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PROGRESS, MATURITY OR EXHAUSTION? SOURCES AND MODES OF THEORIZING ON THE INTERNATIONAL STRATEGY – PERFORMANCE RELATIONSHIP (1990–2011)

Xavier Martin and Koen van den Oever

ABSTRACT

We examine patterns and changes in the use of various theoretical perspectives, and in the approach to testing individual or combinations of theories, within the field of international strategy that constitutes one of the major areas of international business (IB) research. We conduct a systematic bibliometric analysis of 22 years' worth of empirical papers. We generate tabular evidence and introduce the use of network graphing methodology to report and analyse the co-occurrence of theories. We find a changing distribution of theoretical perspectives, indicative of a re-centring of the field around strategic and organizational perspectives. This is accompanied by use of more complex approaches to testing contingencies of the sort likely to result from these theory combinations,

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especially across firm, interfirm and institutional levels of analysis. We thus generate and discuss critically a quantitative and graphical overview of the progress of international strategy research. This creates unique and comprehensive insights into the development of theory and empirics in IB. We draw lessons for academics and report practical recommendations for the conduct of research. Overall, our study sheds new light on the disciplinary nature of IB research and its interplay with related fields and disciplines. It explicates patterns of theory accretion alongside patterns of theory testing and refinement. It provides a comprehensive map of the field of IB strategy as it evolved since 1990 and illuminates its future.

INTRODUCTION

Perhaps the most basic, and yet the most challenging, issue for international strategy research – and thus for one of the main branches of international business (IB) research – is to conceptually and empirically link the choice of strategy with performance outcomes (Caves, 1998; Martin, 2013). This article examines IB literature since 1990 to chart the development in bases and modes of theorizing in this area.

We use content analysis and descriptive bibliometric techniques to document and explain the change in the type of theorizing as the field is growing and (hopefully) getting more careful about the boundaries of its theories. In so doing, we make several contributions. First, we document the changing prevalence of various theoretical perspectives. Second, we demonstrate how perspectives have been used in combination with each other, with specific patterns of commission and omission. Third, we discuss to what extent this can be interpreted as evidence of progress, maturity or perhaps exhaustion. This paper thus contributes to an important debate about the future of a key area of IB (Martin, 2013; Shaver, 2013).

Concepts

Little consensus exists among scholars regarding the strategy concept; nevertheless, its essence can be stated as ‘the dynamics of the firm’s relation with its environment for which the necessary actions are taken to achieve its goals and/or to increase performance by means of the rational use of resources’ (Ronda-Pupo & Guerras-Martin, 2012, p. 182). In this paper,

strategy refers to choices pertaining to the rate, scope (including degree of diversification) and means (especially entry modes) of international expansion and operations, and to the means of coordinating the multinational corporation (MNC). Performance pertains to various dimensions of financial, commercial and technological outcomes, which may be measured at various levels (MNC, subsidiary, even industry and country); this diversity of constructs is necessary for development in theory, though it is also a potential source of incoherence in empirical research (Martin, 2013).

When referring to a ‘theoretical perspective’, or ‘theory’ in short, we mean a coherent set of concepts and assumptions that has achieved sufficient paradigmatic recognition to have both theoretical weight and meaning as a commonly understood perspective (Martin, 2013). We track theories as authors identify them. In using ‘theory’ in short, we acknowledge that there may be debate among scholars as to whether or not a given perspective should be labelled a theory, a view or via some other means; we also recognize that, in any instance, citing even the most accepted ‘theory’ does not substitute for explicating specific causal mechanisms from which one develops precise and refutable predictions (Thomas, Cuervo-Cazurra & Brannen, 2011). Likewise, we do not aim to definitively classify theories within broader disciplinary perspectives, since such assignments are often ambiguous in such a cross-disciplinary domain as IB; we offer some general conclusions in this respect where assignment is straightforward (e.g. transaction cost economics is part of economics), and the reader may find below enough information to draw their own further conclusions.

We do, however, categorize all papers based on the *manner* in which they use theories and contribute to their development. Our categorization builds on two dimensions: (1) the number of theories being used in a given paper and (2) whether the point is to apply and possibly extend a theory, or to narrow it by specifying its boundaries. Regarding (1), the number of theories used differentiates primarily between single-theory contributions and contributions that work with more than one theory (we coded more than two theories where relevant). Regarding (2), we distinguish between analyses that aim to apply one or more theory to extend their reach, i.e. theory applications, and analyses that specify a theory’s boundary, i.e. theory pruning. Altogether, we identify the following categories of uses of theory:

- Among single-theory contributions
 - *Single-theory addition*: This includes papers that centre on demonstrating the explanatory power of a single theory, and aim to provide

thorough and original tests of the theory's predictions. An example is [Hennart's \(1991\)](#) application of transaction cost economics to joint venture vs. wholly owned entry, using firm-level rather than industry-level predictors.

- *Single-theory pruning*: This involves setting boundaries within a theory by ascertaining its core assumptions. For instance, [Cuypers & Martin \(2010\)](#) honed in on the internal logic of real options theory to demonstrate that it applies in one uncertainty condition (exogenous uncertainty) but not inherently in another (endogenous uncertainty).
- Among multiple-theory contributions
 - *Theoretical integration*: This includes papers that bring two or more theoretical perspectives to bear independently on a given phenomenon. An example is [Brouthers' \(2002\)](#) juxtaposition of transaction cost and institutional theories on the study of mode of entry choice and performance.
 - *Acid test*: This involves contrasting two theories in terms of their predictions (and assumptions) so that a test can be conducted that differentiates sharply among them and supports one over the other ([Leavitt, Mitchell & Peterson, 2010](#)).
 - *Theoretical synthesis*: This involves harnessing one theory to specify the boundaries of another (and sometimes vice versa). For instance [Martin & Salomon \(2002, 2003a\)](#) synthesize knowledge-based and internalization theories about the effect of tacitness on entry mode, and then add another layer of synthesis by postulating that these effects also depend on firms' knowledge transfer capacities.

In turn, synthesis may take one of three forms, which are not mutually exclusive ([Boyd, Haynes, Hitt, Bergh & Ketchen, 2012](#)):¹

- *Sample splitting* involves dividing the sample into two or more subsamples, based on one theory, and testing for effects associated with another theory with a view to establishing whether the latter effects differ across subsamples.
- *Moderation* involves a variable associated with one theory interacting with a variable associated with another theory.
- *Mediation* involves one theory's variable operating through another theory's variable.

This categorization allows us to document and reflect on the propensity for international strategy and business researchers to refine and combine

perspectives. It thus contributes to a comprehensive overview of the foundations and use of theory in this IB area.

