India Inc Going Global: Indian IT Industry Internationalization Model

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Abstract :

During last two decades, Indian IT firms' efforts for sustaining a competitive position and profit growth in the rapidly expanding global marketplace has become evident. One of the major strategic planning undertaken by Indian IT firms is the expansion of their activities outside domestic market. Political, legal, financial, economic and cultural forces in the host countries influence these ventures. This paper attempts to develop a model to explain the differences in foreign market entry mode decisions between industries. Foundations of our model are developed on the basis of the relative degree of potential strength of the company, the risk responsiveness of internationalization, and effects of industry use of company strength potential know-how internally or externally. In addition, the analysis contains a detailed description of the findings on IT industry, and summarizes the model with combined results. Finally the conclusions are presented to summarize the work, the practical implementations and suggestions for further research.

Introduction

Globalization in Indian Inc scenario

Indian industry in the search for new markets, has displayed a scintillating spirit and zeal. Over the past eight months, India Inc has acquired a slew of foreign companies across sectors in their quest to go global. A large number of reasons could be attributed to these changes. One of the reasons in these changes in the Indian market scenario is Globalization, and the subsequent and resulting explosive growth of global trade and the international competition.

For last few years, India Inc are venturing abroad in software, biotechnology, automotive and oil sectors.

Companies in the IT sector are often small entrepreneurs with high CSP with small financial resources and often low international experience. In this sector the sole venture is often very expensive and it is assumedly not the most common entry mode in this industry. Large financial resources are invested

in the development of new and technology advanced products (Anderson and Gatignon, 1986). Companies can choose an entry mode with lower risk to compensate the risk in R&D. The companies also have option to use the knowledge both internally or externally. The products often have a high value to weight ratio which favours an exporting mode. However, they also often have patents on their products which make it possible for them to license it.

A NEW APPROACH- THE INDIAN IT INDUSTRY INTERNATIONALISATION MODEL:

The industry internationalization model has three parts:

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1. Company Strength Potentials(CSP)
2. How companies use their company strength potentials
3. Internationalization Risk Responsiveness

Research study believes that these combined factors can indicate which mode of entry an industry would prefer. This paper will analyse how internationalization risk factors and CSP affect the entry mode decision in the IT industry. A framework for explaining choice among exporting, licensing/franchising, joint venture, and sole venture modes has been developed(see figure 1).

Company strength potentials (CSP): All companies have specific assets. It could be know-how, foreign experience, brand name, unique & patented products and so forth, which is something the company want to control. However, among industries the specific asset may not be that important due to difference in the level of technological requirements. For instance the healthcare and IT industry could be seen to have a higher specific advantage and knowledge since it demands higher level of know-how, experience and research and development to succeed in the industry. While in the transport industry , all that is needed to start up a business is a assumedly lorry. Companies in the healthcare and IT sector are much more technologically advanced, demand more resources and are more difficult to set up.

Company'S strength	Firm size Products capability Distribution capability Promotion capability Foreign experience Branding capability

International Risk	Country Risk Location uncertainty Demand uncertainty Intensity of competition

