

WORKING PAPER

IP Indices: A difference between principles and practice? A comparative analysis of UK firms' investment decisions into India and China

Liz Mason
Centre for International Business, University of Leeds (CIBUL)
Leeds University Business School (LUBS)
Maurice Keyworth Building
University of Leeds
Leeds, West Yorkshire
LS2 9JT
United Kingdom
liz-mason@tiscali.co.uk; law2elm@leeds.ac.uk

Abstract

This paper develops and compares 'experience-based' intellectual property (IP) indicators for two large, emerging markets, namely India and China. Experience-based indicators are often absent in the development of indices of IP strength, which tend to employ more factual indicators based on legislative frameworks, terms of protection, cost of protection and enforcement processes. This paper asserts that the inclusion of experience-based indicators in an IP index provides a more holistic measure of the strength or weakness of a nation's intellectual property institution (IPI) and can provide a valuable insight into whether a nation's IPI is as efficacious to firms in practice as it is in principle.

This paper proposes additional 'experience-based' IP indicators extracted from case-study interviews of fourteen interviewees from ten UK firms who have invested, or have considered investing, in India or China, or both. Both China and India are signatories to the TRIPs agreement and have committed to minimum standards of IP legislation. However, results from the interviews show that there are significant differences in the IPIs of these two nations in practice, particularly concerning the extent to which UK firms are able to protect IP; their perceptions of IP enforcement and the prospect of effective remedies.

Keywords:

IP Indices, FDI Location Strategy, Experience Indicators, Comparative analysis, India and China

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1. Introduction

This paper compares how differences in the Intellectual Property and enforcement regimes, referred to as the Intellectual Property Institution (IPIs), of India and China, impact the location and investment decisions of UK firms into both markets. On a global scale, innovative businesses with intellectual property (IP) to protect can face risk of imitation, reverse engineering, counterfeiting and piracy in both domestic and world markets. There is already much empirical research to show that the strength of a nation's IP framework impacts on the strategies of businesses concerning location selection and mode of entry (Dunning 2005). The strengthening of a nation's IPI can be an effective means of attracting additional inward foreign direct investment (FDI), not only in terms of location decisions, but also the composition and volume of FDI (Lee, 1996; Smarzynska, 2002). However, it is also recognised that a nation's IP regime is only one of a number of factors that will influence a nation's investment climate and the decisions of firms to enter a particular foreign market. Other factors include labour costs, market liberalization, deregulation, technology development policies and competition regimes (Maskus, 1998). It is, however, not possible to completely separate these factors from a nation's IP framework, because often market liberalization, policy making and regulation are the very factors that drive the efficacy and successful implementation of the IP legislation itself. These factors are potentially more influential in terms of a business making a strategic decision to enter a foreign market. It may be the case that the necessary IP legislation complying with minimum TRIPs standards is in place but enforcement policies, regulations, public commitment and remedial measures must also be visibly in place and working in order for a firm's IP to be adequately protected. This is particularly the case in developing countries where counterfeiting, piracy and reverse engineering practices are high. The ability to bring enforcement actions and obtain effective remedies within a reasonable cost and timescale are important elements of a nation's IPI and, it follows, its investment climate. It follows that IP enforcement has the potential to significantly impact the location decisions of firms.

Much empirical research has been undertaken to quantify and compare the strength of a country's IPI through the development of IP indices (Maskus, 1998). IP indices are used in econometric studies as tools to provide measures for assessing the level of IP protection in a given country and particularly the quantity and type of foreign direct investment, trade and technology a nation attracts from abroad (Pugatch, 2006). As nations become more industrialised the use of their IP systems by firms and individuals increase which tend to indicate growth in investment activity. Much empirical research has been undertaken to show that increasing IPR has a positive effect on inward direct investment levels. As IP legislation strengthens, FDI and licensing increases, although the impact varies by industry. There is a strong influence in sectors such as oil and gas, electronics, information and communication technologies, media and pharmaceuticals (Park and Lippold, 2004).

Mansfield (1996) has researched the relationship with a developing country's system of IP protection and the volume and composition of US foreign direct investment into that country. This study showed that the risk that a firm would take by investing in a market with weak IP would be more dependent on the industry, and not the type of investment it was making. Mansfield also recognises that even if IP laws are passed, there is a time-lag before perceptions are dispelled, and the IP protection and enforcement framework must be convincing. This paper investigates whether the IP frameworks of India and China are convincing to UK firms. To explore this, this study proposes additional 'experience-based' IP indicators to provide a more holistic measure of the strength or weakness of the IPIs of these two nations.

