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A Critical Perspective on the Measurement of Performance in the Empirical Multinationality and Performance Literature

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Abstract:

This paper contributes to the core research in international business (IB), namely the relation between multinationality and performance, and is concerned with the quality of past empirical research designs. On the basis of 49 studies, we critically evaluate the match between performance measures used in empirical studies and the underlying theoretical streams that explain the effects on benefits and costs of multinationality. Our findings indicate that authors still largely rely on overall financial performance measures. Theoretical arguments, in contrast, refer to specific benefit and cost positions that are better reflected in operational performance indicators. In our view, the idiosyncratic choice of the performance measures contributes to the varying results in past studies. We offer suggestions for improving future research designs.

INTRODUCTION

For decades, the multinationality and performance (M/P) literature is concerned with theoretical and empirical research on how internationalization affects performance and this remains top of the research agenda in international business (IB) (Griffith et al., 2008; Seno-Alday, 2010). Developing an understanding of the impact of internationalization efforts on performance is relevant both, to theorists in the field, and to managers. Researchers aim at developing theories on the M/P-relation that are generally applicable, simple and accurate (e.g. Contractor, 2012; Verbeke and Forootan, 2012). As multinational enterprises (MNE) are not always more profitable than national firms, management is likewise highly interested in understanding whether their sometimes distressful internationalization efforts are good for their business. Management needs to understand how they can actively manage costs and benefits resulting from (strategic) decisions in their international activities (e.g. Garbe and Richter, 2009; Ruigrok and Wagner, 2003; Lu and Beamish, 2004). Theory development and empirical testing aim at delivering recommendations to managers on how to proactively shape the M/P-relation or manage the success of their international operations, yet no unambiguous M/P-relation can be identified so far (see Yang and Driffield, 2012; Kirca et al., 2011).

A variety of theoretical streams rather than an overarching theory explaining the impact of multinationality on specific benefits and costs in MNEs characterize the field. Matysiak and Bausch (2012) identify 31 different theoretical streams and arguments on the M/P relation (in 49 studies), among the most prominent are internalization, portfolio, and transaction cost economics, each with its own benefits and costs of multinationality. This theoretical variety has led authors to develop meta-frameworks for structuring the arguments on benefits and costs: Benito and Tomassen (2003) refer to the resource-based view, to location and production economics, and to transaction cost theory; they structure arguments along Dunning's ownership (O), location (L), and internalization (I) categories (Dunning, 2001). Sethi and Judge (2009) develop two benefit categories, namely benefits (in their terminology, *assets*) of foreignness and of multinationality. Goerzen et al. (2013) differentiate the costs (in their terminology, *liabilities*) (also Zaheer, 1995) of foreignness into costs arising from complexity, uncertainty and discrimination. These benefit and cost categories are used to derive hypotheses on the overall performance impact of multinationality. Authors then try to empirically measure or support the hypothesized M/P-relation.

In empirical studies, the measurement of performance is among the thorniest issues that confront researchers (Venkatraman and Ramanujam, 1986) in any management discipline. Yet, especially IB struggles to operationalize performance due to deviating international accounting standards for example (Hult et al., 2008; Ariño, 2003). Verbeke and Brugman (2009) discuss the quality of the performance measurement in empirical IB studies and note that it is still far from being standardized. However, an overwhelming majority of studies measure performance in terms of overall financial performance such as (risk-adjusted) profitability ratios and market value indicators (see Matysiak and Bausch, 2012; Richter, 2010; Li, 2007). Although typical for strategy research, we argue that studies can profit from incorporating more operational performance indicators, such as efficiency measures. This is in line with Venkatraman and Ramanujam (1986), who note that “the inclusion of operational performance indicators takes us beyond the ‘black box’ approach that seems to characterize the exclusive use of financial indicators and focuses on those key operational success factors that might *lead* to financial performance” (p. 804). Our key research focus is the use of performance measures in empirical IB research and its fit with the theoretical arguments outlined in the M/P literature. The contribution we make is a critical review of the translation of theories into empirical practices. In doing so, we need to ask whether the high reliance on financial performance indicators is due to the fact that they best reflect the theoretical costs and benefits of internationalization. We will show that this is not the case and will evaluate (the potential advantages and disadvantages of) operational indicators as an alternative way of measuring performance.

To elaborate on the match between theory and the operationalization of performance in the empirical M/P literature, we build on the 49 studies outlined in Matysiak and Bausch (2012). We discuss how the literature has measured performance as well as its underlying benefit and cost positions. We then discuss the theoretical arguments on the benefits and costs attributed to international activity. Finally, we analyze and critically evaluate the match between theory and empirical research and outline recommendations for research.

HOW THE M/P LITERATURE HAS MEASURED PERFORMANCE

Following Venkatraman and Ramanujam (1986) we differentiate between financial, operational, and organizational effectiveness performance (see also Hult et al., 2008; Li, 2007).