Methodology

We use Boyd et al.'s (2012) review on the use of contingency hypotheses in strategic management research as a template for the design of this study, using the most relevant portions of it (given the page constraint here) and augmenting it with a co-occurrence network analysis and methodological discussion to generate greater insight into the specific issues associated with the study of the performance effects of (international) strategy.

Since our goal is to assess theorizing and related methodology in international strategy research, we examine a longitudinal set of publications from the most representative IB journal. Specifically, we examine articles published in the *Journal of International Business Studies* (JIBS) between 1990 and 2011, i.e. a 22-year period that we split into two equal 11-year periods in some analyses to detect trends. We focus on JIBS since it is the most prestigious journal in the domain of IB (with a three-year impact factor of 3.557 in 2011), is associated with the largest dedicated scholarly association in this area (the Academy of International Business) and published the largest number of articles on the topic under investigation here. Given the journal's scale and prestige, we take articles within it to contain high-quality theoretical and empirical rigor in IB research, and to be representative of international strategy research.

Our unit of analysis is the individual article. Starting with an initial pool of 1,249 articles that were published between 1990 and 2011, we initially identified all quantitative papers for further analysis. Excluding purely theoretical papers, editorials, book reviews and qualitative papers left us with a sample of 763 quantitative articles. Since we wanted to study the papers that address the relationship between strategy and performance, we then excluded articles which only focused on performance or strategy (but not on both) or that discussed neither performance nor strategy. We used the following keywords to assess whether an article should be considered as an international strategy article: strategy, mode, internationalization, control, ownership, export, contract, franchis, licens, turnkey, management, joint venture, greenfield, acquisition and subsidiary. If one of these keywords was identified as a variable in the study, we retained the article in the sample at this stage. This left us with a sample of 392 articles. Thereafter, we assessed with the following keywords (based on Hult et al., 2008)

whether these articles treated one or more dimensions of performance as a variable in their study:

- Financial: sales, return, profit, earnings, stock price, stock market price, growth, Tobin (for Tobin's q);
- Operational: market share, efficiency, new product, innovat*, quality, productivity, satisfaction, retention, value-added, cycle time, patent, lead time, overtime, market power, stability;
- Overall: reputation, survival, achievement, performance, goal fulfillment, spillover effect.

This left us with a sample of 188 articles that included both strategy and performance as dependent or independent variables. We then excluded articles that used a methodology that does not support the range of methodologies in our categorization (e.g. studies with simple mean comparison tests). This left us with a sample of 160 articles. One coder examined all articles. A second coder examined a random subset, establishing strong inter-coder reliability, which we deem sufficient since all articles were electronically searchable.

To accurately compare the papers, we excluded from the sample articles that discussed only the impact of performance on strategy rather than the effect of strategy on performance (though the remaining articles may have considered the possibility of reverse causation). This led us to exclude six articles from the sample.² Finally, we excluded nine articles that were not comparable with the other articles in the sample for various reasons; these articles dealt with marketing topics, focused on country-of-origin effects rather than strategy, or measured strategy at a level different from the firm and were incommensurable with the rest of the sample. Our final sample contains 145 articles that studied the effect of international strategy on performance.

Our content analysis is organized as follows. First, we report descriptive statistics and trends in the study of the strategy–performance relationship. Second, we report on the different theories used in these articles, using network inference. Third, we report on the manner in which theories get refined or combined, using the categorization of theoretical work described above. Fourth, we discuss how this work can inform thinking about the prospects for IB. Fifth, we provide recommendations for the conduct of future research.

Descriptive Statistics

Our sample includes articles that study the impact of strategy on performance. Fig. 1 depicts the absolute number of those articles published

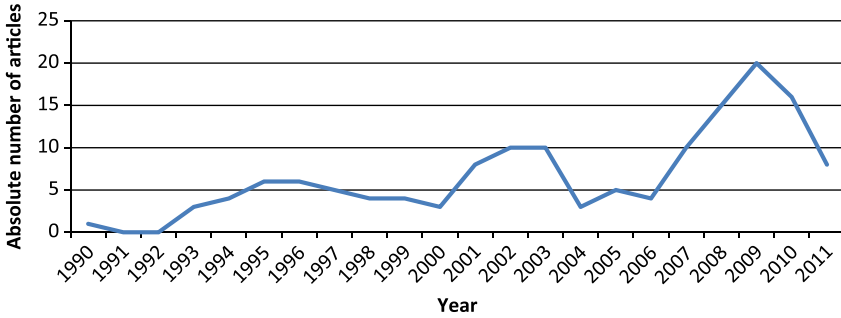


Fig. 1. Absolute Number of Articles Relating Strategy to Performance, Per Year.

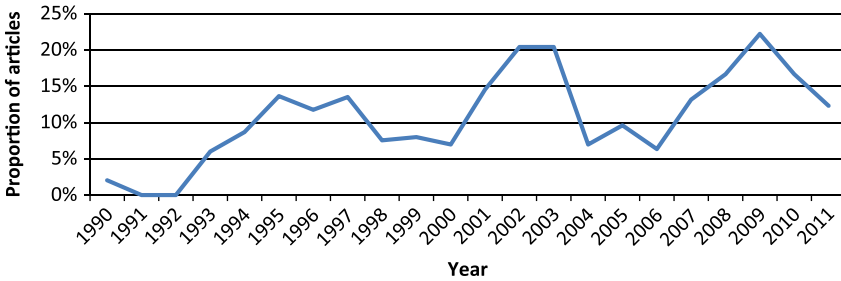


Fig. 2. Proportion of Articles That Relate Strategy to Performance, Per Year.

in JIBS each year. The average for the whole period is 6.59 strategy-performance articles per year, with a rising, if uneven, trend since 1993.

Of course, this trend may simply be due to the fact that JIBS published more articles in recent volumes. Thus, Fig. 2 depicts the relative number of strategy-performance articles, that is the number of strategy-performance articles divided by the total number of articles published in JIBS during that year. On average, 11.6% of the articles in JIBS studied the effect of strategy on performance, although that proportion goes up to 19.0% when considering only empirical articles. Furthermore, we once more find an upward trend, again with peaks and troughs. Overall, these figures show that the study of the link between strategy and performance has become, and remains, one of the main themes in IB research in the last two decades.