This study extracts the 'fact-based' IP indicators from the most widely accepted IP indices (Pugatch, 2006, Ginarte & Park, 1997, Lesser, 2001, Ostergard, 2001) and incorporates experience-based data from firms investing or considering investing in, China and / or India. Fact-based indicators include: the term of patent protection, restrictions on the use of compulsory licences in patented products, level of piracy and effective remedies and enforcement, enforcement mechanisms. Experience-based indicators include: investment risk-orientation, perception and knowledge of IP laws, piracy and enforcement, levels of financial loss and loss of market share. IP 'indices' tend to be developed using macro-level data, taking a 'fact-based' approach founded on the supranational and national characteristics of nations with respect to matters such membership status of IP-related international conventions and agreements and the state of IP law as it appears in statutes. A patent index, for example, will typically include proxies that capture aspects of primary patent law, signatory status to the Patent Cooperation Treaty and the patent enforcement environment of a nation. Most indices do not adequately incorporate experience-based, micro-level data obtained from foreign firms that engage, either directly or indirectly, with the IPI of nations. Since a unitary value is assigned to a nation's IPI, current IP indices also fail to capture properly how the IPI impacts on different functional areas within a firm. This research uses the framework of existing IP indices and identifies additional 'experienced-based' indicators for both India and China that influence the location and investment decisions of UK firms. Experience-based firm data is obtained from interviews conducted in ten UK based firms which have either invested in and/or are considering investing in India and China. Experience-based data is extracted from interview transcripts taken from departments across the organisational structure including R&D, production, sales, marketing, finance and human resources. It is important for researchers to understand better how different parts of a firm's activities are affected differently when it engages with a nation's IPI. Such an approach minimises individual bias within a firm and provides analysis of how, and at which stages, a firm engages with a nation's IP framework. For example, and R&D department is most likely to be concerned about the legislative characteristics of a patent framework, and a sales department engages with contract manufacture or compulsory licensing. A finance department engages at the enforcement and dispute stages and a marketing department with approvals for information flows and marketing authorisations.

Furthermore, current indices often lack comparative country data which is necessary to predict and compare the quantity of FDI, the composition of FDI and the relative position of a nation's IPI between nations.

1.1 Purpose of the paper

The purpose of this paper is to identify additional ‘experienced-based’ indicators of a nation’s IPI that are extracted from the actual experiences and perceptions of a sample of UK firms investing or considering investing in two specific markets, India and China. The indicators identified in this paper strengthen existing IP indices which are primarily based on ‘fact-based’ data, providing a more holistic and ‘complete’ measure of the IPIs of India and China. The complete indices for both China and India, enables the author to identify and compare the similarities and differences in the IPIs of both countries. Finally, this paper demonstrates that there are both similarities and differences in the experience-based data on IP protection and enforcement disclosed for India and China. Existing indices tend not to provide comprehensive data on cross-country differences, and in particular, is not comparative for India and China.

1.2 Structure of the paper

This paper firstly outlines the justification for a focus on India and China, including why these two nations have been chosen and the need for comparative research. This is followed by a review of the existing academic literature which this paper seeks to enhance. This is followed by an overview of the selection of firms and research methodology. Finally there is a presentation of the proposed indicators for experienced-based data to enhance the existing IP indices, tentative conclusions and indications of the differences between the experience-based data in China and India.

2. Justification for a comparative analysis for India and China

Both China and India are rapidly developing economies and are often grouped together (commonly along with Russia and Brazil, for example, under the expression ‘BRIC countries’) with the assumption that they are similar, particularly in terms of economic size, growth, risk investment and market entry barriers.

Both India and China have over recent years enjoyed significant economic growth and have been identified as ‘priority emerging markets’ potentially offering long term investment and trade opportunities for UK businesses. Both countries have strong industrial sectors, dynamic export orientated economies and are engaged in high technological activity (Lall, 2003). The technological capabilities, together with the current low costs of skills and raw materials, position both India and China as highly competitive economies.