CHOICE OF ENTRY MODE

EXPORTING

LICENSING/FRANCHISING
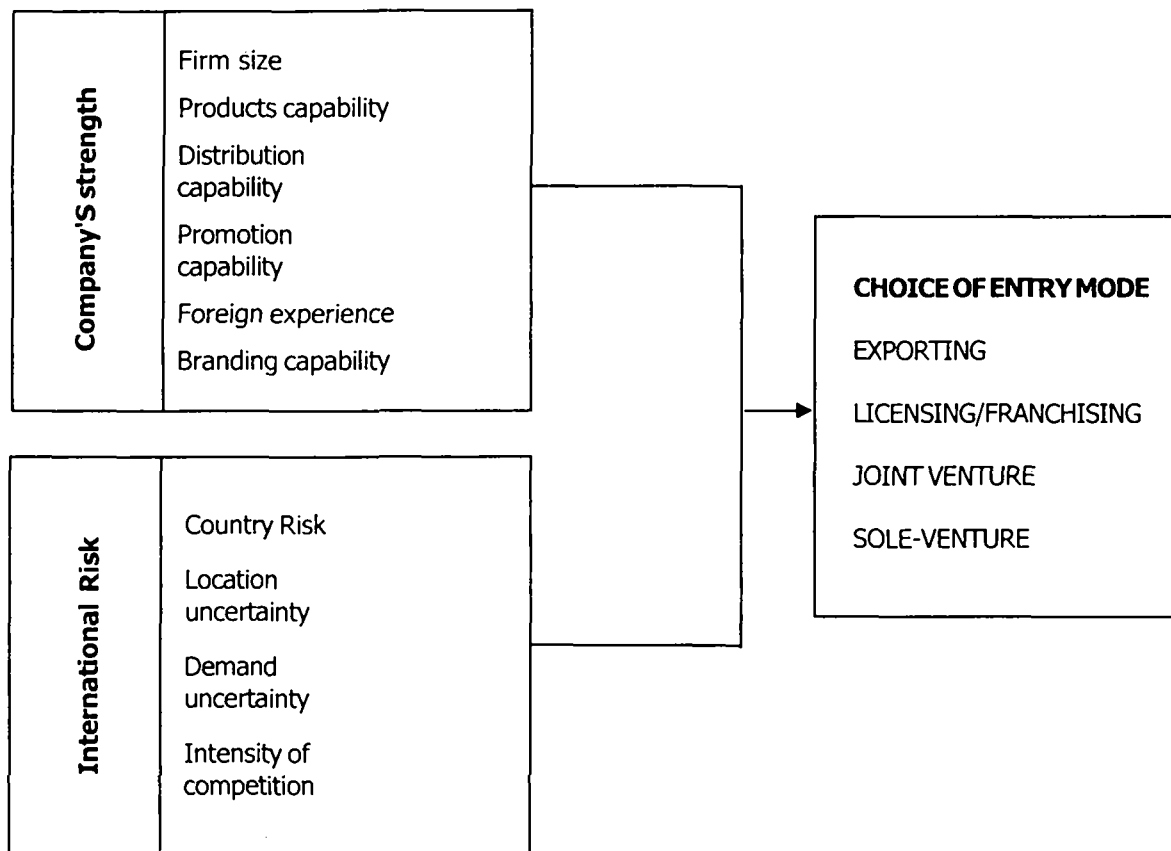
JOINT VENTURE

SOLE-VENTURE

Figure 1 : Conceptional Framework of Entry Mode Choice of IT Industry.
Source : Author Estimation

Internal / External use of CSP: The company could use the CSP internally and keep the knowledge within the company, it can decide to use externally and let the knowledge be used by others. When the company chooses to use the knowledge internally, it has again two options to enter into foreign market. The company could choose an export entry mode and supplies all the markets from one centralized location. The option minimizes both risks as well as commitments. The other option is to use an investment entry mode, and choose between Greenfield investment and acquisition. In Greenfield mode the company starts up a new subsidiary , and in acquisition mode the company acquires an already established company or facilities. The Green field investment entry mode requires much more financial resources, it involves the highest risk but it gives the company total control and could lead to higher profits.

When choosing to use knowledge externally the companies use a contractual entry mode: either license or franchise. Licensing mode allows the company to enter a new market without risks and still increase profits. Franchising works in a similar way as licensing but involves higher control for the franchiser. The franchisee must follow rules and protocol how to do business, and the franchiser enter a new market with higher risk than licensing and more control. A joint venture is another common mode entry. In this mode, a company uses both CSP externally and internally in some degree.

Internationalization Risk Factors:

Country Risk: When country risk is high, existing works indicate that an MNC would do well to limit its exposure to such risk by restricting its resource commitments in that particular national domain (Kobrin 1983).

