

THE RATIONALE FOR BUSINESS PROCESS OFFSHORING: THE CASE OF U.S. FIRMS, 1999-2003

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Business process offshoring refers to the recent practice of firms to migrate selected ICT-enabled white-collar activities to offshore locations. What motivates firms to do so? Building on the recent work of Nachum and Zaheer (2005), I develop hypotheses on the possible rationale for this type of foreign investment and test them in a study of U.S. outward FDI in high information-intensive industries. Efficiency and knowledge seeking emerge as the two significant motivations behind business process offshoring.

Keywords:

International business, offshoring, global organization of work, FDI motivations

1. INTRODUCTION

Offshoring refers to the practice undertaken by companies of migrating activities at offshore locations outside their countries of origin (Venkatraman 2004). Companies, mainly in western economies, have historically adopted an offshore strategy predominantly for manufacturing work and blue-collar jobs. Only recently, thanks to the substantial progresses in information and communication technologies (hereafter ICTs), a novel type of offshoring has emerged. Nowadays in fact, companies have the potential to relocate practically worldwide a number of business processes (e.g., call-center customer support, transaction processing and data management) that only until few decades ago were considered classic white-collar jobs to be performed exclusively at home. Thus, business process offshoring (hereafter BPO) refers to the practice of firms to migrate selected ICT-enabled white-collar activities to offshore locations (usually low-cost). Even though this new kind of offshoring can be still considered a nascent phenomenon, as the proportion of actual versus potential offshored business processes is yet small (Agrawal et al. 2003), its forecasted future impact on the global realignment of jobs (Doh 2005; Karmarkar 2004) urges us to investigate it thoroughly. Yet, Ramamurti (2004) observes that the rise of BPO, despite representing an emerging promising research theme, hasn't so far received by the international business research community the deserved attention.

In this paper, in view of the paucity of studies that explicitly and rigorously treat this phenomenon, I examine the *rationale* for BPO. In other words, the focal question of this study is as follows: *why* do firms decide to relocate selected business processes at offshore locations? A relevant contribution to answer this precise research question comes from the study of Nachum and Zaheer (2005), who examine how variation in the cost of distance precisely caused by technological developments affects the rationale for foreign investment. By focusing on the U.S. inward and outward foreign direct investment (hereafter FDI) for the period of 1990-1998, they detect significant differences between the motivations of firms to invest abroad in high and low information-intensive industries, as well as between investment flowing into the U.S. and investment coming out of the U.S. In this paper, I exclusively focus on the rationale for BPO. I develop hypotheses relative to the possible motivations behind this emergent practice, drawing insights from the international business theory on the rationale for foreign investment (Graham 1998; Kobrin 1991; Kuemmerle 1999; Zaheer and Manrakhan 2001). To test them, I reproduce on more recent data (1999-2003) the same empirical specification first developed by Nachum and Zaheer (2005) and concentrate uniquely on the U.S. outward FDI flow in high information-intensive industries. By replicating their same methodology on a more recent pool of information, I add empirical evidence to a more exhaustive discussion of the motivations behind the decision to offshore selected business processes.

The results, as it was for the case of Nachum and Zaheer (2005), provide substantial corroborating evidence that

efficiency seeking is the key significant driver for BPO. Quite importantly, the results also reveal something that Nachum and Zaheer (2005) failed to empirically prove: knowledge seeking is also a significant motivation behind the decision to offshore business processes. This important empirical finding suggests that an evolution in terms of motivations for pursuing offshoring initiatives is currently taking place. While the initial wave of offshoring documented by Nachum and Zaheer (2005) has been characterized by a narrow cost-cutting perspective strictly in line with an efficiency seeking motivation, the current wave is also increasingly driven by the search for new, and economically convenient, knowledge-intensive resources (Farrell 2004; Lewin and Peeters 2006).

Moreover, the findings provide a suitable starting point for discussing whether some of the key operationalizations used in the model and established in the literature may start losing significance in today's changing environment. The global redistribution of labor that is taking place through BPO radically differs from any other previous wave of internationalization documented and studied by the international business research community. The formal recognition of its novelty should lead us to a deeper discussion of what are the most appropriate measures for contextualizing and evaluating this emergent international phenomenon.