Financial indicators reflect the fulfillment of an MNE's economic goals in financial terms and form the narrowest conception of business performance. Typically, indicators follow an accounting-based logic and refer to profitability ratios (e.g. return on sales). Market-based financial indicators take the investor's view (e.g. cumulative abnormal returns, market-to-book ratio, excess value) and concentrate on or involve risk considerations (e.g. beta or risk-adjusted profitability ratios). All these approaches follow a financial orientation and assume the dominance of overall financial goals in firms. The broader conceptualization of performance is operational performance. Operational indicators focus on those key determinants of success that might lead to financial performance (Venkatraman and Ramanujam, 1986). Operational performance covers two types of outcomes: product-market outcomes (market share, new product introduction, and product quality) and internal process outcomes (such as efficiency, productivity, employee satisfaction, and cycle time) (Hult et al., 2008; Li, 2007). Finally, overall effectiveness measures include reputation, survival, achievement of goals, performance in relation to competitors, etc. (Hult et al., 2008; Venkatraman and Ramanujam, 1986). The latter is of a very strategic type and can be further shaped in terms of content along the MNE's performance goals.

Literature reviews on the M/P relation all conclude: empirical IB research is characterized by a dominance of financial performance indicators; operational and effectiveness measures are rarely found (Yang and Driffield, 2012; Matysiak and Bausch, 2012; Richter, 2010; Hult et al., 2008; Li, 2007). The overwhelming majority of studies refer to overall profitability measures, such as return on assets or on sales (see Table 1).

	Financial performance	Operational performance	Organizational effectiveness performance
In: Matysiak and Bausch, 2012	83 measures, thereof dominant: profitability ratios 34%, market value indicators 27%, and risk-adjusted indicators 17%	7 measures used; all of these were sales growth* (100%)	0 measures
In: Hult et al., 2008	69 measures, thereof dominant: return on assets and other profitability measures 55%	41 measures, thereof dominant: market share 44%, and productivity 20%	30 measures, thereof dominant: perceived overall performance 47%, and performance relative to competitors 20%

Table 1: Performance Measures Used in IB studies on the M/P Relationship

* Some authors refer to sales growth as an operational performance indicator (see Li, 2007); others assign sales growth measures to financial performance (see Hult et al., 2008).

(Sources: based on Matysiak and Bausch, 2012; Hult et al., 2008)

More than 50% of all studies (29 of 49) analyzed in Matysiak and Bausch (2012) apply one single indicator as dependent variable, 14% use two, and 20% choose three indicators, yet almost all indicators seek to measure financial performance. Similarly, Hult et al. (2008) report that 59% of studies use a single performance indicator type, which in most cases relates to financial performance. If applied, indicators that operationalize operational performance involve market share and productivity. Indicators referring to effectiveness involve perceived overall performance or performance compared to competitors. Cost efficiency indicators quantifying the underlying determinants of operational success and overcoming a few of the shortcomings associated with accounting-based profitability measures are rarely employed (yet some authors elaborate on efficiency, see Richter, 2014; Ruigrok and Wagner, 2003; Gomes and Ramaswamy, 1999;).

Overall profitability measures involve much noise (Li, 2007): For the calculation of return figures, such as return on assets, authors refer to the net income or EBIT, and divide this by the total (fixed) assets (Figure 1). In the process of calculating these figures, not only benefits reflected in revenues but also every cost position and every *function of expense* is taken into account. Moreover, overall profitability measures are influenced by both, national and international activities, which makes it difficult to separate the true international determinants of performance.