There are strong investment policies in place in both India and China to attract investment from firms from Western countries. For India and China, these will provide benefits in terms of employment, skills and supply-chain development but will also provide stimulation for innovation and technological development in these markets themselves.

Although IP protection and enforcement regimes are in place in India and China the level of protection and enforcement still does not match Western regimes. Although both markets have signed up to the minimum standards of the TRIPs agreement, the

weakness in both regimes is with the ability to provide adequate enforcement and remedial action. This paper explores the differences and similarities in the weaknesses in the enforcement regimes in both markets.

Both India and China, for certain products, are already major exporters of counterfeit goods, particularly consumable items, where there is an available market due to low levels of income, demand for necessities and low cost luxury items. This paper explores the extent to which the levels of counterfeiting impact the location and FDI decisions of firms.

Both India and China are members of WIPO, are signatories to the TRIPs agreement, the Paris and Berne conventions on Industrial Property and Literary and Artistic Works, respectively. Both India and China have national legislative frameworks and regulatory bodies relating to Patent, Trademark, Copyright laws and anticompetitive practices. However, although both India and China have similar national laws for IP, and have signed up to similar international conventions and treaties, there are differences in the primary political, social and economic drivers underpinning their IP regimes. This paper explores the extent to which these influence the IPI frameworks, through the experience of UK investing firms.

India and China are very different markets, from a social, economic and political perspective. For example, India is a democratic republic; China is a communist led socialist state. India's social structure is based on a hierarchical caste structure and a number of religious influences; China is predominantly and officially atheist. Political and legal systems in India have developed on a democratic basis, significantly influenced by British governance. However, Chinese systems have developed more latterly to include a constitution, legislative frameworks and human rights regulations. Similarities in these markets include, natural resources and industry sectors; predominant rural population; major trading partners with the US and EU; high investment in skills and education and emerging capabilities in technological development.

North (1990) recognised that the consequences of institutional frameworks on economic performance can vary widely (North, 1990). IPIs in individual countries have evolved and developed as a consequence of political, economic and social influences. The intricacies and complex infrastructures of economies and societies contribute towards the characteristics and unique features of IPIs within each nation. However, supranational institutions (WTO, WIPO) and Western governments seek to protect their IP interests by imposing their IP regimes and frameworks on developing markets. Maskus (2000) questions the 'one size fits all' approach to harmonizing IPIs, citing the different characteristics of markets, products and social institutions. This paper identifies the internal political and social factors influencing the development of IPIs in China and India, on a comparative basis, proposing that the IPIs of both nations are not the same.

3. Literature Review

Much empirical research has been done to develop a comprehensive and standard IP index, which has usually focused on a particular type of IP or a particular sector. There have been a number of IPI indices that have been developed to measure the average levels of IP protection in different countries. IP indices focus primarily on the legislative framework of nations and some include enforcement criteria.

The first study of IP protection was conducted by Gadbow & Richards, 1998, which identified the level of protection in 7 countries, including India. At this time, IP protection was found to be lower than minimum standards provided by developed countries.

Ostergard (2000) provides a comprehensive index of IPR measurement, covering seventy-six countries. However, this is obtained primarily from US sources and is weak on enforcement data. Rapp and Rozek (1990) predominantly provide an index for patents and do not cover other types of IP. The Rapp and Rozek index is weak on enforcement and does not provide a comparison between IP systems. Seyoum (1996) offers an index across 27 countries, based on US data and is weak on illustrating comparative country data. Sherwood (1997) provides a subjective index, based on personal experience of the researcher which cannot be objectively verified.

The most widely accepted IPI index is by Ginarte and Park (1997), which predominantly measure patent rights of 110 countries and do not capture the relative differences in IP law. Park and Wagh (2002) update the Ginarte and Park index and consequently the index they devise has similar limitations. Smarzynska (2002) extends the index to include more transitional economies and develops a further index adequate comparative country data but is weak on enforcement data. This index also does not properly account for enforcement issues, nor does it provide a comparison between IP systems. Lee and Mansfield (1996) create an index measuring the relationship between IP protection and outward investment decisions. However, this index is criticised for not providing objective comparative data. More recently, Pugatch (2006) has developed an IP Index specifically to capture issues of concern to the pharmaceutical industry and a patent index which captures issues of relevance to the IT industry.