2. HYPOTHESES DEVELOPMENT

Research on FDI has always had as a primary concern to investigate the motivations for firms to expand internationally (Dunning 1993). Over time, scholars have identified six major motivations driving firms to initiate international investments: resource seeking, market and export seeking, efficiency seeking, knowledge seeking and oligopolistic reaction (Nachum and Zaheer 2005). Thus, I base the development of the hypotheses on these six motivations.

2.1 Resource Seeking

In this study I use the term resource exclusively to identify tangible, natural resources such as minerals, lands or agricultural products (Dunning 2000). While knowledge is also often contextualized as a resource of the firm, for the purposes of this study and in accordance to other previous works (Kuemmerle 1999), I create a different category for this more intangible resource that radically differs from the ones just mentioned. In light of this, international expansion driven by the resource seeking motivation can be considered a supply oriented investment, as its underlying rationale is to have access to physical, tangible resources which are either missing or too expensive in the home country. The immobility of such resources makes it necessary to invest in the foreign country in order to access them (Dunning 1993). Firms investing in BPO don't do it to search for natural resources. Thus, in line also with Nachum and Zaheer (2005, p. 750), who "expect that investment driven by the need to access resources would have limited, if any, impact on FDI in high information-intensive industries", I posit:

Hypothesis 1: Resource seeking is not a significant motivation for business process offshoring.

2.2 Market Seeking and Export Seeking

While resource seeking investment is supply oriented, market and export seeking motivate a demand oriented foreign investment (Dunning 2000). Market seeking investments are in fact designed to serve a foreign market by means of local production and/or distribution. Thus, they typically involve "the physical location of downstream (e.g., marketing) and, in some cases, production activities in a particular country" (Zaheer and Manrakhan 2001, p. 673). When such investments are made to serve not the country where the production is being located but a third foreign market, we talk about export seeking (Nachum and Zaheer 2005).

Demand oriented foreign investment can be driven by a number of reasons (Nachum and Zaheer 2005), none of them being relevant when applied to the case of BPO. Offshoring initiatives are in fact motivated neither by the existence of high barriers on foreign-made goods, which can drive firms that want to enter a foreign market to invest in local activities in order to avoid tariffs, nor by the need for physical proximity to actual and potential customers, which can drive firms to invest in local presence in order to acquire customer knowledge and provide a better after-sales service (Nachum and Zaheer 2005; Zaheer and Manrakhan 2001). Thus, I posit:

Hypothesis 2: Market seeking and export seeking are not significant motivations for business process offshoring.

2.3 Efficiency Seeking

"Efficiency-seeking investment is driven by the intention to spread value-adding activities geographically in order to

take advantage of differences in the availability and cost of factor endowments in different locations.” (Nachum and Zaheer 2005, p. 750) Accordingly, it entails the disaggregation of the value chain and the relocation of the single activities where they can be most efficiently executed (Buckley and Mucchieli 1997; Leamer and Storper 2001). Such a globally dispersed network of highly interconnected capabilities and relationships (Venkatraman 2004) can represent an economically viable option for companies only if its coordination costs don't outweigh all the savings that can be achieved by this more efficient global redistribution of labor. The recent progresses of ICTs have precisely lowered such coordination costs, thus increasing the potential for local specialization of value-adding activities (Zaheer and Manrakhan 2001). Therefore, BPO has emerged as a strategic economically viable alternative for firms to redistribute their activities more efficiently on a global scale. Hence, I posit:

Hypothesis 3: Efficiency seeking is a significant motivation for business process offshoring.

2.4 Knowledge Seeking

Firms investing abroad for a knowledge seeking motivation are in search of new resources that allow them to upgrade their own existing pool of capabilities. Thus, such firms will value locations close to sources of knowledge that is potentially interesting to them. Such locations generally offer more technical activity, more high-skilled labor, more patents being generated or greater R&D intensity (Chung and Alcacer 2002; Kuemmerle 1999). Local proximity to such sources of knowledge is required because part of this knowledge is tacit and difficult to codify and thus needs close and frequent interactions to be accessed (Kogut and Zander 1993; Martin and Salomon 2003).