Location Unfamiliarity: Previous studies argue that the greater the perceived distance between the home and host country in terms of culture, economic systems, and business practices, the more likely that MNCs will shy away from direct investment in favour of licensing or joint venture agreements. This is because in these modes MNCs' flexibility to withdraw from the host market remains open when they are unable to comfortably acclimatize themselves to the unfamiliar setting (Vernon, R. 1974).

Demand Uncertainty: When future host country demand for an MNC's product is uncertain, existing works indicate that an MNC may be unwilling to invest substantial resources in the country to effectively adjust to oscillating conditions and to enhance its ability to exit the market without incurring substantial sunk costs should demand fail to reach a significant level (Yang-Ming Chang, 1990).

Intensity of Competition: When the intensity of competition (Porter, M. 1989) is high in a host market, existing works assert that firms would do well to avoid internal organization; as such markets tend to be less profitable and therefore do not justify heavy resource commitments.

The industries are analyzed by using table 1

Table 1: Basics of the Industry International Model

Influences / Mode of Entry	Company strength potentials	Internal / External use of CSP	Internationalization
Investment mode	Existing	Internal	High
Export mode	Existing	Internal	low
Contractual mode	Existing	External	moderate

Source : Author Estimation

Company strength potentials

Internal use of ISP   External use of ISP   Internal use of ISP
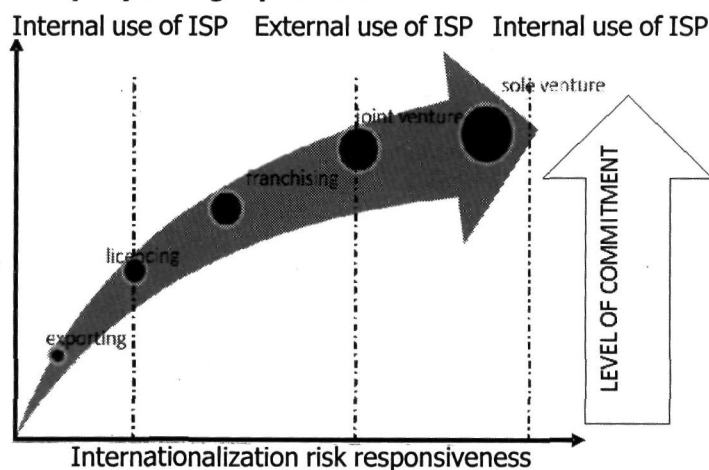
Figure 2: The IT Industry Internationalization model
Source: Author Estimation

OBJECTIVES:

Main objective of the study is to build a formalized integrated alternative model for global entry by Indian industry. In order to achieve this goal, this research focuses on the following pivotal research questions:

1. What models or theories are used to explain the choice of foreign market entry mode?

2. Which factor is most determinant for companies' choice of entry mode?

3. How do these factors affect companies in different industries?

4. Are there any differences in the industries' choice of entry mode?

5. Can a theory or model be created that describes industries choice of different modes of entry?

HYPOTHESES

1) **H0:** Other things being equal, when CSP and country risk is high/low, then companies in the IT sector will favour internal know-how entry mode that involve relatively high risk and commitment.

2) **H0:** Other things being equal, when CSP and country risk is low/high, then company's in the IT sector will favour internal know-how entry mode that involve relatively low/ moderate level risk and commitment.

3) **H0:** Other things being equal, when CSP and location uncertainty is high/low, then company's in the IT sector will favour internal know-how entry mode that involve relatively high risk and commitment.

H0: Other things being equal, when CSP and location uncertainty is low/high, then company's in the IT sector will favour external know-

1) how entry mode that involve relatively choose low risk and commitment.

2) **H0:** Other things being equal, when company's CSP and demand uncertainty is low/low, then company's in the IT sector will favour external know-how entry mode that involve relatively low risk and commitment.