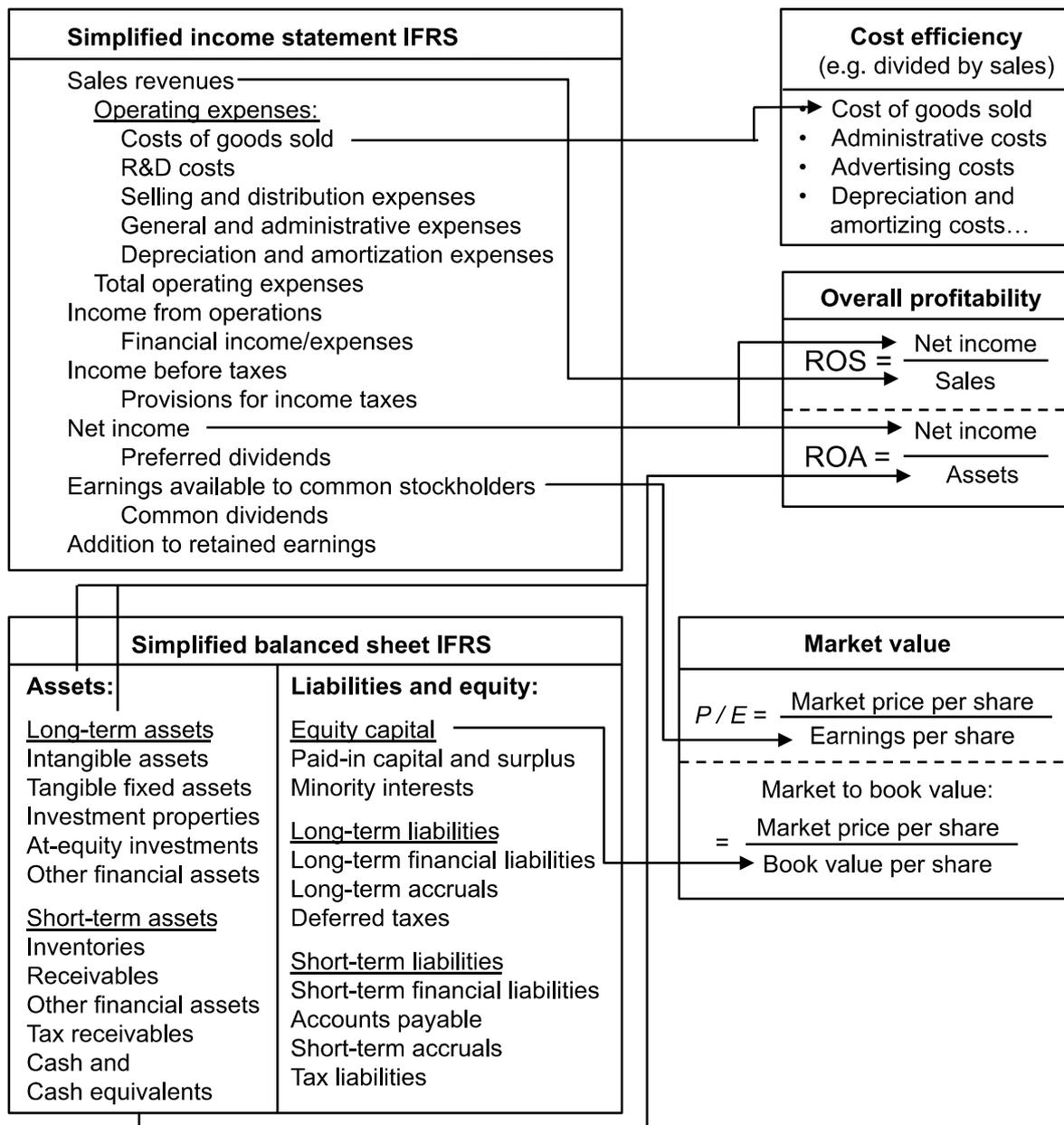


Figure 1: Elements of Performance Measures Used in IB Studies on the M/P Relationship

(Sources: based on Li, 2007; Mackenzie et al., 2014)

For instance, if a firm operated abroad in order to benefit from lower input prices, this would become visible in lower costs of goods sold. Yet, it may not affect overall profitability, owing to other factors that may supersede the influence on profitability, such as higher information or administrative costs (e.g. Gomes and Ramaswamy, 1999). A remedy would be to use control terms in more complex research models (e.g. controlling for information costs) or incorporating moderators or mediators – yet, this is mostly not the case in studies. Furthermore, if asset positions (yet also other overall profitability measures) are used – there is strong noise stemming from accounting standards and ‘window dressing’ by managers (Brigham and Ehrhardt, 2008). Similar issues affect the

use of market value indicators: They involve financial marketplace data (e.g. stock price) and are supposed to reflect the market's perception of the firm's current and future value (Gallagher and Andrew, 2003). Therewith, the number of influencing external factors is even higher than that of profitability measures (Verbeke and Brugman, 2009). Finally, organizational effectiveness measures often build on survey or primary data, as they are supposed to reflect strategic aspects of, for instance, company survival, achievement of goals, or reputation. Again, these might involve various determinants. Operational performance indicators, which focus on productivity and cost efficiency aspects, are closer to operations and involve less noise. They quantify specific benefits and costs, such as the costs of goods sold, marketing costs, depreciation, etc. and therewith the underlying key factors of operational success, namely productivity and efficiency (Li, 2007; Venkatraman and Ramanujam, 1986).

HOW THEORETICAL M/P-APPROACHES DEFINE PERFORMANCE

Matysiak and Bausch (2012) reviewed three international business journals (*Journal of International Business Studies*, *Journal of Management Studies*, and *Strategic Management Journal*, following best practices by Pisani, 2009; Werner and Brouters, 2002) from 1976-2012 and selected all articles that focus on MNE performance on the corporate level. They identified 49 studies focusing on the empirical analysis of the M/P relation, provide an overview of the performance measures used and offer a collection of the main theoretical arguments underlying the research designs. We use their collection to discuss the theoretical approaches applied in the M/P literature that justify an impact of internationalization on performance. Therein, 31 theoretical arguments on performance antecedents are highlighted. Most authors refer to more than one argument, which can be part of more than one theoretical approach. The most prominent arguments appear in Figure 2, with risk, knowledge/learning, economies of scale/scope, internalization and portfolio aspects as the dominant arguments. These are in part intertwined (e.g. the risk argument is part of portfolio theory, and economies of scale and scope are part of internalization theory). We will review these arguments and theoretical streams which offer a good representation of relevant positions in the field (notwithstanding that the relative frequencies of theoretical approaches or arguments might be affected by the selection of journals).

