help to provide tentative answers to this key question by looking at the results of the literature on the relationship between IPRs and FDI and thereby accelerating the growth and development of the States in question.

Keywords: Intellectual property rights, Foreign Direct Investment, Economic Development, and Developing Countries.
INTRODUCTION:
Alarming concerns with regard to economic implications of intellectual property rights (IPRs) has gained considerable attention over the past two decades in context of World Trade Organization’s (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and the subsequent increase in regional and bilateral free trade agreements in the TRIPS-plus era. TRIPS aims at narrowing the gaps between IPRs and Legal International Standards that are protected around the world, to bring them under common international rules. Recent changes in international legal and trade structures altered this situation. The negotiations to ratify the World Trade Organization’s (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) acted as a catalyst to bring discussions of intellectual property to the forefront of policy debates. Signed in 1994, TRIPS provided a minimum standard of protection for intellectual property and provided a dispute resolution system for entities to challenge breaches of these standards. Subsequently, new deals have formed through bilateral, regional and international agreements to strengthen these minimum standards of protection. These agreements are accompanied further by a growing number of institutions which refer to intellectual property questions in their programs, but not limited to, the World Health Organization (WHO), United Nations Educational, Scientific and Cultural Organization (UNESCO) and other United Nations (UN) programs.

Amid this plethora of institutions and agreements discussing IPRs, debates have ensued about the influence of such rights in diverse areas such as trade and industrial policy, public health, food and agriculture and biodiversity and biotechnology. These debates have become increasingly complex, involving arguments from the perspectives of international law, human rights and social and economic development. This complexity is coupled with controversy, as critics challenge the existing intellectual property regimes based on their implications for developing countries, in particular their impact on a development agenda, whether positive or negative. The relationship between IPRs and development is indeed quite complex from a theoretical point of view. On one hand, there are theoretical arguments suggesting that stronger IPRs can have positive effects on development. On the other hand, there are theoretical arguments against stronger IPRs in developing countries.

Developing countries are under increasing pressure to strengthen their national intellectual property (IP) regimes, in order to harmonise them with those of developed countries. It establishes minimum
levels of protection that each WTO Member State must provide. The following rapid proliferation of regional and bilateral free trade agreements include elements of IPRs building on and raising
minimum standards defined by TRIPS. These agreements indeed integrate TRIPS-plus norms, including undertakings by developing countries not to use specific TRIPS flexibilities. For developing countries, trade and FDI are key sources of new technology, particularly in regions where the domestic research and development (R&D) sectors are underdeveloped or non-existent. Traditionally, attracting FDI in general, and in R&D in particular, has been high on the policy agenda. Of many countries, as inward flows of R&D are believed to provide net benefits for the host country (Organisation for Economic Co-operation and Development (OECD), 2008)\(^1\).

The impact of outward FDI in R&D on the home country is an aspect of the R&D internationalisation process which has been considered less frequently in the literature on FDI, but continues to receive considerable policy attention. Several benefits of outward FDI for the home country have been identified. Such investment allows foreign firms to tap into other sources of expertise, enhance their access to foreign markets and benefit from reverse technology transfer (OECD, 2008). In contrast, outward FDI may generate costs for the home country through loss of jobs, loss of technical capability, deindustrialisation and loss of economic benefits, if results are exploited locally (OECD, 2008). Despite the possible costs of FDI for the home country and the host country, FDI is perceived often by policymakers to be an important engine for economic growth, especially in developing countries. This perception has attracted increasing attention over the past decades, especially during the negotiations preceding the ratification of the TRIPS.

In contrast, outward FDI may generate costs for the home country through loss of jobs, loss of technical capability, deindustrialisation and loss of economic benefits, if results are exploited locally (OECD, 2008). Despite the possible costs of FDI for the home country and the host country, FDI is perceived often by policymakers to be an important engine for economic growth, especially in developing countries. This perception has attracted increasing attention over the past decades, especially during the negotiations preceding the ratification of the TRIPS.