3) **H0:** Other things being equal, when company's CSP and demand uncertainty are high/high, then company's in the IT sector will favour internal know-how entry mode that involve relatively high

risk and commitment.

4)   H0: Other things being equal, when company's CSP and competition intensity is high/ high, then company's in the IT sector will favour external know-how entry mode that involve relatively moderate risk and commitment.

H0: Other things being equal, when company's CSP and competition intensity is high/low, then company's in the IT sector will favour internal know-how entry mode that involve relatively high risk and commitment.

SAMPLING DESIGN

Sample selection

In order to accomplish the desired results we chose 143 companies registered with STPI in 2008-09 as our initial sample. During a period of time (i.e 2004-2008) when many larger businesses in the India were undergoing considerable downsizing, the business in the study had increased the number of their employees with 76 percent reported employing more than 100 worker nationwide in 2008 versus 66 percent in 2004. Similarly for company's annual sales number had increased significantly with average reported annual sales more than doubling by 2008.

Table2: Revenue distribution of Nasscom member firms (n = 415) by geographic region

Region	Revenue($M)	Number
Mumbai & Pune	597.5	107
Bangalore	323.6	84
New Delhi-Noida & Gurgaon	285.8	105
Chennai	130.9	34
Hyderabad	62.21	21
Others	57.6	64

Source: CMU Software dataset

Table 3: sample profile

No of Employees	
100 or Less	41
101 to 1000	56
Over 1001	46
Total	143
Company's Age	
10 or less	62
11 to 20	34
21 and above	47
Total	143

International experience	
Less then 3	27
4 to 10	84
Over 10	32
Total	143
Annual sales	
Less then $10mil	33
$11mil to $500mil	62
Over $500mil	48
Total	143

Source: field survey

Response Rate

Our sample consisted of companies that are registered with STPI in 2008-09 from various parts of India. We selected 143 IT companies from Bangalore, Chennai, Pune, Delhi, Calcutta, and Mumbai region as shown in table 3. We sent e-mail to each of those companies, asking them to participate in our survey.

14 of the e-rnails did not reach the intended address resulting in a delivery notification (failure) which means that the e-mail did not reach the intended address. 129 e-mails reached their intended address. Six of the firms *(4.6%)* that answered the e-mail said that they did not want to participate in the survey. We got 83 participants answers on our questionnaire resulting in a response rate of 64.3%. (See table 4 below).

Table 4 : Results of the questionnaire

	Non-respondents	Answered that they would not participate in the survey	E-mail delivery failure	Participations	Total number of E-mail	Number of E-mail receives
Number of firms	26	6	14	83	143	(143-14)= 129
Percentage of total sample	20.0%	4.6%	9.97%	64.3%	100%	90.2%

Source: Field survey

As shown in table 5, a large number of explanations offered by Indian industry internationalization might be a combination of several market driven factors such as perception of the local market being too small, or stagnant, or declining, or dominated by large, multinational firms. Several of the firms produced innovative, technology-intense products that had relatively short life cycles and faced potentially intense competition from multinational firms.

Table 5: Most frequent explanation for Going International (Multi choice)

Motives	Number Of Firms	percentage
Needs for new knowledge/technology	24	16.7
Exploitation of new market	22	15.3
Acquiring information in local market	9	0.06
Development of global network	19	13.2
Competition with foreign firms	16	11.1
Needs of top management	12	0.08
Narrowness of domestic market	18	0.12
Client Fellowship	23	0.16

Source: field survey

Analysis of the material

The response rate of the survey was important when it came to analyze the questionnaire. Since the respondents became divided into subcategories we did not have enough data to analyze the questionnaire statistically. However, we calculated the mean value, median and standard deviation for the industry that had a higher response rate. Each company was analyzed separately by using three figures: the first figure shows all participants in the specific industry, the second figure is the industry internationalization model with clusters of the chosen entry modes and where the industry is located in the model, the third figure is the model again but this version is with each participating company located in the model depending on their result of the questions in the questionnaire.