A critical analysis of existing literature shows that fact-based IP indices are recognised as lacking in experience-based data, which is identified from the following literature:

Pugatch (2006) reviews the strength and weaknesses of current IP indices and recognises that ‘the overall trend is to look at the ‘text-book’ level ‘though there are other more ‘experience-based’ indices’. Park and Wagh (2002) recognise that IP indices tend to relate to the ‘minimum requirements’ of TRIPS, and that a common criticism of the Park and Wagh (2002) patent rights index is that it does not capture actual experiences. Lesser (2001) states that surveys of the *perception* of corruption “as seen by business people”...have the limitation that they reflect perceptions only, but the subject is ‘inherently subjective’ yet ‘perceptions of the quality of governance may often be as important as objective differences in institutions across countries’

4. Methodology and data

4.1 Selection of firms

Firms selected for this case-study research have been identified across a range of sector categories, including software and media, electronics, pharmaceuticals, engineering and construction. Due to the small sample size, the research is not currently sector specific but focuses on country rather than industry differences. Similarly, firms have been selected across a range of size in terms of number of employees and turnover. Firms selected have specifically been targeted as those having an investment interest in China or India, and ideally have invested in, or considered investing in both countries. Firms have also been selected that have protectable IP subject matter, ideally but not exclusively patents.

4.2 Methodology

Experience-based firm data is obtained from interviews conducted in ten UK based firms which have invested in and/or considered investing in India and China. Experience-based data is extracted from interview transcripts taken from departments across the organisational structure including R&D, production, sales, marketing, finance and human resources.

The research evaluates the extent to which the IPI of India and China, particularly the ability of these countries to protect and enforce IPR, influences decision taking of foreign firms. The research measures the effectiveness of the IPI in India and China using a case study method. Case study businesses have been taken from a cross-section of UK outward investors, joint-venture enterprises and exporters into India and China, including both multinational corporations, small and medium enterprises.

5. Empirical Evidence

The interview questionnaire comprises of a mix of open-ended questions and multi-choice questions, where the interviewer was asked to select one box that matched his / her view most closely.

The experience-based data extracted from the interviews have been based on two approaches to analysing the transcripts:

- a) A direct correlation between a specific question and a resulting data criterion
- b) Extraction of common themes from open-ended questions

The primary findings from the case-study interviews are outlined below:

1. Perception and knowledge of existence of IP legislation

100% of interviewees stated the importance that IP legislation is in place, as this provides the basis for enforcement action, even if the firm is currently unable or unwilling to take anti-counterfeiting measures or bring an enforcement action in China or India.

21% of interviewees were from a firm's legal or contracts team and were familiar with the legislative framework in China and India. The remaining 79% were aware

that IP legislation is in place, but not aware of the specific statutes, national laws, conventions and international treaties.

86% of interviewees stated that they were 'more at ease' with the Indian legislative framework than the Chinese. This was expressed to be due to the influence and similarities with the British legal system, as both are based on common law, and written in English. This group perceived the Indian legislative framework to be less bureaucratic than Chinese legislation although when questioned further this seemed to be based more on the 'familiarity' with it rather than experience of enforcement. Furthermore, this group felt that Chinese legislation was difficult to understand, particularly because of differences in the language and interpretation, but also because of the unfamiliarity with its basis in civil law.

64% of interviewees have experience in both China and India, and perceived Indian legislation to be less problematic in terms of enforcement and obtaining remedies, than in China. However, this group felt that currently enforcement and remedial action is currently too costly and lengthy to consider taking action in both India and China.

100% interviewees expressed the view that the enforcement and remedial action situation is likely, and should improve in the future as both markets become global players.

2. Access to information

1 interviewee, who was not from a firm's legal or contracts team, expressed a need to know the specific IP legislation in place in both China and India to assist with investment decisions into these markets based on the IP legislation. This interviewee expressed the view that access to accurate and comprehensive legislation on the IP laws in China and India should be available and easily accessible for firms, and stated that currently it is not.

3. 'Time-lag' factor

100% of interviewees recognised that IP legislation is in place but that the legislation is not being adequately enforced by the authorities in either China or India. The ability and commitment to take adequate anti-counterfeiting measures is viewed by this group of interviewees as progressing at a very slow pace, and that action to put the legislative framework in place is not being adequately implemented.