Encouraged by this controversy, researchers have undertaken growing work to understand better the socio-economic effects of strengthening IPRs in developing countries, both from theoretical and empirical perspectives. In particular, researchers have tried to assess the effects of stronger IPRs on various economic variables, such as foreign direct investment (FDI).

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Compared to the relationship of the selected IPRs to FDI, their relationship to trade is generally positive but not as significant. One major reason is that changes in the intellectual property regime can affect the scale and distribution of foreign modes of entry. That is, both trade and FDI may increase in response to stronger IPRs, but firms may also switch from exporting to engaging in FDI. Thus, some firms expand their exports while others establish affiliates abroad so that, on balance, total trade expands less. (It may be that such affiliates will also subsequently contribute to trade flows, a potential long-run effect that might be investigated in the future).

The chapter is structured as follows: the first section examines the relationship between IPRs and FDI from a theoretical perspective. The second section reviews the literature on the effects of strengthening IPRs in developing countries on FDI decisions. Finally, the chapter concludes by summarizing the key findings from the empirical literature and suggesting future research directions.
FOREIGN DIRECT INVESTMENT:
FDI is defined as “act of establishing or acquiring a foreign subsidiary over which the investing firm has substantial management control” (Maskus 1997: P7). By definition firms engaging in FDI are multinational companies (MNCs). MNCs engage in FDI when they have advantages either in terms of capital or technology or both as compared to the firms in the host country to overcome the disadvantages it might face in terms of language and cultural barriers, jurisdiction specific tax treatments, distance from headquarters, and monitoring local operations.²

Foreign direct investment is defined as “investment in which a resident of one country obtains a lasting interest in, and a degree of influence over the management of, a business enterprise in another country³.” In practice, certain countries apply the definition differently, making international FDI data less than perfectly comparable. For instance, under U.S. practice, the resident must own at least 10% of a foreign business enterprise under German and U.K. practice, at least 20%. Secondly, some countries include reinvested earnings as part of FDI, others do not.

Traditionally, attracting FDI in general, and in R&D in particular, has been high on the policy agenda of many countries, as inward flows of R&D are believed to provide net benefits for the host country (Organisation for Economic Co-operation and Development (OECD), 2008⁴. Acquiring modern technology may generate important spill over for the host country economy, which result in more and better competition, upgrade domestic innovative capacity, increase R&D employment, give better training and support to education and reverse ‘brain drain’ effects. Inward FDI may have negative effects on the host country, such as loss of control over domestic innovative capacity, potentially impacting the technological competitiveness of domestic firms


and leading to job loss.

Over the past two decades, there has been a growing scholarly literature on the relationship between IPRs and FDI inflows in developing countries. From a theoretical viewpoint, the relationship between IPRs and FDI decisions is complex.

The impact of outward FDI in R&D on the home country is an aspect of the R&D Internationalisation process which has been considered less frequently in the literature on FDI, but continues to receive considerable policy attention. Several benefits of outward FDI for the home country have been identified. Such investment allows foreign firms to tap into other sources of expertise, enhance their access to foreign markets and benefit from reverse technology transfer. In contrast, outward FDI may generate costs for the home country through loss of jobs, loss of technical capability, deindustrialisation and loss of economic benefits, if results are exploited locally (OECD, 2008).

Despite the possible costs of FDI for the home country and the host country, FDI is perceived often by policymakers to be an important engine for economic growth, especially in developing countries. This perception has attracted increasing attention over the past decades, especially during the negotiations preceding the ratification of the TRIPS Agreement and subsequent use of bilateral agreements on IPRs in the TRIPS-plus era. This attention compels the question: how do agreements aimed at strengthening IPRs in developing countries impact on FDI decisions by multinationals?