THEORETICAL PERSPECTIVES

Overview and Theoretical Perspective-Level Trends

We then classified the sample articles based on their theoretical framing. For this purpose, we used the theoretical labels as reported by authors, except that we combined labels that are unambiguously synonymous, such as the ‘Uppsala model’ and ‘internationalization’ (see the title of the retrospective paper by Johanson & Vahlne (2009)). Most articles explicitly mentioned which theory they used. In other cases, the theories used were coded by reading the introduction, theory and hypothesis development sections of the papers (see also Boyd et al., 2012). The appendix reports the keywords used for this purpose and two examples of papers using each theory.

Table 1 shows the number of times each theory is used per year. The theoretical perspectives are listed alphabetically at this stage. Since one paper can use multiple theories, the total number of theories used exceeds the number of papers examined. The years 1991 and 1992 are excluded since no strategy-performance paper appeared in these volumes (see Fig. 1).

Table 2 reports the counts and frequencies of the theories for two equal time windows, 1990–2000 and 2001–2011, and for the whole study period (‘Total’). We used equal windows for ease of interpretation. In this table, perspectives are listed based on their frequency of use over the total study period. Looking at Tables 1 and 2 allows us to determine that some theories rose or declined in their popularity.

Contingency theory was especially popular in the first period (1990–2000), and lost some of its relative popularity in the second period (2001–2011). It was the most commonly used theory in the first period (used by 16% of papers), and the sixth most common in the second period (6% of the papers); although with the overall number of papers increasing, contingency theory still featured in more papers in the second period (12) than in the first period (10). Another notable drop, and if anything more remarkable given its IB specificity and the role it played in the development of the field, is in the use of the Dunning’s (1973) OLI framework. This was used in 9% of the articles in the first period, but hardly appears in the second period (1%). The absolute number of OLI papers also dropped sharply, from six to one.

Conversely, two perspectives rose sharply in popularity between the two periods: institutional theory and organizational learning. Institutional theory was used in 5% of the articles in 1990–2000 but 15% of the articles in 2001–2011, when it became the most popular theory in studies of the strategy–performance relationships. This is all the more remarkable as institutional

Table 1. Number of Uses of Each Theory, Per Year.

Theoretical Perspective	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Agency					1		2	1					1		2		1	5		1	14
Behavioural decision					1	1			1						1						4
Contingency	1	1	2	4		1			1	2	1	4		1	1	1	1		1		22
Industrial organization		1	1			1	1	2				4					1	2	5		18
Institutional				1			2			3	1	3		1	1	1	5	7	7	1	33
Internalization		1			1				1	2		2		1		1	1	4	2		16
Internationalization				1		1		1				1		1		3	1	1		1	11
Knowledge-based				1	3	1			1	1			1			1	2	6	3	3	23
Network							1			1							3	4	3	1	13
OLI		1	2		1		1	1							1						7
Organizational learning						1		1			4					3	2	4	1	2	18
Population ecology												1			1		1		1	1	5
Product life cycle																				1	1
Real options					1				1					1		1	1		2		7
Resource dependency				2	1				1	1	1	1	1	2		2	1	1	1		14
Resource-based					3	2	1		1	3	2	3	1	1		2	4	5	4	2	34
Social exchange		1									1			2							4
Transaction costs			1	1	1	1		1		1	1			1	2	1	1	2		2	15
Upper echelon											1	1					1	1			4
Total	1	5	6	10	13	9	6	8	6	15	12	20	4	11	9	16	26	42	30	15	263

Table 2. Counts and Frequencies of Theories Used Per Time Period.

Theoretical Perspectives	Unweighted						Weighted					
	Counts			Frequencies			Counts			Frequencies		
	1990–2000	2001–2011	Total	1990–2000	2001–2011	Total	1990–2000	2001–2011	Total	1990–2000	2001–2011	Total
Agency	4	10	14	0.06	0.05	0.05	1.33	6.5	7.83	0.04	0.06	0.05
Behavioural decision	3	1	4	0.05	0.01	0.02	1.17	0.33	1.5	0.03	0	0.01
Contingency	10	12	22	0.16	0.06	0.08	8.5	5.78	14.28	0.24	0.05	0.1
Industrial organization	6	12	18	0.09	0.06	0.07	2.5	6.45	8.95	0.07	0.06	0.06
Institutional	3	30	33	0.05	0.15	0.13	1.33	15.7	17.03	0.04	0.14	0.12
Internalization	3	13	16	0.05	0.07	0.06	1.17	6.58	7.75	0.03	0.06	0.05
Internationalization	3	8	11	0.05	0.04	0.04	2	5.25	7.25	0.06	0.05	0.05
Knowledge-based	6	17	23	0.09	0.09	0.09	2.33	8.58	10.91	0.07	0.08	0.08
Network	1	12	13	0.02	0.06	0.05	1	5.5	6.5	0.03	0.05	0.05
OLI	6	1	7	0.09	0.01	0.03	5	0.5	5.5	0.14	0	0.04
Organizational learning	2	16	18	0.03	0.08	0.07	0.67	10.25	10.92	0.02	0.09	0.08
Population ecology	0	5	5	0	0.03	0.02	0	2.58	2.58	0	0.02	0.02
Product life cycle	0	1	1	0	0.01	0	0	1	1	0	0.01	0.01
Real options	1	6	7	0.02	0.03	0.03	1	4.75	5.75	0.03	0.04	0.04
Resource dependency	3	11	14	0.05	0.06	0.05	1.33	4.86	6.19	0.04	0.04	0.04
Resource-based	7	27	34	0.11	0.14	0.13	3.17	13.53	16.7	0.09	0.12	0.12
Social exchange	1	3	4	0.02	0.02	0.02	0.5	2.33	2.83	0.01	0.02	0.02
Transaction cost	5	11	16	0.08	0.06	0.06	2	6.16	8.16	0.06	0.06	0.06
Upper echelon	0	4	4	0	0.02	0.02	0	2.33	2.33	0	0.02	0.02

theory, at least as espoused by sociologists, is not inherently a theory geared at explaining firm performance (Martin, 2013). Organizational learning was used in 3% of the articles in 1990–2000 and in 8% of the articles in 2001–2011. This rise is all the more noteworthy as it occurred primarily during the last five years of this study (2007–2011) and at a time when this perspective would be considered relatively mature in related management fields.

Furthermore, the other main theories have been quite stable in terms of their popularity with scholars. The resource-based view and the knowledge-based view remained popular theories to explain the relationship between multinational strategy and performance. Industrial organization also remains a somewhat popular theory to explain this relationship. The perspectives that appeared or grew in the later period but remained relatively marginal include real options, social exchange, population ecology and upper echelon theory. Vernon's (1966) classic product life cycle model, another IB-grown idea, appeared only once in our sample. In summary, these relatively marginal theories were used in 9% of the articles in 1990–2000 and 12% of the articles in 2001–2011, reflecting growth in the number of such theories used rather than a breakthrough in the presence of any specific new theory.