93% of the interviewees stated that their firms will currently not take any action against counterfeiters because of the cost, time and uncertainty of the outcome. 64% of interviewees that have experience in both China and India perceive that implementation of legislation in India is happening more quickly than in China but still not sufficiently for firms to consider taking action. Interviewees stated that the problem is inherently within the markets themselves and that they will not alter their investment decisions until there is clear evidence that IP enforcement practices are strengthening.

40% of firms (43% interviewees) had previously taken enforcement action in either China or India. This group expressed the view that having taken enforcement action, the cost, time and outcome did not justify the outcome. This indicates that the time-lag factor between the legislation being passed and being adequately implemented, is real and not simply that a period of time is required to pass before negative perceptions are dispelled. (Mansfield, 1996)

4. 'Bad-experience' factor

10% of firms stated that due to a ‘bad-experience’ it would not consider investing in India at all in the foreseeable future, due to a bad experience with a partnership arrangement in India concerning trade-mark infringement. The experience had occurred some years ago, but had financial consequences. It was so significant it has ruled out any investment into India whilst the current management structure is in place. The experience has clearly tainted the perceptions of doing business in India and embedded a lack of trust with Indian businesses across the firm, from the US owners, to the UK operations.

10% of firms stated that due to the ‘reputation’ of how difficult it is to do business in China, and the high risk of counterfeiting, that the firm would not consider any investment into the China market.

5. Likelihood of investing sensitive technologies

10% of firms carry out R&D activity in both India and China, and 20% of firms carry out R & D activity in India. These firms have been present in China and India for a long time with established networks, partnerships and market share. The remaining 80% of firms expressly stated that they would not undertake R&D activities in India or China. However, in this group firms stated that R&D was retained either in the UK or at the head-office, stating that the decision was not influenced by India or China specifically.

90% of firms stated that the type of product that they invested, sold or marketed into China or India was of a lower grade or specification than that sold in European or US markets.

6. Ability to provide ‘value-added’ products or services

100% of firms interviewed that had invested in India or China had some ‘value-added- product or service which enabled them to retain their market share. Although these firms are aware that counterfeiting takes place in India and China, the interviewees stated that they have invested succeeded in obtaining a sufficient market share by having a distinctly different ‘offer’ to the infringing firms. This value added ranged from service delivery, order size, quality, performance, customer care, valued trade-mark or brand. This value added is seen by businesses as a means of mitigating the counterfeiting activity taking place. This finding supports the views of Rapp and Rozek (1990), who recognise in their study that for all industries, patents were deemed least effective means of protecting the competitive advantage of new or improved processes and products stating that secrecy, superior sales or services were all deemed more effective than patents. Findings from this case study research show that despite IP and patent regimes strengthening in India and China, businesses still believe that providing ‘value-added’ in their specific market is more effective than relying on the IP protection and enforcement regime. However, the firms surveyed are generally still reluctant to provide added-value through conducting R&D in India and China or by transferring sensitive technologies to these countries.

7. Partnership trust and relationship development

100% of firms interviewed expressed the importance of partnership trust and relationship development.

60% of firms interviewed have had a presence in China and India for over 10 years and have long established partnerships with customers, joint-venture partners and enforcement agencies. Trust and relationship development is seen in both markets as a key factor to ensuring maximum protection of IP. This ensured that the partners

would not leak trade secrets or break confidentiality agreements and this is viewed as an important factor to mitigate against piracy or counterfeiting. Partners in both China and India who were trustworthy could develop relationships with IP enforcement agencies, effect enforcement action, and assist in ensuring the protection of the Principal's IP.

8. Anti-corruption policies (state and investor)

100% of interviewees stated that a significant barrier in both China and India to enforcing and protecting IP is because of the extent of corruption in both markets. This group recognised that corruption occurs at high levels within the local authorities and administrative agencies of the state. This group also stated that corruption practices often extended to local authorities protecting the pirates and counterfeiters who are often located in rural or economically undeveloped communities. All firms interviewed stated that the practice of corruption within India and China is the single greatest factor that impacts on the ability to protect and enforce IP rights, and that the governments of India and China need to operate a zero-tolerance approach to corruption, to enable their IP frameworks to work.

100% of interviewees recognised that IP legislation is more strictly enforced in the more developed and industrial locations in both China and India, but less effectively enforced in the rural and less industrialised communities.

