Strategic Paths and Performance of Born Globals: A Study of Indian IT Firms

D. Karthik
Rajesh Upadhyayula
Rakesh Basant

W.P. No. 2015-03-36
March 2015

INDIAN INSTITUTE OF MANAGEMENT
AHMEDABAD-380 015
INDIA

STRATEGIC PATHS AND PERFORMANCE OF BORN GLOBALS: A STUDY OF INDIAN IT FIRMS

D. Karthik[1]
Rajesh Upadhyayula
Rakesh Basant

Abstract

Extant literature suggests that post entry internationalization strategies and performance implications of born globals is an under-researched area. In this paper, we examine the internationalization strategies of born global firms and performance implications thereof through strategic group analysis of hand collected data from Indian information technology firms. We identified four distinct strategic paths followed by born global firms. While some internationalization paths have performance differences others show equifinality. These performance differences primarily stem from the choice of degree of commitment and scope of internationalization. We also find that the nature of services and ways of mobilization or deployment of resources explain the different internationalization paths and consequently performance. Our paper contributes to the theory on born globals by using strategic lens to explain the internationalization paths and their performance implications. Further, our paper also provides distinct insights to practice by charting internationalization paths for an emerging born global firm..

[1] Assistant Professor, Indian Institute of Management Ahmedabad, Associate Professor, Indian Institute of Management Kozhikode, Professor, Indian Institute of Management Ahmedabad respectively. Corresponding author: dkarthik@iimahd.ernet.in

STRATEGIC PATHS AND PERFORMANCE OF BORN GLOBALS: A STUDY OF INDIAN IT FIRMS[2]

Introduction

Extant literature has shown that the internationalization patterns of born global firms (BGFs) or international new ventures (INVs)[3] are quite different from those of traditional multinationals. While the traditional internationalization theories suggest firms go global only after they have proven themselves in the domestic market, the born globals internationalize soon after their inception (Oviatt, McDougall 2005). Early research on BGFs focused on the initial stages of internationalization (Oviatt, McDougall 2005). The focus has ranged from triggers for early internationalization (Hennart 2014) to resources (Ruzzier, Ruzzier 2015) and performance impact of internationalization (Almodóvar, Rugman 2014). However, there is limited research on subsequent strategies of BGFs as a recent study by Prashantham and Young (2011) has highlighted. Further, research on growth and its performance implications is less developed (Sleuwaegen, Onkelinx 2014). As far as theoretical lens are concerned, the born global phenomenon has been predominantly examined from entrepreneurship and learning/knowledge perspectives. Studies analyzing the determinants of early internationalization have argued that typically new ventures lack resources and therefore primarily rely on the entrepreneur's characteristics and networks for internationalization. The fallout of this approach has been neglect of the role of resources and hence the strategic dimension of born globals. A few studies that have examined the strategies of BGFs have considered internationalization commitment only as geographic scope (Sleuwaegen, Onkelinx 2014) and have ignored the performance implications of these strategies (Hashai 2011). In our paper, we address these lacunae by identifying patterns of internationalization of BGFs in the post-entry phase using a strategic perspective. We undertake a strategic group analysis of BGFs to examine (a) if there are any differences in the strategic decisions across firms and (b) if there are any implications of these strategies

[2] The authors wish to thank Research and Publications committee at IIM Ahmedabad for funding the digitization of NASSCOM Data
[3] We use 'born global' for all such firms as the terms "Born Globals" are synonymous with INVs and "global start-ups".

on the performance of firms. The strategic group approach not only helps us understand why all born globals do not follow the same strategic path, but also provide insights into the strategic trade-offs that different groups of BGFs face after internationalization. Our contribution to born global literature is both theoretical and empirical. Theoretically, the strategic lens helps us understand the role played by the firm resources and strategic choices in shaping the subsequent development of BGFs and how these firms use the learning to accumulate resources. Empirically, the strategic lens helps in identifying different paths that the BGFs can take to develop and deploy unique resources and the financial implications of such choices.

We have used the Indian information technology (IT) industry as the context for doing strategic group analysis of BGFs. Past studies have found that the Indian IT industry has significant presence of BGFs (Contractor *et al.* 2005; Paul, Gupta 2014). We find that there are four strategic groups and the internationalization paths employed as well as performance of these groups are different. Further the four strategic groups exploit resources and process based capabilities differently and these impact the nature of internationalization paths employed.