Initially, BPO hasn't been driven by the quest for new knowledge. Companies have in fact started offshoring easily and codifiable business processes whose degree of knowledge-intensity was relatively low (e.g., data entry and call-center customers support). However, in response to the high quality of the work in the offshore locations and following a sequential process of offshoring (Lewin and Peeters 2006) deeply rooted on incremental commitment and uncertainty reduction (Johanson and Vahlne 1977), companies have quickly begun offshoring to low-wage countries also high-skilled knowledge-intensive activities such as R&D and engineering (Farrell 2004; Lewin and Peeters 2006). In consideration of this rapid evolution and given that a certain degree of knowledge-intensity is by definition always present in any of the business processes offshored (Dossani and Kenney 2003), I posit:

Hypothesis 4: Knowledge seeking is a significant motivation for business process offshoring.

2.5 Oligopolistic Reaction

Companies can decide to expand abroad also as a response to competitors' moves. The decision to imitate a competitor's foreign investment strategy can be generally explained as an effort not to lose sight of rivals' activities and thus not to give them unproblematic access to new markets and/or low-cost resources (Graham 1998; Karnani and Wernerfelt 1985; Knickerbocker 1973). As confirmed by Nachum and Zaheer (2005), the high information-intensive industries where BPO is currently taking place appear as proper settings for oligopolistic considerations. As a matter of fact, recent survey-based researches have confirmed that competitive pressure is indeed a significant driver for BPO (Lewin and Peeters 2006). Thus, I posit:

Hypothesis 5a: Oligopolistic reaction is a significant motivation for business process offshoring.

Said all this, there seems to be a market attractiveness constraint on the number of firms that are likely to imitate industry pioneers in foreign expansion activities (Martin et al. 1998). As the number of domestic competitors that invest in a host country increases, the level of competition also increases, thus making the potential entry less attractive. Studies on this matter have in fact reported a wave-like pattern, with the number of new entrants first increasing and then decreasing as more domestic competitors expand (Knickerbocker 1973; Martin et al. 1998; Yu and Ito 1988). This is particularly applicable to the offshoring phenomenon. The offshoring pioneers in the early 1990s, such as General Electric and British Airways, located their activities in few cities where they found optimal conditions for taking advantage of high-skilled low-wage pools of workers. Competitors, once realized their cost advantages, soon began investing in the same areas. The recent over heating of these few popular offshoring destinations (e.g., Hyderabad and Bangalore) is turning them into less attractive offshore locations characterized by escalating wages and accelerating turnovers. As a consequence, companies are starting to invest in new regions (e.g., South Africa and Brazil), where to find better conditions and less local competitive pressure (Farrell 2006). Thus, I posit:

Hypothesis 5b: The relationship between the oligopolistic reaction motivation and the business process offshoring intensity is U inverted.

3. METHODS

The setting, data source, measures and model of this study are practically identical to the ones employed by Nachum and Zaheer (2005). The few existing differences are discussed whenever present.

3.1 Setting and Data Source

I test the hypotheses using panel data on the FDI of U.S. firms collected by the Bureau of Economic Analysis. U.S. firms are a suitable empirical context because in 2003 they accounted, together with U.K. firms, for about 70 percent of the global BPO market (Agrawal et al. 2003). For the analysis I use outward FDI, which corresponds to American controlling equity investments in foreign establishments. Although BPO also takes place through offshore outsourcing (Dutta and Roy 2005), the issue of restricting the study to FDI as foreign investment, due to data availability, doesn't seem to harm the generalizability of the findings. As a matter of fact, the majority of BPO implementations are run as captive centers owned by the American investing firms (Dossani and Kenney 2003).

The time range selected for the study is 1999-2003, which corresponds to the largest and most recent time range available on outward data that is based on the North American Industry Classification System (hereafter NAICS). The data are collected at the industry level and majority-owned (i.e., more than 50 percent owned) non-bank affiliates of non-bank U.S. parents are used for the analysis. The combined number of observations of the panel is 100, that is, 20 industries observed over 5 years.

As Nachum and Zaheer (2005) did, I select the top 20 high information-intensive industries using the investment in ICT in an industry to proxy for its level of information-intensity. The final list of industries for both studies is reported in the Appendix.

3.2 Measures

The operationalization of the independent variables is as follows.