Reliability

For research to be reliable the result of an operationalization will have to yield the same results during a re-test under similar conditions. To prove the reliability of the research a re-test would be necessary. In our Proposed research we asked questions about managers' thoughts about their industry. Final set of indicators used to measure each factors and cronbach's coefficient alpha for each scale are provided in table 6. As shown the coefficient alphas for all factors were above the 0.6 cut off point established here. In-fact they all either exceeded or came very close to 0.7 criterions for basic research. Hence reliabilities of these factors were judged to be sufficient for our study.

Table 6:Final indicators used to assess the following key entry factors

Factors	Cronbach,s alpha
Company's strength potentials • Products capability • Distribution capability • Promotion capability • Foreign experience • Branding capability	0.745

Internationalization risk

• **Country Risk** i) Political Instability ii) Economic risk iii) Cultural/legal risk	0.793
• **Location uncertainty** i) Prior experience ii) Perceived difference between host & home	0.7102
• **Demand uncertainty** i) Industry growth rate ii) Stage of industry life cycle	0.8149
• **Intensity of competition** i) Instability of market share ii) Number of existing competitor	0.6971
Firm specific know-how · Internal · external	 0.7531 0.7642

Source: field survey

The IT sector covers a number of businesses and is an extremely technology based industry. In table 7 below we can see what the IT firms answered in our survey. 129 IT companies, in which we argued that IT firms, should prefer to use their CSP internally and under control. In addition, the companies' answer on the most common way to use their CSP in the industry correspond relatively well with the actual entry mode. We proposed that it is important to be represented IT industry in the risky environment. When reviewing the result of the survey it is clear that this is an accurate assumption. A majority of the respondents answer that a high international risk responsiveness is significant to IT companies. From the result above it is also obvious that the number of employees in the company, has no influence on the entry mode decision.

Table 7 : Result from the IT Industry *

Com pany	Emplo yees	Internall/ External use of CSP	Degree of company's potential assets	Degree of international risk respon- siveness	Predicted entry mode	Actual entry mode
61	550	Internal	6	3	Export/Licensing	
	500	Internal	7	5	Export/Licensing	
	170	Internal	6	. 7	Export/Licensing	Export
	550	Internal	6	7	Export/Licensing	
	1300	internal	4	4	Export/Licensing	

43	70	External	5	6	Export/Licensing	EJV
	550	External	4	7	Export/Licensing	EJV
	105	internal	1	1	Export/Licensing	EJV/SV
	20	internal	7	5	Export/Licensing	EJV/SV
	95	Internal	5	6	Export/Licensing	EJV/SV
25	40	External	6	5	Export/Licensing	EJV
	15	internal	1	1	Export/Licensing	EJV/SV
	15	internal	6	2	Export/Licensing	Export
	31	internal	5	5	Export/Licensing	Export

Source: field survey
All these indicators were assessed on 7-point Likert-type scales.

From the 129 participants in the survey all but two answered that they believe it is important to have a medium or high degree of CSP. Eighty six out of 129 IT firms answered that they believe that high level of control entry mode and sole venture, would be most commonly used. The result fits our model in a good way.

Table 8: Statistical analysis of the IT industry

|	Degree of company strength potential	International risk responsiveness
Mean value	4.9	4.6
Median Standard	3.0	3.5
deviation	1.81	2.07

Source: field survey

Table 8 shows that the mean value and median of the degree of CSP is statistically high. This motivates the majority's decision to use the CSP internally. This also confirms our proposition. In addition the need of internationalization risk level is statistically high. This motivates the majority's decision to use a high commitment entry mode. However, there are seven companies that believe that export is the most common entry mode in the IT industry. This does not correlate with their perception about the existence of internationalization risk and their high CSP.

Following figure 3 depicts how different factors affect IT companies in the industry.