This paper is structured as follows. In the next section, we review the literature on born globals and strategic groups. In the subsequent section, we provide a description of Indian IT industry and how firms in this industry can be characterized as BGFs. This is followed by a description of our data including selection of strategic variables and methods employed for identifying various strategic groups. Finally, we report the results of strategic groups along with a discussion of theoretical and managerial implications of our findings.

1. Review of literature

1.1 Early Internationalization - Antecedents and Strategic Paths

Rennie (1993) from Mckinsey & Co. coined the term "Born Globals". BGFs are defined as a group of firms, which internationalize (i.e., high proportion of sales to export markets) within a few years of their establishment (Knight, Cavusgil 2005). Multiple explanations have been proposed for the rapid internationalization of BGFs. While traditional theories of internationalization posit that firms internationalize through various stages (Johanson, Vahlne 1977), BGFs internationalize soon after their inception. The stage wise process of internationalization was explained through the liability of unknown foreign markets which results in firms taking time to learn about these markets. Contesting these arguments, recent studies on BGFs suggest that advances in information, production, and communications technologies have led to decrease in costs of conducting international business, leading to rise of born-global firms (Knight, Cavusgil 2005). However, this explanation was also contested by some researchers who argue that all firms across sectors, markets and countries or size do not internationalize rapidly despite the advances in information, production and communication technologies (Griffith *et al.* 2008). The consequent search for additional reasons for the early and rapid internationalization of BGFs has identified limited domestic demand (Bell *et al.* 2003) and homogenization of customer needs as important factors. Further, Contractor *et al.* (2005) find that founders' international experience and the associated well developed networks of contacts due to their prior international experience trigger early and rapid internationalization of BGFs. Kumar (2012) however argued that the background and experience of founders are not sufficient for success of BGFs and internal development of resources and capabilities by these firms are critical. In their seminal paper Fernhaber *et al.* (2007) argued that the nature of the industry also influences BGFs and these are likely to be found in emerging industries rather than mature industries.

While most research in this area has looked at the antecedents to internationalization, few studies have focused on the strategies or paths taken by born globals. Lopez *et al.* (2008) have shown in their study of Costa Rican software companies that there are indeed very few born globals. They coined the term "born regionals" and argued that most firms actually follow a gradual process of internationalization by targeting neighboring countries. Sluewagen and Onkylinx (2014) show that born globals adopt a sprinkler strategy viz., show greater commitment to a wide variety of markets during their internationalization approach. This approach results in greater as well as continued exports over time. They find that unlike global start-ups, regionally focused start-ups adopt a waterfall strategy viz., show a credible commitment only towards a limited number of markets. Although they measure commitment in terms number of countries firms export to, others (e.g. Gaur *et al.* 2014) argue that the degree of commitment may vary across firms and overtime. Internationalizing firms increase their commitment by opening up operations in foreign countries although they could also internationalize by just exporting during the initial time period. In this study, we emphasize this distinction to differentiate between firms exporting to a number of regions and firms having branches in foreign countries.

Few studies have explored differences in strategies within BGFs. Hashai (2011) shows that the BGF's internationalize sequentially either through geographic expansion followed by foreign operations or vice-versa. BGFs also do not internationalize simultaneously across both dimensions. Knight and Cavusgil (2005) developed a taxonomy of BGFs by examining the linkages between firm orientation, strategies and international performance. Their results indicate that technological leadership and entrepreneurship orientation affect strategic choices of BGFs. Firms with both technological leadership and entrepreneurship orientation can follow an integrated strategy whereas firms with technological leadership would adopt the differentiation strategy and firms with entrepreneurial orientation adopt a cost leadership strategy. While Hashai (2011) has highlighted the dimensions of internationalization, Knight and Cavusgil (2005) highlighted the strategic dimensions. We believe that in order to understand the strategic paths fully, the strategic and internationalization dimensions need to be studied together.

Moreover, our understanding of the performance implications would be incomplete if the complementarities between these dimensions are not examined. We now turn to the approach of strategic groups which can help us in combining multiple elements of a firm's strategic choices.