Transnational *portfolio* investments induced by differences in interest rate structures are among the oldest arguments in IB (Iversen, 1935). Portfolio investments are seen as a

possibility to reduce *risk* by investing in unrelated markets (Markowitz, 1959; Cohen, 1972; Severn, 1974). As shown by Rugman (1976), foreign activities are inversely related to the risk of a firm's returns and therewith a benefit of internationalization. Both portfolio and risk arguments are still prominent. Hymer (1976) shifted the focus to the firm itself and its operations abroad. He asserted that the rising share of foreign direct investments by firms could no longer be explained by benefits stemming from the interest rate or portfolio investment theory. The investing firm must possess a *special advantage* to outweigh the disadvantages (or costs) that occur by being foreign in a market, which finally leads to a positive performance outcome. This is closely connected to the theory of *market power* (mentioned in 24% of studies) and *imperfect markets* in which firms have special advantages (in a particular activity) that are not accessible to other firms and that enable benefiting from the generation of monopoly rents, higher returns, and *economies of scale and scope*, which is one of the top arguments in IB (nearly 50% of studies refer to economies of scale and scope). The *firm-specific advantages* (FSA), as they were called in later literature, are defined in more detail by other scholars (e.g. Kindleberger, 1969; Rugman, 1981; Caves, 1996) and are also among the more popular arguments explaining internationalization (31% of studies refer to FSA). They became the primary point of interest in the context of the evolutionary theory (Nelson and Winter, 1982) of the firm, which is strongly connected to the *resource-based view* (RBV). The RBV (mentioned in 27% of studies) sees the firm as a bundle of resources that can be combined and used to develop a competitive advantage (Penrose, 1959; Wernerfelt, 1984; Barney, 1991). Like the RBV, evolutionary theory emphasizes FSA to be exploited in international surroundings, and learning capabilities in internationalization as determinants of performance (Kogut and Zander, 1993).

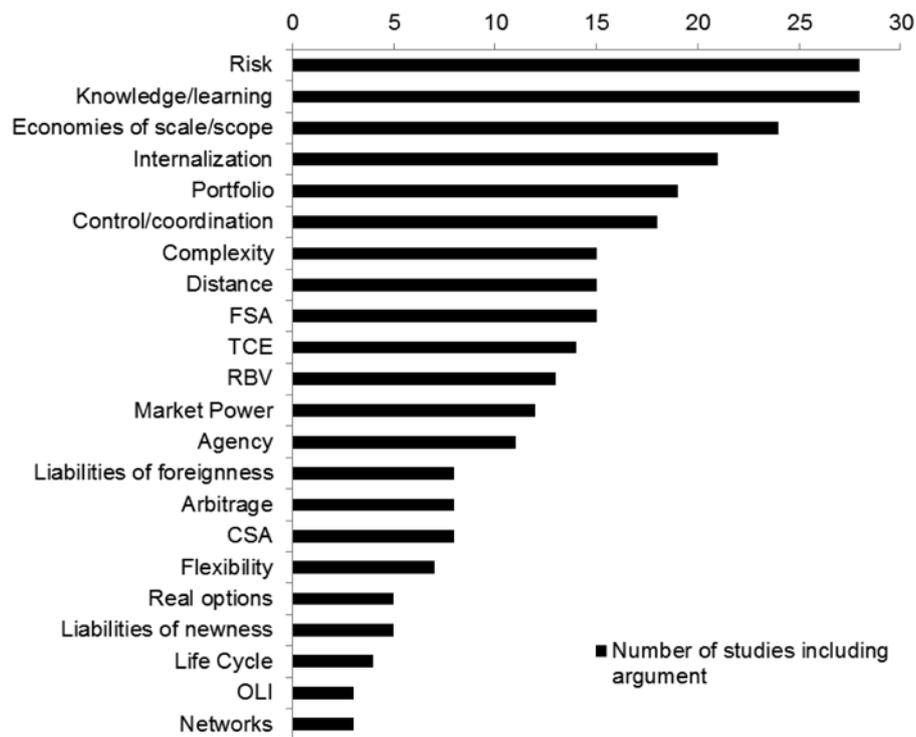


Figure 2: Main Theoretical Arguments Included in Empirical Studies on the M/P Relationship

(Source: numbers based on the findings of Matysiak and Bausch, 2012)

In 1994, Kogut and Kulatilaka stressed *operational flexibility* and the opportunities or *real options* of MNEs to shift production within their network of geographically dispersed plants to react to events or changes (e.g. government policies, competitor behaviors, new technologies, Kogut and Kulatilaka, 1994). In addition to arguments about flexibility (14% of studies), about real options (10% of studies), and about networks (6% of studies), this thinking is also concerned with the benefits of risk reduction.

In the 1960s, Vernon (1966) outlined his *product lifecycle* theory. The lifecycle of products should be extended by foreign activities as soon as the products reach maturity, and as soon as competition becomes tough in the home market. By standardizing the product, firms can shift value-adding activities to countries with lower labor costs (arbitrage benefits) and import the product to the home market (Vernon, 1966). Again, *economies of scale* and *arbitrage benefits* (mentioned in 16% of studies) are essential benefits shifting firm performance in this theory.