At the heart of the study is a regression analysis whereby trends in FDI and trade are related to an index of patent rights (controlling for other factors that influence FDI and trade)⁵. This index was found to correlate well with survey measures of intellectual property laws in practice. The empirical study investigates national data as well as data disaggregated by industry. The period covered is from 1990 to 2000⁶. Overall, the study finds that the patent rights as described by the

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⁵ http://www.oecd.org/trade
⁶ THE IMPACT OF TRADE-RELATED INTELLECTUAL PROPERTY RIGHTS ON TRADE AND
index are associated positively with FDI.

The results indicate that variation in FDI in relation to strengthened patent rights is largest for the least developed nations (where IPR regimes are weakest), and second largest for the developing nations (where IPR regimes are next weakest). Thus, patent rights appear to have a positive but diminishing association with increased FDI as the strength of those rights increases. This would seem consistent with the point that as IPRs increase in strength, they approach levels where the effects of market power prevail. The results do not imply that stronger patent protection or (correlated IPRs) will always raise FDI and trade. There may come a point where these types of IPRs are too strong in the sense that they grant producers of intellectual products excessive market power in which case IPRs may negatively influence FDI and trade.

Compared to the relationship of the selected IPRs to FDI, their relationship to trade is generally positive but not as significant. One major reason is that changes in the intellectual property regime can affect the scale and distribution of foreign modes of entry. That is, both trade and FDI may increase in response to stronger IPRs, but firms may also switch from exporting to engaging in FDI. For many developing economies, imports and inward FDI are the key vehicles for technology inflow and resource accumulation7. Moreover, a developing economy’s exports and outward FDI are measures of its productive capacity.

This paper examines the how Intellectual property rights can strengthen FDI for better economic development in developing countries some of the points are as follows:


1) **Stronger intellectual property rights can create ownership advantages:**
Investment by firms is more likely when host countries have strong IP protection, as this protection reduces the risks of imitation and leads to a relatively larger net demand for protected products (Primo Braga and Fink, 1998a)\(^8\). Therefore, IPRs positively affect the volume of FDI by enabling foreign firms to compete effectively with indigenous firms that possess ownership advantages (Smarzynska Javorcik, 2004)\(^9\).

2) **Stronger intellectual property rights can create location advantages:**
Not only do IPRs positively affect the volume of FDI, but they also influence where multinationals decide to locate that investment. IPRs are territorial in nature and hence differ across national boundaries. In this regard, stronger IPRs in some developing countries can be a location advantage that will positively affect multinationals’ decisions (Primo Braga and Fink, 1998a). On the contrary, developing countries characterised by weak IPRs will be less attractive locations for foreign firms. However, in the context of TRIPS, it is reasonable to think that the trend toward harmonisation of IPRs within TRIPS would offset such location advantages. In this sense, countries with weaker protection would become more attractive as they strengthen their IPRs, and the relative attractiveness of those with strong IPRs already in existence would fall.

3) **Stronger intellectual property rights can increase quality of foreign direct investment:**
IPRs affect the composition of FDI. Strong protection may encourage FDI in high technology sectors, where such rights play an important role. In addition, it may shift the focus of FDI projects from distribution to manufacturing (Smarzynska Javorcik, 2004)

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4) **Strengthening intellectual property rights can increase market power:**

Strong IPRs negatively influence FDI by providing rights holders with increased market power. As a result, strong IPRs, at least theoretically, cause firms to divest and reduce their service to foreign countries. The market power effect reduces the elasticity of demand facing the foreign firm, inducing them to invest – or produce – less of its patentable product in the host country, or products made by a patentable process in the market with the stronger IPRs. Stronger IPRs allow the practice of higher prices by foreign firms because IPRs reduce competition among firms. Therefore, stronger prices can compensate for lower investment or production.

5) **Stronger intellectual property rights can deter foreign direct investment by encouraging Licensing:**

Not only do strong IPRs increase the market power of foreign firms, but they also cause multinationals to switch their preferred mode of delivery from foreign production and R&D to licensing (Primo Braga and Fink, 1998a)\(^{10}\). Ferrantino (1993)\(^{11}\) argues that firms prefer FDI over licensing when protection is weak, as firms are more able to maintain direct control over their proprietary assets through internalised foreign production or in house foreign R&D. In this case, strengthening IPRs diminishes the incentive for FDI at the margin for R&D-intensive industries (Primo Braga and Fink, 1997).