1.2 Strategic Groups

Our main research question is to identify different strategies followed by BGFs. Strategic group analysis has been used in the literature to identify dissimilarities in competitive strategies and performance differentials between firms within an industry. Thomas and Pollock (1999) argue that in a strategic group, firms follow similar strategies to achieve similar outcomes. A Numbers of studies have examined the existence of strategic groups in a variety of industries in the developed economies (*cf*. Chittoor, Ray 2007). However, only a few studies have investigated strategic groups in the context of internationalization of firms (Zeng *et al.* 2010). While examining internationalization pattern of emerging market firms, Chittoor and Ray (2007) found that the internationalization paths differ significantly across Indian pharmaceutical firms. In a similar study of Chinese firms, Zeng *et al.* (2013) found that Chinese firms differ with respect to reliance on exports and foreign direct investment. Accordingly, it is increasingly seen that strategies followed by internationalizing firms differ significantly.

The literature discussed above brings out a variety of facets that an internalization strategy might entail and may help distinguish between different strategic groups in a meaningful manner. Following Hashai (2011) two of these facets seem salient: the geographical scope (or the spread of export regions) and the commitment or extent of foreign operations. The former can also be called the *breadth* and the latter *depth* of internationalization and both have been measured in a variety of ways. Are the depth and breadth of internationalization pursued sequentially or simultaneously? How are these internationalization paths linked to other strategies of the firm. Answers to these questions would help unravel the existence and nature of strategic groups in the context of BGFs in the Indian IT sector.

2. Methods

2.1 Setting – The Indian IT industry

The Indian IT industry is an interesting backdrop for the study of internationalization paths of BGFs. Firstly, the Indian IT industry is considered as a born global industry by a number of studies (Contractor *et al.* 2005; Paul, Gupta 2014) as most firms exported since inception. Secondly, IT industry is also a knowledge intensive service industry which has not been extensively studied in the literature on early internationalization (Hennart, 2014). The Indian IT industry is USD 118 billion in 2014 with more than 70% of these revenues coming from exports. The industry forms a significant part of the total exports from India employing more than 3.1 million in its workforce. The industry share of the global outsourcing market is at 55% (NASSCOM 2014). The flow of human capital and knowledge capital across the globe makes it an interesting setting for examining the strategies of BGFs.

2.2 Research Method

We employed strategic group analysis to identify common patterns in strategies of internationalizing IT firms. In line with the same, we used the technique of cluster analysis for the year 2002 to identify the strategic groups in the IT industry. We did this for two reasons; firstly, the IT industry significantly expanded after liberalization in 1992. However, exporting of IT services became prominent after 2001-02 only. Secondly, our sample time period helps us avoid firms which entered during the dot com period.

2.3 Sample

The data for this study is obtained from directories published by NASSCOM. We digitized the 2002 edition of the directory published by National association of software and service companies. The directory collates the results of a survey conducted by NASSCOM of its members who constitute over 90% of the revenues of the IT industry. The data from these NASSCOM directories was used in a number of studies (*cf.* Lamin 2013).

2.4 Selection of Variables

Consistent with prior studies on internationalization of Indian IT firms we have selected variables that capture the strategic intent of the IT firms (Miller, Friesen 1986). We ensured that all these variables can be measured for each firm in the sample, influences the strategy of the firm and is a result of a decision that the top managers made.

2.4.1 Dimensions of Internationalization

Number of regions exported: NASSCOM directories provide information on the foreign markets served by each firm. While some firms provide information on the individual countries / markets, a significant number provide information on the geographical regions targeted such as Western Europe, Asia Pacific, etc.). Similar to other studies (Lamin 2013), we classified the target markets into various regions following classification provided by the United Nations Statistics division. This variable captures *geographic scope or breadth of internationalization.*

Number of Foreign Branches: Additionally, NASSCOM directories also indicate the presence of firms through foreign branches in various countries. We expect that the firms locate branch offices to indicate greater intent to export and deepen their internationalization reach in comparison to firms who just report target markets for export. Past studies have argued that setting up a foreign branch involves higher *commitment* than exports since it involves investing more resources (Gaur *et al.* 2014). In this study, we use the count of foreign branches that captures the *extent of foreign operations*, as an indicator of the *depth of internationalization* or its *internationalization commitment*. In addition, setting up of foreign branches also implies that the firm would have the ability of delivering services from a variety of locations across the globe (Global Delivery Model) reducing thereby the risk for the client seeking delivery of particular services.