Although some less common theories appeared or exhibited jumps in frequency during the second time period (e.g., population ecology and network research respectively), it is also worthwhile noting that no theory used in the first period disappeared altogether during the second period. This shows that theories tend to accrue rather than being weeded out in this research area, a pattern that makes the discussion of theory pruning all the more relevant (see below).

The above patterns are based on incrementing the count of a theory by 1 each time it occurs in a paper. An alternative approach is to weigh each occurrence inversely to the number of theories, i.e. if N theories are used in a paper, each receives a weight of $1/N$ for that paper. As can be seen in the 'Weighted' columns of Table 2, this alternative does not change the results for most theories substantially, though a few points can be noted. First, OLI was comparatively more likely to be used on its own, as befits its comprehensive, multi-level scope (Martin, Swaminathan & Tihanyi, 2007; Peterson, Arregle & Martin, 2012). Another theory that often stands alone is real options, which makes sense since its focus is on risk and the variability of returns rather than their absolute levels (Cuypers & Martin, 2006a, 2006b, 2007). Conversely, contingency theory was more frequently used alongside other theories. Still, overall, our conclusions so far about which theories are core or more marginal, and which saw their use rise and decline, are confirmed by these weighted analyses.

Co-Occurrence Networks

To draw further insights into the intellectual structure of the research topic, we sought to group theories into coherent sets. For this purpose, we conduct an inductive network analysis. In so doing we build on the fact that the majority of the papers in our sample make use of more than one theory (56% in the first period and 59% in the second period) and that all frequently used theories are used alongside one or more other theory in some papers. That makes it possible to identify the propensity of pairs of theories to appear jointly in papers.

We thus calculated the adjacency matrices for the two periods (1990–2000 and 2001–2011) as well as for the entire sample. Each adjacency matrix reports the number of times two theories are used together in one paper. In this analysis, the theories are the nodes and the links between the theories are the papers where the co-occurrence is found. For instance, if a paper used population ecology and contingency theory to explain the link between strategy and performance, we increment the link between population ecology and contingency theory by one unit. Tie strength thus increases when two theories appear more frequently in the same paper.³

Figs. 3–5 show the outcome, with the size of each node denoting how many co-occurrence links (weighted as just described) it has in aggregate with other nodes (theories). The larger the node, the more frequently it is linked with other theories overall. The thickness of the links denotes how

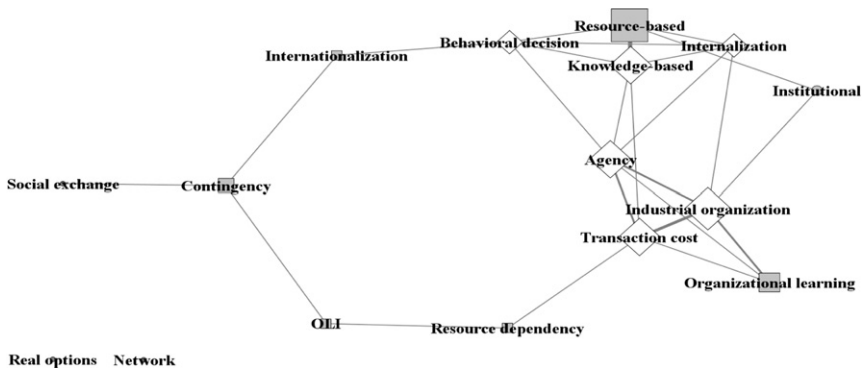


Fig. 3. Co-Occurrence Network for 1990–2000.

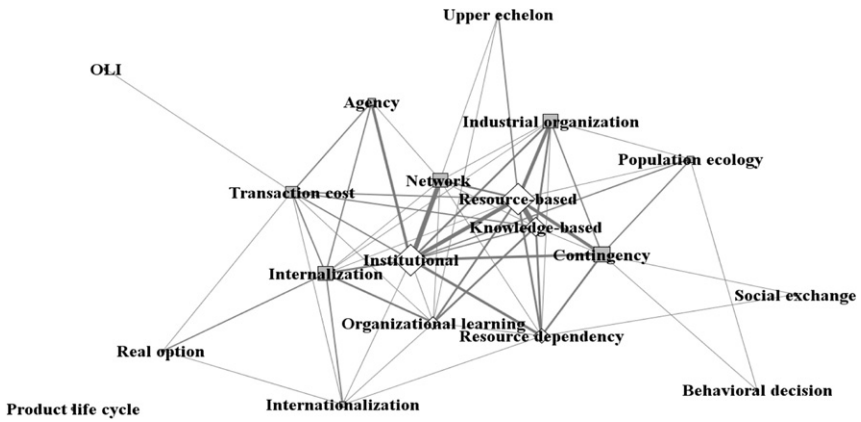


Fig. 4. Co-Occurrence Network for 2001–2011.

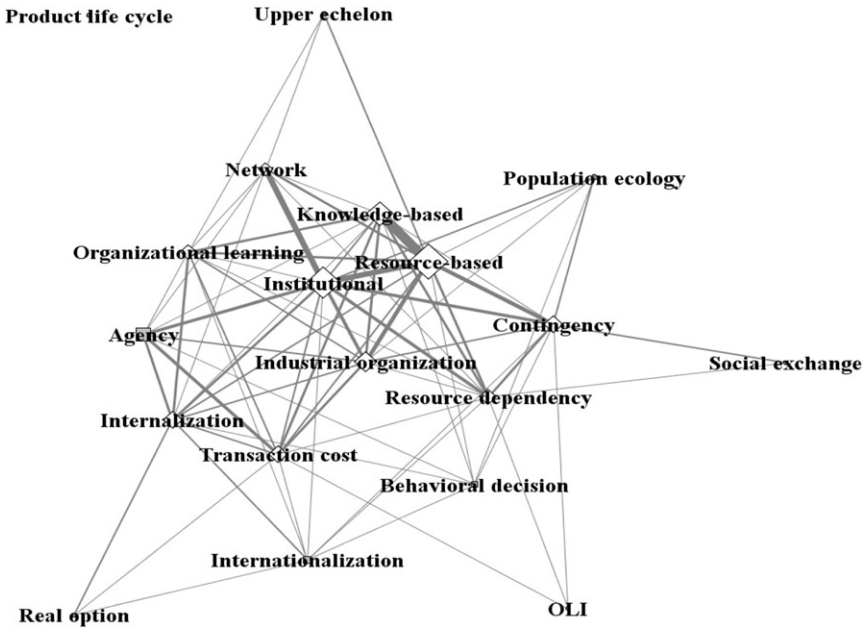


Fig. 5. Co-Occurrence Network for 1990–2011.

many papers link two particular theories with each other, i.e. the tie strength.