In the 1970s, the idea developed that market transactions and their related costs were superseded by incorporating operations more efficiently within the firm, building on the work of Coase (1937). This idea was advanced under the terms *transaction cost economics* (TCE) and *internalization* theory. Authors in this field (Buckley and Casson,

1976; Williamson, 1975; Caves, 1998; Hennart, 2000; Dunning, 2003) highlighted the benefit of being more cost efficient by internalizing certain foreign operations instead of handling them through the external market abroad (Teece, 2006). Costs associated with uncertainty, bargaining, bounded rationality, and opportunism can be reduced or avoided (e.g. Williamson, 1975). Internalization (mentioned in 43% of studies) and TCE (mentioned in 29% of studies) are very often found in theoretical arguments on the M/P relation. Another theoretical stream in the 1970s paid special attention to firms' *strategic investment behavior*. Knickerbocker's (1973) assertion was that firms tend to engage in oligopolistic investment behaviors to maintain their strategic market position. Graham's (1978) hypothesis was that firms tend towards defensive investment to retaliate against other firms' market entries (these theories are also referred to under the heading *market power*). Also in the 1970s, Johanson and Vahlne (1977) introduced their Uppsala internationalization process model, which assumes that internationalization is an incremental process of foreign investments from near to distant locations and from small to higher commitment. This process is accompanied by a *learning process* where *knowledge development* leads to competitiveness in the foreign market (Johanson and Vahlne, 1990). Arguments building on their work refer to knowledge and learning benefits (mentioned in 57% of studies) and to distance as a cost of internationalization (31% of studies).

Building on previous theories, Dunning developed his eclectic paradigm, which explains the *why* question by the possession of ownership advantages (O), the *how* question by internalization (I), but also the *where* question by location-specific advantages (L) (Dunning, 1988; Dunning, 2001). These location advantages are seen as a set of *country-specific advantages (CSA)* that one country has over another (16% of studies refer to CSA). Following Hood and Young (1979), four locational factors influence investors' internationalization decision: labor costs; marketing factors, barriers to trade, and government policies. These are often related to arbitrage benefits, but also to costs in IB. Firms going through a rational decision-making process will only internationalize if they profit from the different benefit categories and if they can outweigh the costs which accrue. According to the OLI framework, well-managed firms will increase their performance by going international.

The costs of IB, first mentioned in Hymer (1976) and Kindleberger (1969) – as costs of internationalization that need to be overcompensated – became a research focus only recently (e.g. Zaheer, 1995; Sethi and Judge, 2009). Zaheer (1995) developed the con-

cept of liabilities of foreignness (LOF), which is common in the IB literature today (16% of studies refer to LOF). Goerzen et al. (2013) who build on Zaheer (1995) identify three main sources of LOF: *Complexity*, i.e. costs directly associated with spatial distance and with coordination over distance and across timezones, resulting in an overall complexity of operations. *Uncertainty*, i.e. costs based on the MNE's unfamiliarity with and lack of roots in a local environment that leads to high uncertainty within the host environment. Later, the concept of liabilities of newness was developed and integrated within the aspect of uncertainty (Cuervo-Cazurra et al., 2007; Lu and Beamish, 2004). *Discrimination*, i.e. costs that result from the host country environment (e.g. owing to economic nationalism).

Shifting the perspective also to costs, the (so far positive) performance predictions became more differentiated. Authors started to highlight different forms of the M/P-relation due to the interplay of benefits and costs in different phases of international involvement (e.g. Contractor, 2012; Contractor et al., 2003). We will focus on the benefits and costs influencing firm performance that stem from the theoretical approaches discussed (and that are of major relevance in the empirical IB literature, see for instance Contractor, 2012; Goerzen et al., 2013).

The Benefits¹ of Internationalization

Following the basic logic of Sethi and Judge (2009) and Contractor (2012), we distinguish between the benefits of foreignness, which arise within the MNE's host country's environment, and the benefits of multinationality, which arise from the international context of an MNE's cross-border operations.

	Financial performance [Profitability, Market value, risk, risk-adjusted profitability]	Operational performance [Product market outcomes: market share and sales growth; internal process outcomes: cost efficiency and productivity]	Effectiveness performance [Survey based measures related to objectives]
Benefits of foreignness			
CSA, OLI		Host government incentives and favorable treatment by local suppliers, customers, etc. [COGS, S&D costs, G&A costs, market share]	
Benefits of multinationality			
Risk, portfolio	Lower variance in profits, lower costs of capital and better share prices [beta, WACC, share price]		
Strategic/Operational flexibility, real options		Increased bargaining power and reduced labor costs [COGS, G&A costs]	Achieve objectives or ensure survival in spite of turbulent environments
Knowledge/Learning, CSA, OLI		Corporate learning from innovative locations and spillovers increase innovativeness, competitiveness [higher sales revenues, more new products brought to the market (more swiftly), innovative production and production processes, stimulating creativity]	Increased innovativeness may ensure survival, increase reputation, and performance compared to competitors
Economies of scale and scope		Economizing owing to common governance, large-scale production, and plant specialization [cost efficiency indicators]	
Lifecycle FSA, RBV, market power		Higher sales owing to prolonged product lifecycles or transfer of FSA, therewith: economizing [sales growth; cost efficiency indicators]	
Arbitrage		Lower input prices, lower labor costs, etc. [COGS, G&A costs]	

Table 2: The Theoretical Benefits of Internationalization in Empirical IB Studies

¹ We use the word *benefits* to include what other authors refer to as *assets* or *advantages*.