2.4.2 Services offered

Number of Horizontals: Every year, NASSCOM sought specialization or services offered by IT firms for its offshore clients. Studies have shown that such *service diversification* affects performance outcomes for firms in the IT industry (Gao *et al.* 2010; Karthik, Upadhyayula 2015). Similar to these studies, we have considered the number of services offered by a firm as a key strategic variable.

Percentage of High value services: The wide array of services provided by an IT firm vary in terms of value they provide to the clients. Firms make a choice of providing high value services or low value services depending on the nature of resources / capabilities available with the firm. Hence, proportion of high value services is a choice made by the firm depending on the nature of resources or capabilities. Each of the services were classified into low and high. The high valued services are those services which would possess aspects such as design of the software service whereas any service which involves coding, entry, etc. is classified as low end services.

2.4.3 Domestic location choices

Cluster presence: Clusters provide firms with key resources that affect their performance. A number of studies have shown the effect of firms' presence in cluster on performance outcomes. Consistent with previous studies (Gao *et al.* 2010) we have also considered the firm's presence in Bangalore as cluster location. Similar to these studies, firm's presence in a cluster is considered as one of the key variables influencing the internationalization of Indian IT firms as well as performance.

Number of domestic branches: Similar to clusters, locations also offer diversified resources. Firms extend their operations across multiple locations either to access markets or resources or for business continuity planning. Hence, firms' choice regarding locational presence through multiple branches (*domestic locational diversification*) helps in accessing resources.

2.4.4 Process capability

Certification: Gao *et al*. (2011) have shown that firms signal quality resources or capabilities using independent certification mechanisms. The ability to deploy resources may be reflected by a good certified process. Some of the widely accepted certification standards for IT service firms include ISO and CMM. Following Lamin (2013), we consider a firm certified if it has CMM or ISO certification. Certification takes a value of 1 if the firm has either CMM or ISO certification.

3 Results

3.1 Internationalization paths

The most widely used technique for strategic group analysis is Ward's method of cluster analysis. However, some of the variables we have chosen are categorical in nature and Ward's method can be used only for continuous variables. Amongst the variables listed above, firm's presence in Bangalore (cluster) and certification (CMM/ISO) are categorical in nature (see appendix 1 for descriptive statistics). Hence we used a two-step clustering approach that allows cluster analysis when data has both categorical and numeric variables while adopting a numerically based classification technique (Norusis 2012). From our analysis, we found that the ratio of distance measures is highest for a four cluster solution. Accordingly we identify four distinct strategic groups for firms in the Indian IT industry. Kaufman and Rousseeuw (1990) silhouette measure of cohesion and separation had value more than 0.5 indicating strong evidence of cluster structure.

Table 1, part A displays the difference in the clusters through variable means. We used ANOVA to compare group means across the explanatory variables and found the differences to be statistically significant. Since ANOVA has somewhat strict assumptions about the variables, we also used a non-parametric test i.e. Kruskal-Wallis test to check robustness of our results. The results are actually better than what we found through ANOVA. The four groups of firms have distinct strategies and these are summarized below.

Table 1. Profile of strategic groups

Variable name	Diversified global delivery exemplars - mean	Diversified low cost arbitrageurs - mean	Specialised globalisers- mean	Emerging offshore service providers- mean	All firms- mean	ANOVA results - F statistic	Kruskal Wallis results - Chi-squared statistic
Part A: Strategic choice variables							
Number of regions exported	5.52	4.88	3.87	3.71	4.38	13.12***	36.32***
Number of foreign branches	3.63	1.96	1.91	1.36	1.99	19.37***	56.87***
Number of horizontals	11.60	10.86	7.40	8.33	9.49	12.92***	36.86***
Percentage of high value services	35.83%	32.78%	39.50%	33.60%	34.5%	1.86	6.49†
Number of domestic branches	4.19	1.63	2.58	1.26	2.05	23.67***	55.27***
Presence in a cluster (Bangalore)	YES	NO	YES	NO	30%		
Quality Certification obtained	YES	YES	NO	NO	45%		
Part B: Characteristics of strategic groups							
Exports (million Rupees)	1598.47	774.52	156.81	56.84	540.52	7.58***	70.67***
Sales (million Rupees)	2044.40	844.26	215.70	71.58	652.17	9.05***	88.33***
Number of employees	994.60	409.02	138.89	76.95	338.78	9.21***	90.39***
Age (years)	10.89	9.26	8.71	5.82	8.03	14.09***	43.18***
Part C: Performance measures for strategic groups							
Export Intensity	0.74	0.86	0.64	0.82	0.79	1.55	6.55†
Revenue per employee (million Rupees)	1.57	1.42	1.47	0.95	1.26	2.88*	36.37***
N	63	99	45	150	357		