In addition, the layout of the networks is not random. We used metric multi-dimensional scaling so that theories cluster around each other when they have strong ties. We then used stress minimization to optimize the layout. For instance, in the figures the resource-based view and the knowledge-based view appear very close to each other, representing graphically the fact that they are the most often used together in one paper. The more distant the nodes (theories) are from each other, the less they are used together in one paper, e.g. in Fig. 4, upper echelon theory was used once each with organizational learning, network literature and the resource-based view, so it lies on the periphery of the network graph. Finally, a theory that appeared only on its own in all papers – i.e. that co-occurred with no other theory – is represented as an isolate. Not surprisingly, isolates are relatively scarce (e.g. product life cycle) or nascent (network theory before 2000) theories.

Moreover, we calculated the closeness centrality of each node. This measures the aggregate closeness to all other nodes in the network (Freeman, 1979). Nodes with high closeness centrality can be regarded as being part of the core of the network (Ronda-Pupo & Guerras-Martin, 2012). Conversely, nodes with low closeness centrality occupy a peripheral position (Ronda-Pupo & Guerras-Martin, 2012). Following Ronda-Pupo and Guerras-Martin (2012), we stratified the nodes in the network into three segments: periphery (shown in black and circle-shaped), semi-periphery (grey and rectangle-shaped) and core (white and diamond-shaped).

Last, we calculated the density of the network for each period. This refers to the completeness of the network (actual number of ties divided by maximum number of ties) and reflects the internal coherence among nodes (Friedkin, 1981). Network density was 0.23 for 1990–2000 and 0.35 for 2001–2011. This increase, though partly explained by the increasing number of papers, is especially remarkable given that network density tends to decrease with the size of the network. Three more theoretical perspectives were used in multi-theory papers in the second period, which tended to depress density; indeed when density for 2001–2011 is computed for the same set of theories as found in the first period, density increases to 0.43. These figures imply that more, and more different combinations of, theoretical perspectives are being used to study international strategy.

We now turn to the substantive interpretation of these graphs in terms of the relationships between theories. First, a general comparison of Figs. 3

and 4 is informative as to which theories become more prominent and central, and which waned, between the first and second period. This analysis shows that internalization, transaction costs, agency and behavioural decision theories have decreased in prominence in the co-occurrence matrix, meaning that they are more seldom found alongside other theories in the literature. These leave room, in the second period, to a growing cluster around the resource-based and knowledge-based views and institutional theory.

The graphs imply that perspectives that were once central to the conceptual development of IB as a scholarly domain, namely internalization theory (and related transaction costs economics and agency theory) as well as internationalization, became less prominent and less central to theoretical recombination in the part of the domain of interest here. This is all the more important as we found, as discussed earlier, that the study of the strategy-performance link is itself gaining in prominence within IB.

In terms of closeness centrality, the graphs imply that theories that originated within IB (internalization, OLI) and related ones grounded in economics (agency theory, transaction costs) have become more peripheral over time. At the same time theories originating in strategic management grew in prominence (resource-based view) or started appearing (upper echelon theory). Furthermore, theories associated with macro-organization research (network, resource dependency) also grew in importance over time. Although the assignment of some other theories to broader disciplines is more ambiguous, the general pattern implies that theoretical IB conversations increasingly feature perspectives from strategic and organizational management.

This is not to say that classical IB theories are disappearing. Their apparent drift to the periphery may actually indicate that they are more often used as stand-alone theories, befitting their specialized nature and their ability to explain IB outcomes on their own. Internalization theory, in particular, remains a relatively central node and one that is quite frequently used (indeed, per Table 2, its relative use grew). However, other IB-grown perspectives are declining, and in general they and economic theories are less a part of the theoretical debates in international strategy and business.

The changing landscape of theory in international strategy also implies a change in the intensity of theory combinations. Thus, we turn next to the investigation of *how* theories are used individually and jointly in this IB area.

MANNER OF THEORY REFINEMENT AND COMBINATION

Overview

The co-occurrence of theories as described above makes it all the more important to understand how theories are brought together, i.e. in what ways they feature jointly in international strategy research. As indicated in the Concepts section above, theories can be used differently, whether alone or alongside other theories. A paper may use a single theory to introduce it or expand its application (single-theory addition); use multiple theories independently to explain a given phenomenon (theory integration); revisit one theory to challenge its core assumptions and narrow rather than expand its scope (theory pruning: single theory pruning); pit two or more theories directly against each other with a view to sorting them out (theory pruning: acid test); or use multiple theories with one theory specifying the boundaries of the other theory (theory synthesis). Theory synthesis can in turn be done via splitting the sample, moderation and/or mediation analysis. Table 3 summarizes, per period and overall, how papers go about using theory in accordance with this categorization.

As Table 3 indicates, no approach to theory diminishes in absolute frequency of use between the first and second period, and new approaches to synthesis appear. That is, the range of approaches to theorizing is getting broader in empirical international strategy research.

Starting with the major categories identified in bold in Table 3, the single most common approach in each period is the use of a single theory, typically to expand its use rather than refine its boundaries. However, the most notable increase is in the number of articles doing a theoretical synthesis; this rose fivefold between 1990–2000 and 2001–2011.

In general, these data show that the use of multiple theories is on the rise. During the second period, one fifth of the strategy-performance articles theorized by actively combining perspectives – mostly as synthesis (23%), but also as acid tests pitting one theory against the other (3%). Thus, empirical strategy papers published in JIBS have combined theories in increasingly complex ways.

We next compare trends in theory addition vs. theory pruning. Although single-theory addition is the most common category, its share declined slightly over time (from 42% to 38%). Meanwhile, the share of theory pruning went up (from 5% to 8%, combining single-theory and acid test versions). This dual pattern is important because, absent systematic efforts

Table 3. Categories of Theorizing Per Time Period.