Benefits of foreignness

Benefits of foreignness arise owing to any kind of superior treatment of foreign firms – by governments, suppliers, customers, and potential employees in the host country. They are mostly derived by ideas stemming from location or CSA.

Because MNEs often bring valuable capital, expertise, and technology to a host country, many governments seek to attract foreign firms by offering benefits such as: preferential access to sectors (e.g. infrastructural facilities), speedy customs clearance, favorable licensing and tax procedures (UNCTAD, 1997). These benefits induce relatively lower operational costs, such as costs of goods sold (COGS), selling and distribution expenses (S&D), general and administrative expenses (G&A), and taxes (Table 2).² Benefits can also occur from superior treatment by local suppliers, who value the potential learning opportunities and prospects for connecting with customers in foreign markets (Cannon and Perreault, 1999; Gudum and Kavas, 1996; Nachum, 2003). From a business performance perspective, lower operational costs are induced owing to a higher bargaining power. Finally, foreign subsidiaries can benefit from a potentially superior treatment by local customers, for instance, if they prefer to buy foreign products because they expect better quality from them (Nachum, 2003). Thereby, MNEs can reach higher sales volumes and market shares, or save on marketing costs (i.e. increase operational performance) (Shi and Hoskisson, 2012). *Hence, we ask: Are benefits of foreignness best reflected in a higher overall financial performance? **Assumption (A) 1:** No, there is only a second tier influence on overall profitability indicators via the reduction in cost positions, which will be observable if all other positions entering the analyses are constant. They are more directly reflected in operational performance indicators related to cost positions and sales growth (in the foreign countries).*

Benefits of multinationality

An MNE can experience benefits of multinationality by leveraging its network of business units and by interacting with entities outside the host country context (Sethi and Judge, 2009). Multinationality reduces location-specific *risks* by spreading investments over different countries and smoothing out fluctuations in revenue streams (Rugman, 1979; De Meza and van der Ploeg, 1987; Rangan, 1998).

² *Relatively* is an important term in this context, since costs will rise absolutely, yet in relation to for instance additional foreign sales, cost intensities are supposed to be lower. In other words, when we talk about lower costs/expenses, we always refer to cost intensities, in relation to sales, for instance.

This might lead to better share prices, lower capital costs, and lower variance in returns. *Are benefits of multinationality related to risk arguments best reflected in a higher overall financial performance? A2: A higher overall financial performance measure reflects risk arguments in the case that it directly tries to measure risk, and this is the case for specific measures only, such as beta, the weighted average costs of capital and share prices.*

Furthermore, firms gain strategic and operational *flexibility* by having a portfolio of alternative production sites, as they are able to relocate value chain activities from one site to another. (Contractor, 2012). Having options to react to uncertain events enables MNEs to achieve their objectives or to ensure survival in spite of turbulent environments (Kogut and Kulatilaka, 1994). *Are benefits of multinationality related to flexibility arguments best reflected in a higher overall financial performance? A3: No, this flexibility is assumed to most directly increase organizational effectiveness performance. However, the ability to shift between different locations may also increase an MNE's bargaining power vis-à-vis both local government and trade unions, and may therefore also influence wages and working conditions, and – therewith – operational performance (see Cantwell, 2000).*

MNEs are granted access to alternative resources (Cantwell, 1989), and may benefit from operating in areas where, for instance, technologies are highly developed (Dunning, 1996). Locating in such areas may provide *spillovers* for an MNE, inducing corporate *learning* and the development of firm-specific capabilities. This may lead to higher competitiveness and demand (sales growth) owing to more innovative products (Contractor, 2012). A factor mentioned in this regard is the multicultural context, which exposes people to heterogeneous opinions and behaviors, thereby increasing their *creativity*, and in turn innovation (Nemeth and Kwan, 1987; Csikszentmihalyi, 1988; Barret, 1998; Bundy, 2002; Zhou and Shalley, 2003; Levine and Moreland, 2004; Guimera et al., 2005; Maddux and Galinsky, 2009). Besides, learning from technological advantages and owning superior technologies (Rugman and Verbeke, 2001) may cause lower production costs (i.e. better operational performance), due to the development of innovative production processes. *Are benefits of multinationality related to knowledge/learning/creativity arguments best reflected in a higher overall financial performance? A4: No, higher innovativeness is supposed to increase sales and further operational performance indicators, such as the number of new products brought to the market, or the lead time to bring new products to market (Scarlett, 2008). Moreover,*

process innovations are best reflected in operational performance indicators related to cost positions.