Notes: *** significant at p < 0.001.; ** significant at p < 0.01; * significant at p < 0.05; † significant at p < 0.10

Strategic Group 1 – Diversified Global Delivery Exemplars: This group consists of 63 firms. The firms in this group are spread widely around the globe in terms of their foreign branches and they export their services to almost all the regions. The firms have on an average about 4 foreign branches and target about 6 regions globally. These firms can be termed as global full-service providers. They provide a very diverse portfolio of services; on an average, they provide 12 specialized services to their clients. About 36 percent of their services are high value added services. Additionally, these firms have multiple branches in India in addition to their presence in Bangalore (to exploit advantages of clustering). Further, all these firms are quality certified.

Strategic Group 2 – Diversified Low Cost Arbitrageurs: This group consists of 99 firms. These firms target clients from an average of sixregions. However, they have fewer international (as well as domestic) branch locations with an average of about 2 foreign and less than 2 domestic branches. Similar to the first group, these firms offer a wide variety of services (about 11) but the proportion of high-value services offered by these firms is somewhat lower (32 percent). While they do not have a presence in Bangalore, all firms are quality certified.

Strategic Group 3 - Specialised Globalisers: There are 45 firms in this group. The firms in this group specialize in services (average number of services is 7). The proportion of high value added services is highest at 40%. The firms in this group target fewer regions/markets but, the average number of foreign branches is similar to group 2 and have a better spread domestically. All firms have a presence in Bangalore while none of them are quality certified.

Strategic Group 4 - Emerging Offshore Service Providers: With 150 firms, this group has the highest number of firms. These firms offer more services than group 3 but lower than groups 1 and 2. About two-thirds of their services are low value added services. The firms in this group are similar to group 3 in terms of targeting few regions (lowest amongst all the groups) and primarily rely on offshoring to cater to clients (average number of foreign branches for this group is about 1). With very few domestic branches, these firms are least diversified on all counts with no quality certification and no presence in Bangalore. .

Table 1, part B provides the firm characteristics for each strategic group. In terms of average size, group 1 is the highest with about 1000 employees and group 4 is the lowest with about 77 employees. The average age of group 4 firms is about 6 years whereas it is around 10 years for group 1 firms. The export revenue of group 1 is the highest at 2 billion rupees and lowest for group 4 (about 71 million rupees). The performance of firms differs significantly between firms in group 1 and group 4.

The four strategic groups is an interesting confluence of the key strategic variables. Offering a diverse set of services that are of relatively high value to a large number of export regions requires higher intensity/commitment of internationalization through higher number of foreign offices. Such an internationalization strategy also seems to be combined with a larger spread of branches in the domestic market, presence in a cluster and quality certification. Firms with a high breadth of internationalization (export regions), offering diversified services but of relatively lower value do not pursue high commitment in terms of depth of internationalization. Such firms also have low spread of domestic branches and are not present in a cluster. They do, however, possess quality certification. Firms offering a small number of specialised services to only a few foreign regions, have fewer foreign offices. These, however, have cluster presence and relatively high number of domestic offices but no quality certification. The emerging globalisers who have low breadth and depth of internationalization neither have cluster presence nor quality certification. Their domestic spread is also low.