93% of firms stated that they perceived corruption in China occurring to a greater extent than in India. This group stated that the reasons for this are due to differences in culture, the perception of IP by individuals in society, the existence of corruption at higher levels than in India, and the lack of state control of corrupt practices.

80% of firms stated that they expected the IP frameworks in both India and China to improve within the next 10 years, because of the way the countries are developing themselves, and the need of their own industries to protect IP.

100% of firms interviewed stated that they have a zero-tolerance approach to bribery and corrupt practices in China and India, and that such practices must be eliminated from any IP enforcement or remedial action process.

9. Cultural differences (state, businesses and communities)

90% of firms stated that understanding the legislative framework and being able to take enforcement action, in India is easier than in China. This group recognised that there are marked cultural differences between the UK and China.

10. Inability to measure financial loss due to piracy

90% of firms interviewed stated that they were certain that counterfeiting of their products was taking place, definitely in China and to a lesser extent in India. No firm had quantified this financially in terms of the cost of loss of business or market share. 60% of this group stated that quantifying this loss would be virtually impossible to do and were unsure how this would be quantified. This group stated that the cost of investigating the financial loss would outweigh the benefits. 40% stated that although difficult, this financial loss should be quantified.

11. Inability to measure loss of market share due to piracy

90% of firms stated that they have lost market share due to piracy, but had not quantified this. Reasons stated were similar to 10 above. This group stated that provided the market in China and India remains profitable and lucrative, the cost of assessing the loss of market share would outweigh the benefit.

12. Incentive to Commence Proceedings

90% of businesses investing in India and China stated that they would not even consider enforcement or court action because it is not economically viable. Businesses are aware that infringement is happening, but are not taking action under the current legislative climate. Those businesses who have taken action, have had very limited success and are either not aware of the final outcome after reporting an infringer, or they are aware that an infringer has moved on and set up elsewhere. In some cases businesses were reluctant to take action because it just 'moved the problem on to a competitor'. Businesses generally felt that the IP situation was improving, slowly, more so in India than China. However, they would need to be on a par with regimes in the West to even consider taking action. It also considers the experiences of businesses who have considered enforcement and the barriers and activities that take place that make taking action appear to be impossible.

13. Cost and speed of enforcement

100% of interviewees stated that confirmed that the cost and speed of enforcement was completely prohibitive to taking action. The length of time, and the uncertain outcome in most cases, ruled out taking enforcement action. This is the case for both China and India, although India is perceived as being slightly better than China.

14. Understanding the process

Interviewees felt that the process for enforcement in India was clearer and that judges had a legal training similar to the British legal system. The laws and legal processes in India are constructed similarly. The process in China is very unclear, partly because of the levels of corruption, which could make the process much quicker, but all firms had strict corporate policies concerning anti-corruption practices.

15. Transparency and communication of decisions

100% of firms stated that in both India and China the process for IP enforcement is not clear and the outcomes are often unsupported in terms of the reason behind the decision. Decisions are made without stated reasons and decisions can be changed or overturned without a clear and stated reason. The basis for decisions is not clearly stated, but given as broad, general statements which do not assist with lodging an objection or appeal.

6. Conclusions

This paper proposes that firms are taking strategic decisions to enter both China and India, despite their perceptions that their IP is effectively unenforceable due to cost, time and unsatisfactory outcomes. Firms are using alternative location and sales strategies to mitigate against the occurrence of counterfeiting activity, or the inability to take enforcement action. Findings from this case study research show that despite IP and patent regimes strengthening in India and China, businesses are using 'value-added' market entry strategies to protect market share as a more effective mechanism than relying on the country's IPI. Indications show that businesses are still reluctant to provide added-value through investing R&D or sensitive technologies. This is the case for both markets.

Findings show from this small sample, that if a firm finds the right business partner, they are more likely to invest in either China or India. China is perceived as a more risky and difficult market, but this depends partly on the industry, and the market structure. Firms that do invest in China and India seem to do so irrespective of the IP framework. Their decisions to invest are based on other factors and economic motivators which are measured against the IP risk factor. Firm's who do invest in China and India, do so in a more considered and measured way, by finding the right market entry model that minimises loss of market share, through 'value-added' sales and marketing.