An MNE can benefit from the shared governance of geographically dispersed activities, e.g., it has economizing options in the procurement of raw materials that go beyond the possibilities of a single plant (Dunning, 1993; Caves, 1996). These benefits are essentially *economies of scale and scope*. Economies of scale arise from large-scale production and from sharing fixed firm costs across a number of product units (Nachum, 2003). Economies of scope are generated from using existing resources for diversified products or processes, leading to greater efficiency (Tallman and Li, 1996). Rugman (1990) argues that a network of production units also enables plant-level economies of scale owing to specialization. Specialization enables MNEs to profit from the best matches between the resources available in their internal network (RBV, FSAs) and the specific advantages of various locations (CSAs), e.g. each plant might – efficiently – specialize in some items rather than each plant producing the whole array (Caves, 1996). *Are benefits of multinationality related to economies of scale and scope arguments best reflected in a higher overall financial performance? A5: No, they are best reflected in cost efficiency indicators, i.e. in operational performance figures.*

Internationalization enables an MNE to exploit or promote new markets and to better exploit firms' intangibles. MNEs profit from transferring FSA, such as its products (e.g. in the maturity phase of the product *lifecycle*), knowledge, or know-how to foreign countries (Wernerfelt, 1984; Barney, 1986). It thereby increases its sales (Cool et al., 2002), and its efficiency as long as the minimum efficient scale is not reached (Hennart, 2011), as the firms are able to amortize R&D costs and central overheads over a larger pool of customers and over extending the lifecycle of a product. (Contractor, 2012). Depending on the product, network externalities may also occur if benefits from using a product increase with the number of consumers using compatible products (e.g. in the software industry). These network externalities lead to a lack of competition, which can be used to create monopoly rents (Benito and Tomassen, 2003). *Are benefits of multinationality related to lifecycle and FSA arguments best reflected in a higher overall financial performance? A6: No, they are best reflected in sales growth figures and cost efficiency indicators, i.e. in operational performance figures.*

Finally, MNEs can benefit from further *arbitrages*: Authors refer to benefits from lower input prices or from lower labor costs (Dunning, 1973; Hennart, 2000; Contractor, 2012). *Are benefits of multinationality related to arbitrage arguments best reflected in a*

higher overall financial performance? **A7:** No, these benefits impact MNEs' operational performance in terms of their cost of goods sold or general administration costs.

The Costs of Internationalization

Hymer (1976) and Kindleberger (1969) have pointed out that foreign subsidiaries are at a disadvantage relative to domestic firms. These disadvantages are referred to as the liabilities of foreignness (LOF)³ (see Zaheer 1995) and arise within an MNE's host country environment (Sethi and Judge, 2009; Goerzen et al., 2013). Goerzen et al. (2013) refer to three primary sources of liabilities of foreignness: *Complexity*, *uncertainty*, and *discrimination*.

³ We do not differentiate between *costs* and *liabilities*. Both terms are found in the literature, although *liabilities* might be more common.

Financial performance [Profitability, Market value, risk, risk-adjusted profitability]	Operational performance [Product market outcomes: market share and sales growth; internal process outcomes: cost efficiency and productivity]	Effectiveness performance [Survey based measures related to objectives]
LOF due to complexity		
Distance, control/coordination, TCE, internalization	Increasing number of transactions and differences trigger complexity and, therewith, additional transportation, communication, coordination, management and information costs [cost efficiency indicators]	
Strategic constraints		Worldwide corporate strategies might constrain local subsidiaries' strategic options [specific strategic objectives of subsidiaries not achieved]
LOF due to uncertainty		
Unfamiliarity and uncertainty	Information costs (costs for collecting and processing information) [often G&A and personnel costs] Reduced economies of scale and scope [cost efficiency indicators]	
Unfamiliarity hazards	Unfamiliarity hazards [G&A costs, extraordinary results]	Strategic misbehavior, leading to lower organizational effectiveness [specific strategic objectives not achieved]
LOF due to discrimination		
Distance, discriminatory	Lower revenues or sales owing to consumer ethnocentrism Higher overall costs owing to government, supplier, and consumer ethnocentrism [COGS, marketing expenditures, G&A costs, taxes]	