Company strength potentials

Internal use of ISP   External use of ISP Internal use of ISP
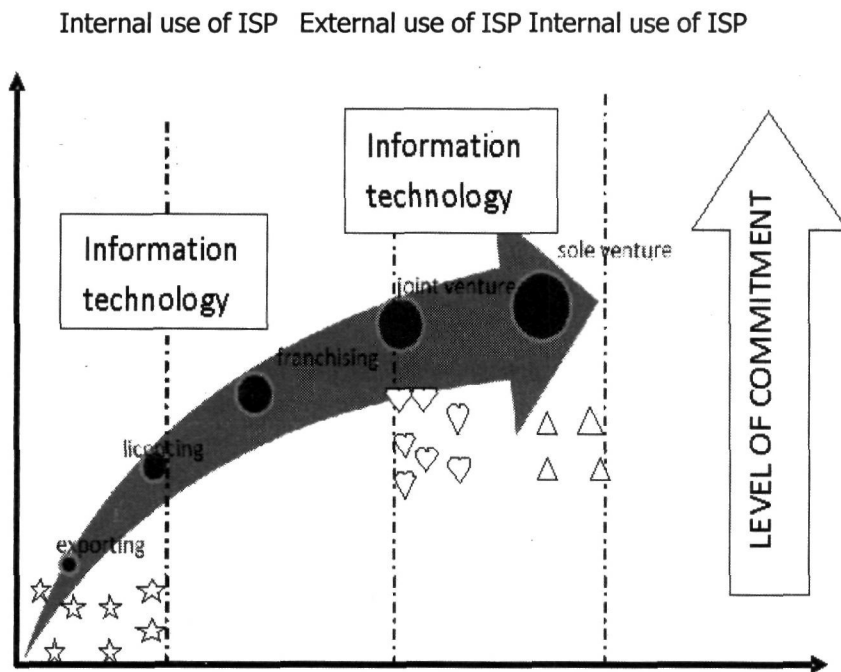
Internationalization risk responsiveness

Figure 3: The predicted/actual entry mode in the IT industry
Source: Author Estimation

☆ Export   ♡ : Joint venture   △ : Sole venture

Table 9: Entry mode classification accuracy level

			Predicted Entry Mode	
Actual group	**No of cases**	**Exports**	**Joint venture**	**Sole venture**
Exports	61	68.8%	31.3%	0.00%
Joint venture	43	10.5%	81.6%	07.9%
Sole venture	25	0.00%	23.1%	76.9%

Source: field survey

Table 8: provides the classification accuracy of the discriminate functions for the three distinct entry modes. Overall highest ratio was 76.0%.68.8% of the exports subsidiary group, 81.6% of the joint venturing group, and 76.9% of the sole venture group were correctly classified. All three individual group ratios met the criterion that a rough estimate of the acceptable level of predictive accuracy should be at least 25% greater than by chance (i.e, 33.3%,39.6%, and 27.1%, for wholly owned subsidiaries, joint venturing, and licensing, respectively). The results suggest therefore, that the discriminate functions performed well in classifying the three distinct entry modes.
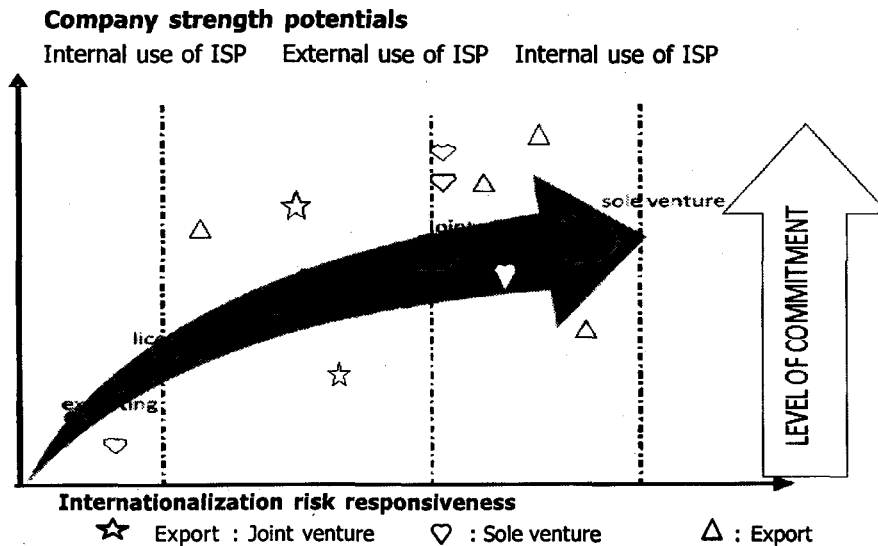
Our arguments that IT firms often are small and should favour a low commitment entry mode contradict the results of the survey. The big firms with many employees believe export to be the most commonly used entry mode. The small firms with fewer employees believe that a joint or sole venture is the most commonly used entry mode. This is a very interesting result that can be examined with further studies. If we look at the result from the survey we find that there are only three firms that do not believe internationalization risk to be important. The interesting thing about the answers of these three companies is that they all believed joint and sole venture to be the most commonly used entry mode(Table 10).