Table 1 (experience-based indicators)

Legislative Framework	Fact-based Indicators *	Experience-Based Indicators	
National Laws	Term of Patent protection	1	Knowledge of existence of IP Laws
TRIPS	Use of compulsory licences in Patented products	2	Access to Comprehensive & Reliable Information
PCT	Levels of Piracy	3	'Time-lag' factor
Membership of International Conventions	Effective Remedies	4	'Bad-Experience' Factor
	Effective Enforcement	5	Likelihood of investing sensitive technologies
	Strength of Exclusivity	6	Ability to provide 'value-added' product or service
	Ban on Parallel Imports	7	Partnership trust & relationship development
	Policing Actions	8	Anti-corruption policies (state and investor)
	Imprisonment	9	Cultural differences (state, businesses and communities)
	Free use of Brands in Packaging	10	Inability to measure financial loss due to piracy
	Loss of Protection	11	Inability to measure loss of market share due to piracy
	Revocation of Conditions	12	Incentive to commence proceedings
	Enforcement Mechanisms	13	Cost & speed of enforcement
	Duration of Protection	14	Understanding the process
	Adequacy of Court Systems	15	Transparency & communication of decisions
	Administration Procedures		
	Appeal Process		
	Public Commitment		

Sources: Pugatch 2006, IT and Pharmaceutical Indices; Ginarte & Park (1997); Lesser (2001); Ostergard (2000)

Table 2 (company matrix)

Company ID	Number of Employees	Turnover Band	Industry Sector	Department Interviewed	IP Protected	IP Market I = India C = China	Type of Investment *	Investment Market I = India C = China	
A	0-100	0-5m	Software	Management	Business Methods Trade Marks	I I I	Production Distributor License Agreement	I I I	
B	5000+	5b+	Pharmaceuticals	R&D, Legal (Patents and Trade Marks)	Patents Trade Secrets Business Methods Trade Marks	CI CI CI CI	Manufacturing R&D Facilities	CI CI	
C	1000-5000	500-1b	Engineering	Management	Patents Trade Secrets Business Methods Trade Marks	CI CI CI CI	Exporting Branch Office Processing Manufacturing Equity JV W/o Subsidiary Distributor License R&D	CI CI CI CI C I CI CI CI	
D	500-1000	5m-500m	Engineering; Environmental	Management, Legal	Patents Trade Secrets Trade Marks Registered Designs	CI CI CI CI CI	Exporting Branch Office Processing Manufacturing Distributor License R&D	CI CI CI CI CI CI I	
E	0-50	0-5m	Software	Management	Trade Marks	I	Exporting Distributor License	I I I	
F	1000-5000	500m-1b	Electronics	Sales	Patents Trade Secrets Business Methods Trade Marks	CI CI CI CI	Exporting Branch Office Equity Joint Venture Wholly Owned Subsidiary Distributor	I I I I I I I	
G	100-500	5m-500m	Chemicals	Management	Patents Trade Mark	CI CI	Exporting Branch Office Assembly Manufacturing Subsidiary Distributor	CI C C C C I	
H	100-500	5m-500m	Engineering	Production, Purchasing	Patents Trade Secrets Trade Marks	CI CI CI	Exporting Branch Office Processing Manufacturing W/o subsidiary Distributor License	C C C CI C C CI	
J	100-500	5m-500m	Construction	R&D	Patents Trade Marks	C CI	Branch Office Manufacturing W/o subsidiary	C I CI	
K	100-500	5m-500m	Construction	Legal	Patent Trade Secrets Trade Marks	CI CI CI	Exporting Assembly Manufacturing Joint Venture Distributor License	CI CI CI C CI C	

Note: Types of Investment are either investments that firms are currently making, or would consider making in the markets specified

Appendix 1

India and China Economic Data:

	China	India
Population	1,321,851,888	1,129,866
Population Growth Rate	0.606%	1.606%
Government Type	Communist State	Federal Republic
Religions	Atheist (Daoist, Buddhist)	Hindu, Muslim, Christian, Sikh
Literacy	90.9%	61%
Legal System	Civil Law	English Common Law
GDP (PPP)	\$10.17 trillion	\$4.156 trillion
GDP growth rate	10.7%	9.2%
GDP by sector	11.9% agriculture 48.1% industry 40% services	19.9% agriculture 19.3% industry 60.7% services
Labour force	798 million	509.3m
*FDI Inflows 2005	US\$72,406million	US\$6598million

Sources: CIA World Factbook

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