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Evidence from the perspective of developed countries:

*Intellectual property rights positively impact on foreign investment under certain Circumstances:*

Early studies focusing on the decisions made by US multinational enterprises did not find any statistical significant relationship between IPRs and FDI (Ferrantino, 1993; Mansfield, 1993; Maskus and Konan, 1994). However, as Maskus (2004) noted, these studies suffer from methodological weaknesses, including poor measurement of the strength of IPRs. Further studies carried out in the 1990s continue to present mixed conclusions. Lee and Mansfield (1996) examined the relationship between a developing country’s system of intellectual property protection and the volume and composition of US FDI in that country, by using a new index of weakness of IPRs. This study was carried out in 14 destination countries including several South American, Latin American and Asian RAND Europe IP and Foreign Direct Investment countries and one African country. Based on data obtained from almost 100 US firms regarding their perceptions of the strength of such protection in the various countries, Lee and Mansfield (1996) found that the level of intellectual property protection influenced the volume of US FDI.

Maskus (1998) further corroborated Lee and Mansfield’s (1996) results. Maskus investigated the impact of IPRs on FDI decisions from US multinationals in a panel of 46 developing countries. Using the index of patent strength developed by Maskus and Penubarti (1995), he found that the strength of IPRs positively affected FDI decisions only for more developed countries. According to the econometric results, when other things were equal, a 1 per cent rise in the extent of patent protection expanded the stock of US investment in developing countries by 0.45 per cent. Nevertheless, empirical studies do not find universally that IPRs positively affect FDI decisions. This is evident


in a study by Primo Braga and Fink (1997), in which the effects of IPRs on FDI decisions with respect to manufacturing from US multinationals were examined using a larger set of developing countries than Lee and Mansfield (1996)\textsuperscript{14}. To proxy the strength of IPRs, they used the index developed by Rapp and Rozek (1990a)\textsuperscript{15} the Rapp-Rozek index. The authors found a positive significant relationship between the strength of IPRs and FDI for total manufacturing in developing countries. However, their results at the sectoral level are less statistically robust. Other empirical studies have disaggregated these previous findings so as to understand better the effects of IPRs on foreign direct decisions according to the level of development of recipient countries and their imitative abilities. For example, Smith (2001)\textsuperscript{16} analysed how IPRs affect US affiliate sales and licences in a sample of 50 countries from Africa, Asia, Europe, Latin America and the Middle East, measuring the strength of IPRs by using the Rapp-Rozek index and the index developed by Ginarte and Park (1997) index. Smith found that strong IPRs increase both US affiliate sales and licences, particularly among countries with strong imitative abilities, as measured by R&D and education statistics.

Similar to the Smith (2001) study, Nair-Reichert and Duncan (2008)\textsuperscript{17} used panel data from US multinationals over the period 1992–2000 to show that affiliate sales are impacted negatively and significantly when a host country poses a risky environment for firms due to high imitation abilities. Strong IPRs increase affiliate sales in countries with a high ability to imitate, suggesting that the positive market expansion effect dominates the negative monopoly power effect.

Park and Lippoldt (2003)\textsuperscript{18} confirmed that the effects of IPRs on FDI tend to vary by a


country’s level of economic development. For example, the authors found that developing nations which are WTO members generally have greater inward stocks of FDI than developing nations which are not. However, they found that this does not hold true among the least developed nations: among these countries, WTO members do not have significantly more FDI than non-members. Nevertheless, Park and Lippoldt’s econometric results suggest overall that an increase in the strength of IPRs will tend to have a significant positive effect on the inward and outward FDI of both developing and least developed countries.