Resource seeking: because of data availability, I operationalize the resource seeking motivation differently from Nachum and Zaheer (2005). I use the investment in net property, plant and equipment to proxy for the intention of accessing physical and tangible resources in the host country. As defined by the Bureau of Economic Analysis, net property, plant and equipment refers to land, mineral rights, building, structures, machinery and equipment, and thus well identifies those natural, tangible resources characteristic of the resource seeking motivation (Dunning 2000).

Market seeking: to operationalize the market seeking motivation I use the local sales of affiliates as a share of their total sales. Nachum and Zaheer (2005) don't use this measure because the necessary information was available only for outward FDI and not for inward FDI. Thus, they selected a cost-based measure to increase comparability between the two analyses. As this study focuses only on outward FDI, these data are fully available for the industries selected and thus allow for a sales-based operationalization of market seeking.

Export seeking: the export seeking motivation is operationalized using the total exports of affiliates to non U.S. unrelated bodies as a share of their total sales. Nachum and Zaheer (2005) use the same measure, which optimally assesses the export propensity of affiliates. It allows in fact to purposefully differentiate among efficiency seeking (intra-firm transactions), market seeking (sales in the local foreign market where the affiliate is located), and export seeking (sales to a third market different from U.S. and from the local foreign market where the affiliate is located).

Efficiency seeking: the efficiency seeking motivation is generally operationalized using the magnitude of intra-firm transactions as a share of total sales of affiliates in an effort of measuring the degree of internal linkages inside the multinational firm (Kobrin 1991). The same variation of Kobrin's index of integration (Kobrin 1991) used by Nachum and Zaheer (2005) is also employed here as follows:

$$\frac{\text{Sales of affiliates to parents} + \text{Sales of affiliates to other} \\ \text{affiliated bodies} + \text{Sales of parents to affiliates}}{\text{Total sales of affiliates}}$$

Total sales of affiliates

Knowledge seeking: as in the study of Nachum and Zaheer (2005), knowledge seeking motivation is operationalized using two measures:

1. The level of compensation per employee. The argument generally recalled here is that high salaries correspond to a reliance on highly skilled workers (Nachum and Zaheer 2005). As used by Nachum and Zaheer (2005), I used the average compensation per employee across all countries.
2. R&D intensity, obtained dividing the R&D investment of affiliates by their total sales. This type of operationalization has been extensively used in extant researches to proxy for the search of knowledge in foreign locations (Chung and Alcacer 2002).

Oligopolistic reaction: to account for the role of competitive pressure as possible determinant of BPO activities I use the same measures employed by Nachum and Zaheer (2005). Thus, I use the number of new affiliates entering foreign markets each year, expressed as a share of the total number of affiliates in an industry; I also include the quadratic form of this measure to account for the non-linear relationship hypothesized in extant research (Martin et al. 1998).

Following what Nachum and Zaheer (2005) did, I also include a series of control variables.

Ownership advantages: the advantages specific to the ownership of the enterprise seeking to engage in FDI are determinant when analyzing the propensity of certain firms relative to others to engage in international expansion (Dunning 2000). As Nachum and Zaheer (2005) did, I use profitability to proxy for the ownership of such advantages.

Size and growth: extant research confirms that both size and growth influence FDI flows (Grubaugh 1987). Following Nachum and Zaheer's (2005) procedure, I measure size by the number of employees in an industry and growth by its annual relative increment.

FDI stocks: in some industries more than in others FDI is considered a viable strategic option available to companies. The inclusion of FDI stocks aims directly at controlling for this variation in the propensity of using FDI.

Market structure: market structure influences the competitive pressure to invest overseas (Knickerbocker 1973). As Nachum and Zaheer (2005) did, I use the number of parent firms in an industry together with its quadratic term, to account for an eventual non-linear relationship.

3.3 Model

The model used to investigate how the different FDI motivations explain the FDI intensity is the same used by Nachum and Zaheer (2005):

$$\mathbf{FDI}_{it} = f(\beta * \mathbf{M}_{it}; \gamma * \mathbf{X}_{it}) + \mathbf{E}_{it}$$

\mathbf{FDI}_{it} is the total capital flow, including capital flow between parents and affiliates, inter-company loans, and reinvested earnings of industry i at time t ; \mathbf{M}_{it} is the vector of FDI motivations; \mathbf{X}_{it} is the vector containing the control variables; i stands for industries and ranges from 1 to 20; t stands for time, years in this case, and ranges from 1 to 5; \mathbf{E} is the random error term.