Table 10: Foreign Market Entry Mode and current main business mode

	Export	licensing	franchising	Joint venture	sole venture
Predicted Entry mode	96(67.1%)	—	—	58(40.5%)	35(24.4%)
Current mode	61(47.2%)	—	—	43(33.3%)	75(19.3%)

In the figure 4 we can see that 129 companies believe that the IT industry has high specific assets compared to other industries. We can conclude the analysis of the IT industry by noticing that the industry internationalization model work relatively well when it describes IT companies' entry mode. A majority choose an entry mode that matched their degree of CSP and their need of internationalization risk responsiveness. This can arguably be translated to that the factors in the model helps to explain IT companies' choice of entry mode

Company strength potentials

Internal use of ISP   External use of ISP   Internal use of ISP

Internationalization risk responsiveness

☆ Export : Joint venture   ♡ : Sole venture   △ : Export

Figure 4: The suggested/actual entry mode in the IT
Source: Author Estimation

Conclusion:

This paper analyses the internationalization and their choice of entry mode of companies, with the focus on Indian IT industry. This paper studies the most acknowledged theories on internationalization and then develop a statistically testable model. our model has been developed after consulting widely acclaimed Eclectic Paradigm as well all theories on internationalization. The model has been developed on the basis of explanatory factors such as degree of company specific assets, degree of risk responsiveness and how the company uses the firm strength potential. If a company has high asset strength potential and internationalization risk responsiveness on a new market, the company should select an entry mode with higher commitment so that the knowledge will stay within the company.

When a company has no need to use the CSP internally, it could use it externally through licensing or franchising mode. When internationalization risk representation is low, the company would prefer an exporting entry mode.

We conducted an internet-based mail-survey with purpose to see working of the model and how far the model capable of the entry mode decision of industries. Tests of hypotheses on industry internationalization model developed here indicate that these are applicable for some industries.

Finally the industry internationalization model can function as a guide for companies and people responsible for management of companies in industries explained in the model. In addition, this model is useful for making the choice of mode of entry. This one is also useful for academic review of industries mode of entry.

Limitation of study

Inter survey conducted in this study may have lost important information which could have been received when performing a deeper contact interviews. Our sample consisted of small and medium-sized companies on the Indian stock market. It could also be assumed that larger companies have another approach and thoughts about the entry mode decision in the industry. Inclusion of large companies

would have increased the response rate in each industry. This could have been a better statistical evidence for the applicability of our industry internationalization model.

Scope for Future research

* The scope of survey can be expanded by including both small, medium and large scale companies in the Industry

* Instead of internet survey in depth information on all aspects of entry mode can be collected through more deeper communication links. This will improve the quality of information.

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