More recently, Awokuse and Yin (in press, 2009)\textsuperscript{19} investigated the role of IPR protection in the surge in FDI in China. Using panel data from 38 source countries, they found that the strengthening of IPRs in China has had a positive and significant effect on FDI. Blyde and Acea (2002)\textsuperscript{20} empirically examined the effects of IPRs and FDI in Latin American countries. Their results nuance the influence of the level of development of countries on FDI decisions, affirming a positive relationship between IPRs and FDI. They found that IPRs affected bilateral inflows of investment from OECD countries, even after controlling for variables such as infrastructure and human capital levels.

\textit{Intellectual property rights affect the composition of foreign direct investment}

Although while they considered the level of development of countries and their strong technical capabilities, the previous studies on direct investment drew on aggregate FDI data rather than data disaggregated by industry. In contrast, a growing number of empirical studies have begun to consider the effects of IPRs on FDI by industry and its composition. In their pioneer study Lee and Mansfield (1996)\textsuperscript{21} show empirically, through a sample of US chemical multinational firms, that the proportion of FDI devoted to final production of R&D facilities was negatively and significantly associated with weak intellectual property protection.


In another study comprising a survey on US manufacturing firms, Mansfield (1994) determined that the importance of IPRs for investment depended on the purpose of the investment project. For example, only a minor share of the respondents were concerned about IPRs concerning investment in sales and distribution. The share of those concerned rose when considering investment in rudimentary production and assembly facilities. The share further increased for investment in manufacturing components, complete products and R&D facilities (Mansfield, 1994).22

Similarly, Park and Lippoldt (2003) found that the importance of IPRs to FDI differed across industries. For example, the influence of the strength of foreign patent regimes was insignificant for US outward FDI in metals, machinery, electronics, transportation and wholesale trade. In addition, patent rights were found to affect modestly US outward FDI in chemicals and pharmaceuticals.23 In contrast, the strength of foreign patent regimes significantly influenced US outward FDI in the petroleum, finance and services (including computer-related services) industries in all countries. According to the authors, the sectors are sensitive to patent protection due to the emergence of new energy-related technologies and the complementarity between finance and technology. Finally, patent rights moderately affected US FDI in these same sectors in developing nations (except in the computer-related services industry, where this depended strongly on patent rights).

Looking specifically at investment projects in Eastern Europe and the former Soviet Union by using unique firm-level data from 24 economies, Smarzynska Javorcik (2004) found that investors in sectors relying heavily on intellectual property protection were deterred by weak IPRs in a potential host country. Moreover, weak rights deterred investors from undertaking local production and encouraged them to focus on distribution of imported products.

Using sectorally-disaggregated data on FDI for a large sample of host countries, Nunnenkamp and

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23 The authors recognised that this result is surprising especially for pharmaceuticals. Nevertheless, they stressed that their sectoral study does not distinguish between chemicals and pharmaceuticals, the latter being a subcategory of the former. Moreover, they pointed out that their data on foreign direct investment do not include only R&D investment, but also other types of investment.
Spatz (2004)\textsuperscript{24} concluded that IPRs were a significant determinant of US outward FDI, particularly in developing countries. Their results also revealed that weaker IPRs were associated with lower quality of FDI, as judged by the small increases in local R&D, employment and added value that accompany the investment.

**Evidence from the perspective of developing countries:**

Following the literature review from the perspective of developed countries, the question remains as to what the existing evidence shows about the effects of strengthening IPRs on FDI in the developing countries. In this respect, the empirical evidence is limited. Predominantly, this literature has examined first, whether increased FDI from developed countries has impacted economic development, and second, whether IPRs impact on the outward FDI of developing countries.

*Intellectual property rights seem to impact positively on economic development through foreign direct investment*

Branstetter et al. (2007)\textsuperscript{25} provide recent empirical insights about the effects of increased FDI on industrial development. Using firm-level panel data on US multinational firms, they examined how US firms responded to a series of intellectual property reforms undertaken in 16 countries in Asia, Europe, Latin America and the Middle East. Their findings showed that US multinationals expanded the scale of their activities in countries after these countries implemented IPR reforms. The increase in use of inputs in the host countries was disproportionately higher among multinationals that made extensive use of IPRs. More importantly, industrial activity expanded overall after rights reform. This expansion of multinational activity more than offset any decline in the imitative activity of indigenous firms.