I perform the skewness and kurtosis and the Shapiro-Wilk tests for normality and the results show that some of the variables used are not normally distributed. As a consequence of this, I transform them using power transformations. Among the variables in the \mathbf{M} vector I transform the resource seeking variable, taking the inverse of its square root. Among the variables in the \mathbf{X} vector, I take the natural logarithm of size, FDI stocks, market structure and its square term. Table 1 shows the variables used, their descriptive statistics and correlation coefficients.

TABLE 1

Descriptive Statistics and Correlation Coefficients of the Independent Variables^a

	Variable	Mean	s.d.	1	2	3	4	5	6	7
1.	Resource seeking ^b	2.57	1.13							
2.	Market seeking	0.56	0.20	0.04						
3.	Export seeking	0.13	0.09	0.16	-0.44					
4.	Efficiency seeking	0.30	0.23	-0.02	-0.91	0.14				
5.	Knowledge seeking 1 ^e	42.19	18.73	0.04	0.01	-0.09	0.05			
6.	Knowledge seeking 2	0.01	0.02	0.01	-0.52	0.43	0.44	-0.06		
7.	Oligopolistic reaction	0.02	0.06	-0.04	-0.15	0.11	0.22	0.29	0.28	
8.	Oligopolistic reaction ²	0.00	0.01	-0.16	-0.20	0.21	0.07	-0.08	0.20	0.22
9.	Profitability ^d	7,855	21,361	-0.07	-0.24	-0.27	0.31	0.33	0.01	0.29
10.	Size ^{c,f}	3.26	16.71	0.04	0.21	-0.02	-0.17	0.13	-0.01	0.31
11.	Growth	4.40	1.02	0.49	0.25	-0.19	-0.07	0.10	0.00	0.07
12.	FDI stocks ^{c,d}	9.16	1.63	0.04	0.15	-0.38	0.08	0.69	-0.12	0.34
13.	Market structure ^c	3.44	0.86	0.47	0.13	-0.05	0.08	0.40	0.03	0.22
14.	Market structure ^{2,c}	6.87	1.71	0.47	0.13	-0.05	0.08	0.40	0.03	0.22

^a N = 100. Correlations greater than .22 or less than -.22 are significant at $p < .05$.

^b Inverse of the square root.

^c Logarithm.

^d Millions of dollars.

^e Dollars.

^f Thousands of employees.

² Square function.

TABLE 1 (CONTINUED)

	Variable	8	9	10	11	12	13	14		
1.	Resource seeking ^b									
2.	Market seeking									
3.	Export seeking									
4.	Efficiency seeking									
5.	Knowledge seeking 1 ^e									
6.	Knowledge seeking 2									
7.	Oligopolistic reaction									
8.	Oligopolistic reaction ²									
9.	Profitability ^d	0.12								
10.	Size ^{c,f}	0.01	0.10							
11.	Growth	-0.27	-0.06	0.31						
12.	FDI stocks ^{c,d}	-0.09	0.62	0.22	0.41					
13.	Market structure ^c	-0.21	0.29	0.25	0.71	0.65				
14.	Market structure ^{2,c}	-0.21	0.29	0.25	0.71	0.65	1.00			

Most of the correlation coefficients are low and don't exceed the usual cut-off point of 0.5. Thus, they present no harm in assuming independency among the different independent variables. The only problematic correlation coefficient that needs to be addressed is the one between efficiency seeking and market seeking (- 0.91). For the analysis, I correct for this by regressing efficiency seeking on market seeking; I then calculate the residuals of such regression and introduce them into the final regression as a substitute for market seeking. These residuals represent in fact the additional contribution of such variable that is not also explained by efficiency seeking. Nachum and Zaheer (2005) use a similar methodology to correct for high correlation coefficients in their panel.

To deal with the missing values of the dataset, I proceed following the same method employed by Nachum and Zaheer (2005). I first perform independent sample *t*-tests and I obtain that the missing values are not randomly scattered in the dataset. Thus, I estimate them using available observations, "by testing a model based on all observations for which there were no missing values, and using it to estimate the missing values" (Nachum and Zaheer 2005, p. 755).