	Counts			Frequencies		
	1990–2000	2001–2011	Total	1990–2000	2001–2011	Total
Single-theory addition	16	41	57	0.42	0.38	0.39
Theoretical integration	15	33	48	0.39	0.31	0.33
Theory pruning , of which:	2	9	11	0.05	0.08	0.08
Single-theory pruning	1	6	7	0.03	0.06	0.05
Acid test	1	3	4	0.03	0.03	0.03
Theoretical synthesis , of which:	5	25	30	0.13	0.23	0.21
Split sample (alone)	0	2	2	0	0.02	0.01
Moderation (alone)	2	15	17	0.05	0.14	0.12
Mediation (alone)	3	3	6	0.08	0.03	0.04
Both moderation and split sample	0	3	3	0	0.03	0.02
Both moderation and mediation	0	1	1	0	0.01	0.01
Both mediation and split sample	0	1	1	0	0.01	0.01

to discover the limitations of extant theories, the explosion in the number of theories that we documented would give rise to ever more ambiguity in the field's theoretical apparatus (Cuypers & Martin, 2010; Leavitt et al., 2010). In this respect, it is hopeful that the rise in the absolute number of single theory-adding work has been accompanied by a numerically lesser, but relatively growing, amount of effort at determining the boundaries of theories.

Turning to the sub-categories of Table 3, theory pruning encompasses two approaches, namely single-theory pruning and the acid test. Both approaches are used more often in the second period. Since there was only one single-theory pruning paper and one cross-theory acid test paper in the first period, it is not very meaningful to compare the rates of use of these approaches across time periods. It appears that the single-theory pruning approach became somewhat more popular than the acid test approach (seven vs. four instances in the second time period). While this is relevant when it comes to theories that are relatively specialized or stand-alone, such as real options (Cuypers & Martin, 2010), the relative scarcity of acid tests begs the question of whether and how the theoretical landscape may be 'cleared' when it comes to the multiple-perspective contributions which we showed are becoming more frequent.

Approaches to Theoretical Synthesis

For this purpose, we examine the use of theoretical synthesis in more detail. The data show a growth not only in its frequency, but also in the diversity and complexity of manners in which it is conducted between the two periods. The theoretical synthesis articles in 1990–2000 only used moderation or mediation approaches, and no paper used both – though the number of papers involved was admittedly small in that period (five). By contrast, in 2001–2011, split sampling was also used and combinations of these three approaches also came into being (Fig. 6). While mediation was the most frequently used way to synthesize two or more theories in 1990–2000 (albeit based on just five cases), in 2001–2011 moderation was the most frequently used single approach. Furthermore, while mediation was still used and sample splitting came into use, both approaches were often used together with moderation. In particular, sample splitting was used more often in combination with moderation than alone. This can be seen both as a positive and as a negative sign. On the positive side, this reflects the complementarity between these approaches, and suggests that researchers

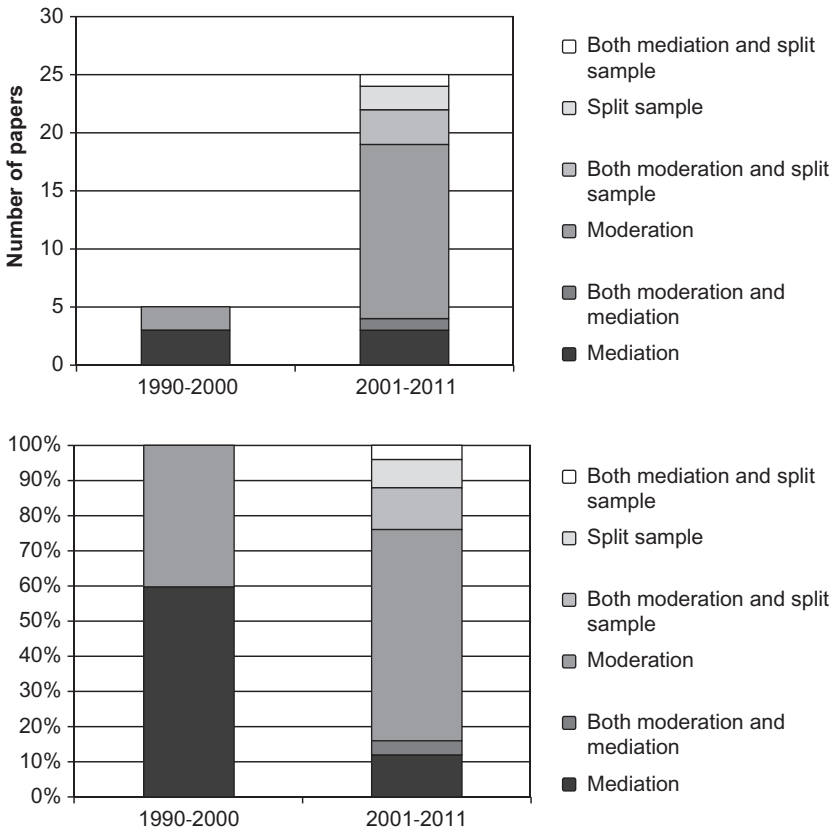


Fig. 6. Theory Synthesis Sub-Categorization: Absolute and Percentage Distribution.

are more thorough in evaluating their moderation results. On the negative side, this indicates that some of the most powerful uses of sample splitting for the field, namely in explicating the differences between contexts that are so distinctive to IB in general (Koen, 2005; Kotabe, Martin & Domoto, 2003; Martin, Salomon & Wu, 2010), may be understudied in recent research (Martin, 2013).

It is also worth noting that the use of mediation has stagnated in terms of its absolute numbers, as well as declined sharply in relative terms. It thus accounted for 20% of syntheses during the 2001–2011 period (including combinations with moderation or sample split), down from 40% in

1990–2000. Yet mediation is especially suitable for establishing the causal structure of phenomena, partly because it is inherently a causal methodology (Miller, del Carmen Triana, Reutzler & Certo, 2007; Pearl, 2009). This implies that empirical work in international strategy, and we suspect in IB more generally, is lagging in explicating the causal structures that are inherent to complex foreign expansion phenomena. This is all the more unfortunate as panel data, of the type that is increasingly available to IB scholars and underlies many other approaches to synthesis, can also enable powerful mediation testing (MacKinnon, Fairchild & Fritz, 2007).

Conversely, in the second time period, full 76% of the theoretical synthesis articles used moderation (alone or with a combination of mediation or split sampling) to synthesize two or more theories. Although this development may be welcome with respect to the incorporating contingencies into international strategy reasoning (see also Boyd et al., 2012), one methodological implication is worth highlighting: Interaction models are comparatively complex to interpret, and they may yield little practical insight, particularly when the dependent variable is limited or is a count variable (Shaver, 2007). This limitation extends to the case of multilevel (Peterson et al., 2012) and conditional or mixed outcomes (Martin et al., 2007).

DISCUSSION

Having documented the changing prevalence of various theoretical perspectives in empirical papers in international strategy published in JIBS, and changing patterns in the way these papers use individual theories or set of theories, we can now return to the question set out at the beginning of this paper: Is this evidence of progress, maturity or exhaustion in the development of scientific ideas and evidence in this critical area of IB scholarship? That is, is the area bound to decreasing returns, or conversely one of on-going and even greater opportunity (Martin, 2013; Shaver, 2013)?