3.2 Performance implications

The main idea behind strategic groups is that these firms have different strategies with different performance implications. In order to check the performance implications, we have assessed differences among two widely used measures in the context of services firms' viz., revenue per employee and export intensity. Studies on IT service firms (Lamin, 2013) have assessed performance using revenue per employee. Another measure used for assessing the performance of BGFs is export intensity. Table 1, part C summarizes the differences in revenue per employee and export intensity across the four strategic groups. As far as revenue per employee is concerned, ANOVA test confirms that the difference across groups is statistically significant at 5% level. It is evident from table 3 group 4 has lowest average profitability and is highest for group 1. The second measure of performance is an indication of the level of internationalization of the firm. ANOVA test does not provide any evidence of statistically significant difference between the groups in terms of export intensity. From this it is reasonable to derive that high internationalization can be obtained through a variety of strategies, four of which are clearly described here.

To check the robustness of our results, we conducted case study of one firm in each strategic group using information from public sources. Case study of Tata Consultancy Services, DSQ Software, Mindtree Consulting and Visualsoft Technologies corresponding to diversified global delivery exemplars, diversified low cost arbitrageurs, specialised globalisers and emerging offshore service providers respectively helped in triangulating the results from quantitative analysis

4. Discussion

We set out to identify different strategic paths followed by BGFs and assess the performance implications of such strategies. While some of the paths lead to higher performance, other paths show equifinality in their performance. Our results extend the insights on international commitment of BGFs. Unlike the findings of Sluewagen and Onkelinx (2014) who found BGFs choose between rapid vs gradual approach to internationalization (sprinkler vs waterfall), we find that BGFs adopt both sprinkler and waterfall approaches towards internationalization. While Specialized Globalizers and Emerging Off-shore Service Providers (Strategic Groups 3 and 4) adopt a waterfall approach to internationalization with fewer export regions, firms in the other two groups adopt a sprinkler strategy with varying degrees of commitment as captured by the number of foreign branches. This can be deduced from the comparison of countries targeted for exports and the number of foreign branches for each strategic group. This suggests that within BGFs there are a set of firms which internationalize gradually. The corollary to this statement is that not all BGFs have similar speed of internationalization and this heterogeneity within BGFs, which has hitherto been ignored in the literature, needs to be recognized.

Our results also throw light on timing and scope of operations which is consistent with Hashai (2011). While diversified global delivery exemplars have high extent of foreign operations as well as high geographic scope, the emerging offshore service providers have low extent of foreign operations and low geographic scope. The other two groups straddle across these two dimensions. The *diversified low-cost arbitrageurs* have low extent of foreign operations but high geographic scope whereas the specialist partners have relatively high extent of foreign operations but low geographic scope. One can conclude that geographical scope and extent of foreign operations are not independent choices. An interesting pattern emerges if one computes the number of foreign branches per export region targeted. The diversified global delivery exemplars have the highest ratio (0.66) followed by specialized globalizers (0.49), diversified low cost arbitrageurs (0.40) and emerging offshore service providers (0.37).

Apart from the above contributions to the literature on internationalization of BGFs our findings also improve our understanding of the performance implications a hitherto underexplored area in the literature. We find that varying degree of commitment shown by firms in terms of export markets and branches also have different performance implications. While firms using high geographical scope (number of export regions) along with more intensive foreign operations (number of foreign offices), i.e, Diversified Global Delivery Exemplars have a higher performance in comparison to firms following different strategy in terms of high geographical scope but with a low intensity of foreign operations (Diversified Low Cost Arbitrageurs). Interestingly, firms having a waterfall strategy in terms of geographical scope but offering few specialized services (Specialized Globalizers) have a performance that is similar to those pursuing a sprinkler strategy for export regions but with low foreign operations intensity (Diversified Low Cost Arbitrageurs). This equifinality of performance across the two groups can be explained by the nature of augmentation of resources by the firms. We find that specialist partners augment their resources through its presence in clusters while providing a limited range of high-value services and targeting lower number of markets. This means that for those BGFs providing specialized services adopting a conventional waterfall approach to internationalization, resource augmentation approach (presence in clusters) is crucial for the performance. Further, we also find *diversified low cost arbitrageurs* deploy their resources efficiently, while providing low value services and targeting greater number of markets. This means that for those BGFs providing low value services (less risky services) adopting a sprinkler approach to internationalization, efficient deployment of resources (Certification in the case of IT services) is crucial for better performance. The theoretical contribution of this finding is that the relationship between internationalization path and performance is moderated by the nature of services and the ways of mobilization/deployment of resources. The implication for future studies is that the resource based perspective can substantially contribute to the performance effects of BGFs internationalization.