The model is estimated using STATA software, by means of panel data analysis (Greene 2003). The advantage of panel data analysis is that it allows improving the estimation obtained by simply pooling the data and performing an OLS regression on them. It allows in fact for the introduction of different intercepts to test for industry and time effects. I first tested the null hypothesis of no industry effects, performing an *F* test on the two following models: the pooled model with a single intercept and the least squares dummy variable model, which corresponds to the pooled model with the addition of dummy variables for each industry (minus one) (Greene 2003). The hypothesis that the industry effects were the same was rejected ($p < 0.001$; $F = 3.59$). Following the same procedure for testing whether the time effects were the same, the null hypothesis of no time effects was also rejected ($p < 0.01$; $F = 4.68$). Thus, the model estimated included both industry and time effects.

In panel data analysis there are two different ways of modeling the presence of different intercepts accounting for industry and time effects, namely the fixed effects model and the random effects model. A Hausman test was performed to see which one of the two models would be more appropriate for this panel (Greene 2003). The test was not significant ($p = 0.91$; $\chi^2 = 9.19$), suggesting that the random effects estimate was not significantly different from the unbiased fixed effects estimate. Thus, this result allowed the usage of the random effects estimator, which appeared as more suitable especially because it didn't imply the loss of $i - 1$ degrees of freedom as the fixed effects model instead did (Kennedy 2003). The final coefficients for testing the hypothesis of this study were therefore obtained out of a random-effects generalized least square regression that included both industry and time effects. Table 2 reports the complete regression equation.

TABLE 2

Motivations for Business Process Offshoring ^a

Variable	Operation measure	Model
BPO motivations		
	Net property, plant and equipment / total sales	815.25 (1.26)
Resource seeking ^b	(H1)	
	Local sales of affiliates / total sales (H2)	-5,433.64 (-0.37)
Market seeking		
Export seeking	Exports to unaffiliated bodies / total sales (H2)	-17,390.69 (-1.32)
Efficiency seeking	Intra-firms transactions / total sales (H3)	8,326.03* (2.27)
Knowledge seeking 1	Compensation of employees (H4)	-103.36* (-2.18)
Knowledge seeking 2	R&D investment / total sales (H4)	-24,021.71 (-0.70)
Oligopolistic reaction	# of U.S. foreign affiliates	-1,410.19

	(H5a)	(-0.12)
Oligopolistic reaction ²	(# of U.S. foreign affiliates) ²	39,372.33
	(H5b)	(0.40)
Control variables		
Profitability	Net income (\$)	0.18** (3.68)
Size ^c	# of employees ('000)	5,622.31** (-4.79)
Growth	Annual change # of employees	95.14* (2.12)
FDI stocks ^c	(\$)	4,416.80** (5.17)
Market structure ^c	# of parent firms	- -
Market structure ^{2, c}	(# of parent firms) ²	718.30 (1.08)
Constant		-16,378.03**
(-3.12)		
Wald χ^2	409.08	
Prob.> χ^2	0.00	
Number of observations	100	

^a Parameters estimates are shown, with z's in parentheses.

^b Inverse of the square root.

^c Logarithm.

* $p < .05$

** $p < .01$

² Square function.

4. RESULTS AND DISCUSSION

Before discussing the results, one consideration should be borne in mind. In order to increase the comparability of this study with the one of Nachum and Zaheer (2005), I used their same operationalizations practically for all the constructs, modifying them only when issues of data availability forced me to do so. Said this, I think that some of the key operationalizations employed here and established in the literature (Nachum and Zaheer 2005) need to be re-examined carefully as they may have lost over time some of their effectiveness in measuring what they were initially designed to measure. For example, I find that the efficiency seeking operationalization used (Kobrin 1991) presents some limitations in tracking the search for improved efficiency in today's migration of digitized business processes. As a matter of fact, this measure was introduced to measure intra-firm integration only in manufacturing firms, in a moment when the offshoring migration was practically interesting only production-related activities (Kobrin 1991). Thus, while for issues of comparability I still employ such measure, I argue that a better operationalization of the efficiency seeking construct would be highly desirable in order to better contextualize the new international phenomenon of BPO.