Progress

Starting with the most optimistic side of the argument, we see some evidence of progress for international strategy research in our data. First, and perhaps most obviously, there has been an increase in the number of publications on this topic in the leading IB journal (JIBS), both in absolute

and relative to other topics (Tables 1 and 2). Thus, the ‘market for ideas’ – or more precisely the editorial process – demonstrates increasing interest in the issues that link MNC strategy and performance, and acceptance of this work into print, although analysis outside the scope of this study, such as of forward citations, could tell us yet more about whether this acceptance is accompanied by impact.

Second, we see a positive sign in the fact that the trends towards extra theory and extra methodology that we discussed earlier as separate phenomena are actually occurring *simultaneously*. At the same time when more theories are being used (overall as well as per paper), more complex and plausibly more thorough methodologies for separating out main and contingent effects are being implemented. This simultaneity appears to be purposeful, with researchers being aware of the requirements of testing their theories and following these requirements. Further research could examine whether the extra theory and the extra methodological attention occur at the level of individual papers (rather than at the level of the field as documented here), for it bears remembering that methodological sophistication alone and for its own sake – and likewise theoretical sophistication alone – is no guarantee or indicator of progress (Shaver, 2013). However, our evidence provides grounds for optimism that the international strategy field is growing to encompass a broader theoretical *and* methodological toolkit in a manner that helps future IB researchers maintain appropriate fit between predictions and the means of testing them.

Exhaustion

Turning next to the most pessimistic case, some potential signs of exhaustion, and even decline, can be found in some facets of the field. First, there is a relative, and in some cases absolute, decline of some theories, which we documented quantitatively and graphically as the literal marginalization of perspectives arising from economics and some born within IB. Our data document the rate and scope of a pattern that key representatives of these perspectives became concerned about 10–15 years ago (Buckley & Casson, 2001; Caves, 1998). Arguably, displacement of some theories by others is a healthy development in the evolution of IB as science (Kuhn, 1970). Indeed, John Dunning (2007), another foundational IB scholar, welcomed such a development insofar as it was borne out of recognition of the growing role of organizational and social factors in practice and in scholarship. However, this re-centring of the field implies

that IB as a stand-alone discipline, and by extension primarily IB-trained scholars, can expect to face an on-going legitimacy challenge relative to related and ancillary academic fields. This is also borne out, and indeed reinforced, by casual observation of the decline in the number of independent IB academic departments and Ph.D. programmes.

A second potential concern is whether the propensity to combine theories is not so much a sign of healthy progress as of defensive cobbling, as might happen if the gaps in one primary theory get stubbornly patched by introducing elements of other theories rather than recognizing the need for an outright alternative to the primary theory (Lakatos, 1999). However, we see as more compelling a more virtuous interpretation of our results, whereby the theories that have become central to the field explain different and complementary levels (firm resources, interfirm networks, institutional environment) that genuinely interact with each other (Peterson et al., 2012). This development may also allow more thorough and more differentiated coverage of the different corporate functions (R&D, manufacturing, production etc.) as they pertain to international strategy themes such as alliances and outsourcing (Gospel & Sako, 2010; Martin, 2002). Analyses of the path of individual theories and of their combinations, and of the sub-topics thus covered, may shed further light on this.

Maturity

We turn, finally, to a milder but nevertheless interesting possibility. Is international strategy, and indeed much of IB, simply exhibiting signs of maturity, i.e. is it achieving a state where a creditable balance of reinforcement and replacement accompanies the steady, if unspectacular, accretion of knowledge? We see two plausible signs of this in our data.

First, we documented a relatively modest, but important uptick in the use of theory pruning. This now consists of more single-theory pruning (e.g. Cuypers & Martin, 2010) than acid tests – perhaps because the latter require strong *ceteris paribus* conditions that are difficult to attain in IB settings (see Leavitt et al., 2010). Unfortunately, the raw numbers also suggest that there is still deficit of pruning relative to addition. Nevertheless, we find evidence that some active cleaning up of the theoretical apparatus of international strategy is occurring, along with the abandonment of some perspectives. All of this is consistent with a science in progress, where theoretical perspectives are pitted against each other on their merit in solving empirical questions and ultimately in informing practice (Laudan, 1977).

Second, IB scholars have engaged in a healthy amount of give-and-take with related topical areas, which is consistent with the flow of perspectives across Figs. 3 and 4. Three examples illustrate versions of this give-and-take. First, knowledge-based research originated both in IB (Kogut & Zander, 1993) and strategy (Grant, 1996) and is experiencing progress in both fields (Martin & Salomon, 2003a, 2003b; Salomon & Martin, 2008). Second, institutional theory, although it was first formalized outside of IB, has received ground-breaking input from IB research (e.g. Kostova & Zaheer, 1999). Third, real options theory originated outside IB but has been tested and pruned by IB scholars in a manner that would be all but impossible in other contexts (Cuypers & Martin, 2007, 2010; Kogut, 1991).

Towards Closure

This pruning and give-and-take leads us to conclude that maturity is a better description of the state of international strategy research – and plausibly of IB more generally – than outright expansion or exhaustion. As IB scholars have gained a stronger understanding of the (institutional) environment as well as the strategic and organizational dimensions of the MNC, international strategy has established a robust foundation that supports both contingency building within IB and the exchange of concepts and empirical findings with other fields.

This is not to ignore the relative inadequacies and failings of the field as discussed earlier, or the very real threats to its academic legitimacy. For example, the relative growth of international strategy within IB, which we have documented, is no guarantee that this area of IB can stand its ground relative to other areas of strategy scholarship. But equally, our analysis implies that the rise and (mostly relative) fall of various theories and methods within IB is not a matter of the field failing to add insight. Rather, it corresponds to the field encompassing a finer-grained understanding of interfirm and environmental contingencies, with a matching refinement of the approach to testing the contingencies and limitations of various theories.

RECOMMENDATIONS AND CONCLUSION

This paper demonstrates that the study of the relationship between international strategy and performance is a vibrant topic, as befits one of

the central themes in IB. Besides the sheer number of studies being published, we show that there has been a rise in the number of theories advanced in the pursuit of this topic. Although economic and IB centred perspectives remain in use, there has been a general movement – at least in the pages of JIBS over the last 22 years – towards greater use of strategic and organizational management arguments. Furthermore, the associated theories are increasingly used as components for developing more complex predictions in individual papers.