Conclusion

This paper attempts to uncover various strategic paths taken by BGFs through a strategic group examination of Internationalizing Indian IT organisations. We show that there are distinct differences in internationalization approaches of born globals despite similar export intensity among these firms. While studies have identified the risk averse nature of internationalization among BGFs (Sleuwagen and Onkelinx, reference), we highlight that that the scope of product / services (diversified vs. specialized) affects the nature of internationalization paths. Further, we find that these internationalization approaches lead to different performance outcomes. In this paper, we explain some of the reasons for these performance differentials among the strategic groups.

For managers, our findings imply that they need to simultaneously make consistent choices across nature of services offered, internationalization paths, resource mobilization and deployment. We find that the resource mobilization and deployment efforts are eased when firms are located in clusters and signal the quality of their processes through certification. However, these two sources of resources may be either complementary or substitutes depending on the competitive positions chosen by the managers.

From the perspective of strategic options, the case of Emerging Offshore Service Providers is probably the most interesting. The firms in this strategic group have much lower degrees of internationalization but they are much younger as well. As these firms age, they have a variety of strategic options available to them. These can evolve into any of the remaining three strategic groups. To begin with, they may need to choose between the diversified low-cost arbitrageurs option and specialized globalisers option. For each of these options these would require different sets of resources and internationalization paths.

It is also important to mention some limitations in our research. Firstly, the data used in our study covers only services. Though many studies have argued that born global phenomenon is more prevalent in services, a follow up study on manufacturing sector would be an interesting validation of our findings. Secondly, we have used one industry for our analysis i.e. the Indian Software Industry. We made this choice to exploit the natural setting of the whole industry being oriented towards global markets. However, follow up studies on industries with a mix of domestic and international orientation would complement our study. Finally, Owing to data limitations we combined cross-section data analysis and case studies. Future studies can attempt longitudinal path analysis to delineate the role of time in internationalization. Large sample studies may help discover specific organization level antecedents that may impact post internationalization paths of BGFs.

This paper opens up a rich area for more nuanced theoretical contribution in the literature on born globals. Many more questions can be asked to understand the behaviour of BGFs. One set of questions involves addressing the pace dimension of internationalization. Do born globals accelerate early or attempt to have controlled internationalization? Why do some born globals follow the Uppsala model for internationalization (waterfall approach), whereas other follow a rapid entry into global markets. How do born globals address the trade-off between scope, timing and pace of internationalization? In this paper, we have only partially addressed these questions by focusing on the timing and scope aspects. Another set of questions could be integrating the entrepreneurial characteristics and uncovering their relationships with the strategies. To what extent do entrepreneurs' networks and resources contribute the different paths that born globals adopt for subsequent internationalization? We are sure that further study of these questions will not only have significant implications for theory but also for practice and policy formulation

References

Almodóvar, P.; Rugman, A.M. 2014. The M curve and the performance of Spanish international new ventures, *British Journal of Management* 25: S6-S23.

Bell, J., McNaughton, R., Young, S.; Crick, D. 2003. Towards an integrative model of small firm internationalisation, *Journal of International Entrepreneurship* 1(4): 339-362.

Chittoor, R.; Ray, S. 2007. Internationalization paths of Indian pharmaceutical firms: a strategic group analysis, *Journal of International Management* 13(3): 338-355.

Contractor, F.J., Hsu, C.; Kundu, S.K. 2005. Explaining export performance: a comparative study of international new ventures in Indian and Taiwanese software industry, *Management International Review* 45(3): 83-110.

Fernhaber, S.A., McDougall, P.P.; Oviatt, B.M. 2007. Exploring the role of industry structure in new venture internationalization, *Entrepreneurship Theory and Practice* 31(4): 517-542.

Gao, G., Gopal, A.; Agarwal, R. 2010. Contingent effects of quality signaling: evidence from the Indian offshore it services industry, *Management Science* 56(6): 1012-1029.

Gaur, A.S., Kumar, V.; Singh, D. 2014. Institutions, resources, and internationalization of emerging economy firms, *Journal of World Business* 49(1): 12-20.