With such consideration in mind, I go on to discuss the findings of the study. *Hypothesis 1, that resource seeking is not a significant motivation for business process offshoring received strong support in the analysis.* The p -value (0.206) associated to the coefficient of resource seeking motivation is in fact higher than the usual threshold level for significancy of 0.05. This result is perfectly in line with the one obtained by Nachum and Zaheer (2005), corroborating

the theoretical argument that BPO is not driven by the quest for tangible and immobile resources in the host country.

Hypothesis 2, that market seeking and export seeking are not significant motivations for business process offshoring received strong support in the analysis. Both coefficients are in fact not significant at 5 percent level and thus confirm the idea that BPO is not a demand oriented type of foreign investment. Such result is strongly aligned to the findings of Nachum and Zaheer (2005), who also obtained a lack of statistical significance for both coefficients in the outward analysis of high information-intensive industries.

Hypothesis 3, that efficiency seeking is a significant motivation for business process offshoring received strong support in the analysis. The coefficient relative to the efficiency seeking motivation is significant at the 5 percent level and positive, thus corroborating the theoretical argument that companies initiate BPO investments in order to increase internal efficiency and minimize costs. This result is extremely important as it confirms the generalized perception that companies practice BPO in order to reduce costs by taking advantage of a more efficient global redistribution of labor. Such finding is highly consistent with the ones of Nachum and Zaheer (2005) and of other survey-based researches (Lewin and Peeters 2006). The strong homogeneity of results obtained across studies leads to the conclusion that efficiency seeking is indeed the key motivation for BPO.

Hypothesis 4, that knowledge seeking is a significant motivation for business process offshoring received support in the analysis. The p -value (0.029) associated to the coefficient of knowledge seeking motivation relative to compensation of employees is in fact lower than the usual threshold level for significance of 0.05. Thus, such result confirms that knowledge seeking significantly motivates BPO. Said this, it is important to stress that the significant relationship observed is negative, confirming that higher compensation levels in the offshore locations attract less BPO. When compared with the lack of significance of both knowledge seeking measures in the study of Nachum and Zaheer (2005), this finding shows an evolution in terms of motivations for initiating BPO. While for the first wave of BPO, tracked in the study of Nachum and Zaheer (2005), the only significant driver was to increase efficiency and minimize costs, in this more recent wave knowledge seeking arguments also significantly influence the decision of companies to practice BPO. Nonetheless, the negative sign of the relationship confirms that firms are cost sensitive in their search for complementary knowledge. In fact, the higher and the more comparable to U.S. standards are the compensation levels in the offshore locations, the less companies are attracted to invest there. The coefficient of R&D intensity is instead insignificant in the analysis.

Hypotheses 5a and 5b, that competitive pressure is a significant motivation for business

process offshoring, received no support in the analysis. Both the linear and quadratic measures of such motivation are not significant in the analysis. Such coefficients are also not significant in Nachum and Zaheer's (2005) study. The fact that both works fail to bring any kind of empirical support to the hypothesis relative to competitive pressure further opens the question raised by Nachum and Zaheer (2005) of whether the operationalization employed is accurate for testing such hypotheses. The operationalization generally used for the oligopolistic reaction motivation is traditionally centered on the structure of the home market (Knickerbocker 1973). Accordingly, in both studies the number of new U.S. affiliates entering foreign markets each year is employed to measure such construct. However, as competition is increasingly taking place on a global rather than a domestic basis, to include in the analysis only local rivals in the home country is likely to oversimplify the picture. Firms' most relevant competitors are in fact often located in different countries. Not to take into account the move of these global rivals possibly jeopardizes the entire analysis of the competitive pressure faced by single companies.

5. CONCLUSION

The objective of this study was to develop and test hypotheses on the rationale for BPO. Thus, the focal research question to be answered was: *why* do firms decide to relocate selected business processes at offshore locations?

The key finding of this study is that BPO is motivated primarily by the search for efficiency and secondly by the quest for new knowledge. Academic works as well as general press articles on BPO (Dossani and Kenney 2003; Farrell 2004; Lewin and Peeters 2006) have always pointed at the quest for cost minimization through a more efficient global redistribution of labor as the main motivation behind the rise of BPO.