For this reason, it is also relevant to note that the manner in which theories get used has changed, with more papers using one theory to set boundaries to another. While less prevalent, efforts at theory pruning are also gaining some ground, although perhaps not fast enough to keep up with the explosion of theoretical claims and the combinations being applied. Altogether, we provide consistent and systematic evidence that the strategy-performance articles published in JIBS are becoming more complex, and plausibly more sophisticated, over the years. The balance of theory accretion with the various approaches to adding or reducing the theoretical landscape will, in our opinion, become more important in IB and particularly with respect to research on the strategy-performance relationship. This will be critical if IB research is to remain both pragmatically fruitful and academically sound.

Recommendations

Having illustrated the areas of co-occurrence and potential complementarities between theories – and by default having also shown those (perhaps implausible) pairings that could yet be pioneered – we will not endeavour here to guess what theory(ies) or combinations require more emphasis. However, our findings allow several recommendations regarding topic definition and the conduct of research.

First, a thorough understanding of the international strategy-performance relationship cannot be attained without overcoming the conceptual and methodological hurdles raised by endogeneity, and specifically self-selection. Although the range of solutions is becoming better understood and applied within IB (Reeb, Sakakibara & Mahmood, 2012), Martin (2013) showed that some of the most powerful methodology for assessing the strategy-performance relationship remains underutilized. Furthermore, this is not just a matter of econometric modelling. Progress in this area requires a firm conceptual grasp of the factors that affect self-selection, even

if some of these are unobserved, and sharp theorizing about the mechanisms that underlie performance. That is, theory and empirics go hand-in-hand (Martin, 2013).

Second, a related gap in the literature we reviewed pertains to the attention given to reverse causation and the specification of intervening mechanisms. Greater attention to feedback and causal mechanisms, and to mediating factors, would advance the field and strengthen its inferences. Again, this is a matter of theory as well as methods.

Third, we found that there remains a gap in the effort given to pruning our theories. In assembling the data for this study, we found a remarkable scarcity of replication studies. A rare instance, and compelling in correcting fallacies of earlier trust research in IB, can be found in Wasti & Wasti (2007). Partly, this scarcity results from the editorial policy of JIBS, though the issue is hardly limited to IB (Singh, Ang & Leong, 2003). In any instance, replication as well as extension should plausibly become a greater part of the apparatus of a mature IB field where theories get refined and pruned more systematically.

Contributions and Conclusion

We have documented the changing prevalence of various theoretical perspectives in international strategy. In so doing, we introduced a network-graph tool for the representation of bibliometric patterns, which we believe is new to IB. We have demonstrated a parallel pattern whereby theories are used increasingly in combination with each other, although our analysis of the manner of these combinations unearthed some gaps. Overall, our study informs an important debate about the prospects and future of a key area of IB (Martin, 2013; Shaver, 2013). We find, overall, that the parallel development in theory and in empirics is suggestive of a maturing field that participates in meaningful exchange with related fields – although this may come at the cost of, or perhaps simply reflect the existence of, some loss of theoretical independence such that IB functions less as a stand-alone field.

NOTES

1. Venkatraman (1989) identifies yet more forms of synthesis such as gestalt or profile deviation, but we could not find evidence of their use in the research reviewed here.

2. This indicates that very few articles deal with the feedback effect of performance on strategy, and this is especially so in recent years. This is consistent with the relative decline in attention to theories that could support such research, such as behavioural decision theory. Still, further work dealing with feedback as well as reverse causation would seem well warranted.

3. In the same spirit as for Table 2, we also created versions of this analysis that assign lower weights to each co-occurrence when more than two theories were used in one paper. The weighting scheme is more complex and the alternative results less interpretable due to the network nature of the data used at this stage, but in any case the results are similar to those presented here.

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APPENDIX THEORETICAL PERSPECTIVES: KEYWORDS AND REPRESENTATIVE WORKS

Theoretical Perspectives	Keywords	Examples
Agency theory	Information asymmetry, contract, moral hazard, alignment of interests, risk sharing	Gande, Schenzler, & Senbet (2009) Zou & Adams (2008)
Behavioural decision theory	Aspiration level, target performance, satisficing, goals, goal setting, managerial hubris in decision making	Seth, Song & Pettit (2000) Dow (2006)
Contingency theory	Organizational size, structure, fit	Roth & Morrison (1990) Woodcock, Beamish & Makino (1994)
Industrial organization	Market structure, competition, market position, timing of entry, concentration	Luo (1998) Li, Zhou & Shao (2009)
Institutional theory	Conformity, legitimacy, isomorphism, institutionalization, institutions	Aybar & Ficici (2009) Chacar, Newburry & Vissa (2010)
Internalization theory	Intangible assets, market imperfection	Filatotchev & Piesse (2009) Doukas & Lang (2003)
Internationalization theory	Incremental process, learning, sequential internationalization	Contractor, Kundu & Hsu (2003) Barkema & Drogendijk (2007)
Knowledge-based view	Knowledge, knowledge transfer, capabilities	Liu, Li, Filatotchev, Buck & Wright (2010) Makino & Delios (1996)
Network literature	Network, relationships, centrality, embeddedness	Danis, Chiaburu & Lyles (2010) Chen & Chen (1998)

Appendix (Continued)

Theoretical Perspectives	Keywords	Examples
OLI	Internalization, ownership advantages, location	Wooster (2006) Brouthers, Brouthers & Werner (1999)
Organizational learning	Learning, experience, knowledge	Bouquet, Morrison & Birkinshaw (2009) Ellis (2011)
Population ecology	Density, legitimacy, competition, population, specialists, generalists	Zhou & Li (2008) Zhou & Van Witteloostuijn (2010)
Product life cycle theory	Product life cycle, exporting, sequential internationalization	Cassiman & Golovko (2011)
Real options theory	Portfolio, real options, strategic investments	Chung, Lee, Beamish & Isobe (2010) Pantzalis (2001)
Resource dependency theory	Power, dependence, interorganizational relations	Cadogan, Diamantopoulos & Siguaw (2002) Murray, Kotabe & Zhou (2005)
Resource-based view	Assets, capabilities, resources, competitive advantage, organizational performance	Erramilli, Agarwal & Dev (2002) Morosini, Shane & Singh (1998)
Social exchange theory	Exchange relation, approval, status, reputation, flexibility and trust, distributive justice	Luo (2002) Griffith & Myers (2005)
Transaction cost theory	Governance structure, outsourcing, vertical integration, opportunism, asset specificity, uncertainty	Wooster (2006) Zhang, Li, Hitt & Cui (2007)
Upper echelon theory	Senior management, CEO	Fernhaber, Gilbert & McDougall (2008) Herrmann & Datta (2002)