Griffith, D.A., Cavusgil, S.T.; Xu, S. 2008. Emerging themes in international business research, *Journal of International Business Studies* 39(7): 1220-1235.

Hashai, N. 2011. Sequencing the expansion of geographic scope and foreign operations by born global firms, *Journal of International Business Studies* 42(8): 995-1015.

Hennart, J. 2014. The accidental internationalists: a theory of born globals, *Entrepreneurship Theory and Practice* 38(1): 117-135.

Johanson, J.; Vahlne, J. 1977. The internationalization process of the firm: a model of knowledge development and increasing foreign market commitments, *Journal of International Business Studies* 8(1): 23-32.

Karthik, D.; Upadhyayula, R. 2015. Two paths to diversification, *International Journal of Emerging Markets* 10(1): 32-51.

Kaufman, L.; Rousseeuw, P.J. 1990. Finding groups in data, New York*:* J. Wiley & Sons,

Knight, G.A.; Cavusgil, S.T. 2005. A taxonomy of born-global firms, *MIR: Management International Review* 45(3): 15-35.

Kumar, N. 2012. The resource dynamics of early internationalising Indian IT firms, *Journal of International Entrepreneurship* 10(3): 255-278.

Lamin, A. 2013. The business group as an information resource: an investigation of business group affiliation in the Indian software services industry, *Academy of Management Journal* 56(5): 1487-1509.

Lopez, L.E., Kundu, S.K.; Ciravegna, L. 2008. Born global or born regional? evidence from an exploratory study in the Costa Rican software industry, *Journal of International Business Studies* 40(7): 1228-1238.

Miller, D.; Friesen, P.H. 1986. Porter's (1980) Generic strategies and performance: an empirical examination with American data part I: testing Porter, *Organization Studies* 7(1): 37-55.

NASSCOM 2014. *THE IT-BPM SECTOR IN INDIA - Strategic Review 2014*, New Delhi: NASSCOM.

Norusis, M.J. 2012. *IBM SPSS statistics 19 statistical procedures companion*, Prentice Hall.

Oviatt, B.M.; McDougall, P.P. 2005. Defining international entrepreneurship and modeling the speed of internationalization, *Entrepreneurship Theory and Practice* 29(5): 537-554.

Paul, J.; Gupta, P. 2014. Process and intensity of internationalization of IT firms: evidence from India, *International Business Review* 23(3): 594-603.

Prashantham, S.; Young, S. 2011. Post-entry speed of international new ventures, *Entrepreneurship Theory and Practice* 35(2): 275-292.

Rennie, M.W. 1993. Born Global, *The McKinsey Quarterly*, 4:45-52.

Ruzzier, M.; Ruzzier, M.K. 2015. On the relationship between firm size, resources, age at entry and internationalization: the case of Slovenian SMEs, *Journal of Business Economics and Management* 16(1): 52-73.

Sleuwaegen, L.; Onkelinx, J. 2014. International commitment, post-entry growth and survival of international new ventures, *Journal of Business Venturing* 29(1): 106-120.

Thomas, H.; Pollock, T. 1999. From I-O Economics' S-C-P paradigm through strategic groups to competence-based competition: reflections on the puzzle of competitive strategy, *British Journal of Management* 10(2): 127-140.

Zeng, S., Shen, Q., Tam, C.; Wan, T. 2010. Internationalization paths of Chinese firms: evidences from an emerging economy, *Journal of Business Economics and Management* 11(2): 297-315.

Appendix 1: Descriptive statistics

Variable	Mean	Std Dev	Min	Max
No of regions exported	4.38	2.28	1	17
No of foreign branches	1.99	2.14	1	22
No of horizontals	9.49	4.95	1	24
% high value services	34.5	0.17	0	1
No of domestic branches	2.05	2.63	1	32
Presence in a cluster (Bangalore)	0.3	0.46	0	1
Quality Certification	0.45	0.5	0	1
Exports (million Rupees)	540.52	2336.83	0.02	28700
Sales (million Rupees)	652.17	2697.01	0.2	31420
No of employees	338.78	1238.79	2	16880
Age (years)	8.03	6.1	1	34
Export Intensity	0.79	0.61	0	7.56
Revenue per employee (million Rupees)	1.26	1.71	0.01	11.11

N=357