Consistent with this generalized perception and with the specific findings of Nachum and Zaheer (2005), the results of this study provide substantial corroborating evidence that efficiency seeking is indeed the key significant driver

for BPO. Said this, the findings also show something that Nachum and Zaheer (2005) failed to empirically prove: knowledge seeking is also a significant motivation behind the decision to offshore business processes. This important empirical finding confirms that an evolution in terms of motivations for BPO is currently taking place. While the initial wave of offshoring (1990-1998) documented by Nachum and Zaheer (2005) has been characterized by a narrow cost-cutting perspective strictly in line with an efficiency seeking motivation, the more recent wave (1999-2003) tracked in this study is also increasingly driven by the search for new knowledge-intensive resources. The fact that the significant relationship between the knowledge seeking motivation and the outward FDI flow is negative confirms that firms remain cost sensitive in their search for new knowledge through BPO. In fact, the higher and the more comparable to U.S. standards are the compensation levels in the offshore locations, the less companies are attracted to offshore business processes there.

These findings have important theoretical implications and open up relevant avenues for future research. First and foremost, they show that BPO represents a new type of international expansion. The fact that resource, market and export seeking motivations fail to be significant drivers behind BPO confirms that this current wave of internationalization radically differs from previous waves of geography-related change in the organization of corporation (Venkatraman 2004). Recent ICT progresses are deeply altering the way companies organize globally their activities (Zaheer and Manrakan 2001), and they are sensibly modifying the rationale for foreign investment across industries and countries (Nachum and Zaheer 2005). BPO emerges thus as an innovative practice in the international business scenario that responds to specific new competitive dynamics and that requires a different theoretical contextualization from the previous waves of internationalization. This study, by explicitly assessing the rationale for BPO, is nothing but the first step towards a more complete theorizing of this emergent phenomenon.

Different scholars have already argued that competitive advantage is incrementally based on how companies globally source single activities in the value chain (Gottfredson et al. 2005), and on how they innovate learning from the world by leveraging diverse skills and capabilities across dispersed subsidiaries (Santos et al. 2004). BPO precisely represents the mean by which this global redistribution of labor is taking place. Thus, future research will have to focus on deepening our understanding of this new strategic alternative of international expansion through a more complete theoretical conceptualization and an improvement of the empirical measurements employed to assess this peculiar emergent phenomenon.

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APPENDIX

Classification of Industries by Investment in ICT

High information-intensive industries

This study

(Top 20 industries – NAICS based)

Nachum and Zaheer's (2005) study

(Top 15 industries – SIC based)

Industries	ICT ratio ^a	Industries	ICT ratio ^b
Broadcasting, cable networks and program distribution	0.84	Business Services	0.895
Telecommunications	0.82	Insurance	0.876
Information services and data processing services	0.77	Communication	0.846
Finance (except depository institutions)	0.76	Information services and data processing	0.823
Management of nonblank companies and enterprises	0.69	Drugs	0.778
Publishing industries	0.66	Household audio and video, and communication equipment	0.757
Computers and peripheral equipment	0.65	Motion pictures, including TV tape and film	0.723
Insurance carriers and related activities	0.63	Electric and electronic components and accessories	0.680
Navigational, measuring and other instruments	0.55	Electronic and electric components n.e.c.	0.629
Magnetic and optical media	0.51	Printing and publishing	0.598
Communications equipment	0.49	Finance (except depository institutions)	0.590
Audio and video equipment	0.49	Transportation	0.565
Pharmaceuticals and medicines	0.43	Computer and office equipment	0.481
Motion pictures and sound recording industries	0.42	Instruments and related products	0.458
Administration, support and waste management	0.36	Industrial chemicals and synthetics	0.447
Transportation and warehousing	0.34		
Resins and synthetic rubber, fibers and filaments	0.34		
Wholesale trade	0.34		
Other transportation and			

equipment – Manufacturing	0.33
Basic Chemicals	0.32

^a ICT ratio = ICT investment as share of total investment, calculated for the year 1997. More detailed information is available upon request.

^b ICT ratio = ICT investment as share of total investment, calculated as accumulated investment during 1990-1999. Source: Nachum and Zaheer (2005)