*Intellectual property rights positively affect outward foreign direct investment:*

Concerning outward FDI from developing countries, Park and Lippoldt (2003) empirically showed that


that an increase in the strength of patent rights tended to significantly and positively affect the outward FDI of developing and least developed countries, suggesting that the latter could gain from the harmonization of IPRs.

FUTURE RESEARCH SCOPE:

This chapter has examined the relationship between IPRs and FDI, and concludes the following.

- There are theoretical arguments showing that strengthening IPRs can have positive effects on FDI. Strong rights can create ownership advantages that allow firms to invest abroad.

- They can also represent a location advantage which can be used by developing countries to attract new cross-border investment. Moreover, stronger IPRs can provide incentives for multinationals to increase the quality of their investment dedicated to developing countries.

- However, there are theoretical arguments against strong IPRs. The latter can increase the market power of multinationals in developing countries, giving them incentives to increase the price of their products and to decrease their investment and sales abroad. Moreover, strengthening IPRs can reduce FDI to the benefit of licensing.

- Empirical evidence shows that stronger rights positively affect the volume of inward FDI
in developing countries, especially those with strong technical absorptive capabilities. Additionally, they may influence the composition of FDI by encouraging investment in production and R&D rather than in sales and distribution.

- The empirical literature suggests that developing countries may benefit from the international harmonization of IPR regimes. Strong rights increase inward FDI and contribute further to industrial development. Moreover, international harmonization may impact positively on outward FDI of developing and least developed countries.

- Examination of the empirical evidence of the effects of IPRs on FDIs suggests several gaps in the literature. Among the most striking ones is the need to extend research on multinationals to others than those only in the US, since multinationals’ decisions might differ across home countries. Equally important is a better understanding of the extent to which IPRs affect FDI at the industry level and, above all, the type of cross-border investment (e.g. sales versus R&D)
CONCLUSION

This paper has dealt with the evidence on the effects of IPRs in developed countries in the context of the WTO TRIPS Agreement and the development of TRIPS-plus standards. TRIPS encouraged the congruency of IPR regimes in an international arena by providing a minimum standard of protection for IP, and a dispute resolution system which would also help dispel the fear being cultivated by some of the seasonal analysts professing their competence at times prematurely for entities to challenge breaches of TRIPS plus standards. Since the establishment of TRIPS, there has been an increase in the number of new deals formed through bilateral and regional free trade agreements to strengthen these minimum standards of protection, the so-called TRIPS plus standards.

Hence, we have examined the impact of strengthening IPRs in developing countries in Foreign Direct Investment—through a review of the most recent scholarly and grey literature. The empirical findings from the report show that stronger IPRs seem to influence the decisions of individual firms in developed countries by encouraging them to export, invest, and transfer their technologies through licensing in developing countries, in particular those with strong technical absorptive activities. The report stressed that uniform IP laws cannot ensure diversity of access and benefit-sharing from genetic resources and traditional knowledge.

The evidence in this study, on the whole, finds that intellectual property rights matter importantly to FDI. However, the effects of IPRs on FDI vary by a country’s level of economic development and by industry. For instance, developing nations that are members of the WTO generally have greater inward and outward stocks of FDI than developing nations that are not members. But among least developed nations, WTO members do not have significantly more FDI than non-members. The regression results suggest, though, that an increase in the strength of patent rights will (over time) tend to have a significant positive effect on the inward and outward FDI of developing and least developed countries.

Finally, the paper reveals that there is significant knowledge gaps in the empirical literature on the effects of strengthening IPRs in developing countries. Therefore, its findings should be interpreted with caution. For this reason, the report suggests few future research directions which should aim to provide further insights for policymakers on the effects of stronger IPRs in developing countries which is aptly congruency with the objective of dynamic development of participating states.
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