Table 3: The Theoretical Costs of Internationalization in Empirical IB Studies

Within the notion of *complexity*, costs related to the complexity of the environment occur (Goerzen et al., 2013): As internationalization increases, it becomes more complex and difficult to manage. It requires dealing with additional transportation, communication, coordination, information-processing, or simply governance/control costs (Gomes and Ramaswamy, 1999; Roth and Schweiger, 1991; Zaheer, 1995). These additional pro-

cesses or costs can be enhanced by geographic and especially cultural dispersion (Hitt et al., 1997; Porter, 1990; Tallman and Li, 1996). In sum, the number of transactions and the differences encountered across geographic regions are one of the main drivers of costs or liabilities of foreignness. Eden and Miller (2001) as well as Ghoshal and Bartlett (1990) contribute to the same idea with what they call managing operations at a distance. The ongoing governance costs of managing the parent-subsidiary relationship, at both the dyadic parent-subsidiary and network (all MNE subsidiaries) levels are the most important components of managing operations at a distance. Furthermore, Sethi and Guisinger (2002) argue that venturing abroad not only causes additional governance costs but also costs for *reading* (e.g. scanning and interpreting activities) the IB environment. These may include costs of monitoring trade policies and deliberations of multilateral economic institutions (Sethi and Judge, 2009). Also, multinational production capacities may annihilate scale effects resulting from relatively higher depreciation costs, personnel costs (e.g. owing to lower productivity of new workforces) or material costs (e.g. owing to less efficient material usage in new production facilities) (Eden and Miller, 2001; Hennart, 2007; Goerzen et al., 2013). *Are liabilities or costs of foreignness related to complexity arguments best reflected in a lower overall financial performance?*

A8: *No, they are most directly reflected in operational performance indicators, such as G&A costs in income statements accruing from reading the multinational environment and managing an MNE's increased complexity (coordination, governance, etc.) and in cost efficiency indicators.*

Moreover geographic separation and complexity can inhibit trust and the freedom of strategic decision-making. Sethi and Judge (2009) refer to costs arising from strategic constraints: the parent's corporate strategy might constrain the subsidiary's strategic options such that it foregoes more profitable independent strategies. *Are liabilities or costs of foreignness related to strategic constraints due to complexity arguments best reflected in a lower overall financial performance?* **A9:** *No, these are costs of missed global options. These costs are not immediately visible in cost accounts, but might be responsible for relatively lower sales volumes and form part of organizational effectiveness performance.*

Uncertainty comes from the fact that foreign firms are unfamiliar with the host environment. Costs related to uncertainty comprise costs of learning and adaption to cope with the unfamiliarity and lack of roots in the host country environment (Hymer, 1976; Sethi and Judge, 2009). By purchasing and installing facilities, staffing, and establishing in-

ternal management systems as well as external business networks they are confronted with additional search costs (Lu and Beamish, 2004; Cuervo-Cazurra et al., 2007). This argument is also highlighted by the internationalization process scholars who refer to the constraints of foreign entrance owing to insufficient knowledge about a host country (Johanson and Vahlne, 1977). Both schools consider additional costs of internationalization for acquiring information and knowledge. *Are liabilities or costs of foreignness related to uncertainty and unfamiliarity best reflected in a lower overall financial performance? A10: No, these are reflected in higher personnel costs owing to necessary staffing, or employees working overtime to gather the needed information or in the costs for collecting and processing information (see also Richter, 2014), i.e. in the basic elements that affect operational performance.*

Eden and Miller (2001) further draw the attention to unfamiliarity hazards, i.e. costs arising from misbehavior through disregarding regulations an MNE was unaware of (e.g. flawed product launches and the failure to comply with legal norms and cultural values). For instance, Mezias (2002) finds that foreign subsidiaries face more labor lawsuit judgments than their local counterparts, which may be due to a knowledge deficit about the legal environment. *Are liabilities or costs of foreignness related to unfamiliarity hazards best reflected in a lower overall financial performance? A11: No, they may be reflected in G&A costs or in extraordinary results (i.e. in operational performance figures) and may affect organizational effectiveness performance if such misbehavior is strategic in nature.*

Discriminatory costs result from discriminatory treatment of foreign firms vis-à-vis local firms by local stakeholders such as the government, suppliers, or consumers. Kostova and Zaheer (1999) ascribe discriminatory treatment to an MNE's lack of embeddedness in the host country. Discrimination can lead to lower sales volumes and to higher costs (COGS, marketing costs, administration costs, and income taxes), for instance, when foreign firms are excluded from subsidies. It can even lead to total losses (in a worst-case scenario) in case of expropriation of investments (Cuervo-Cazurra et al., 2007; Eden and Miller, 2001). Internationalization costs can also increase dramatically owing to consumer ethnocentric behavior, which leads to favorable buying behavior towards home country products, to a renunciation of foreign products (Eden and Miller, 2001), and thus to lower sales volumes. *Are liabilities or costs of foreignness related to discriminatory costs best reflected in a lower overall financial performance? A12: No, they are reflected in organizational effectiveness indicators related to not achieving sales*

prospects and in operational performance indicators related to higher costs of goods sold, marketing expenditures and G&A costs and taxes stemming from the foreign activities.

DISCUSSION

The Match between Theory and Operationalization of Performance in the Empirical M/P Literature

At the beginning of the paper, we asked whether the high reliance on financial performance indicators is due to the fact that they best reflect the theoretical benefits and costs of internationalization. The analyses showed that arguments on the benefits and costs of internationalization largely focus on aspects that are most directly concerned with operational performance and rather have a second-tier impact on financial performance, which becomes observable only if all other determinants are constant. Hence, we follow Li (2007) as well as Venkatraman and Ramanujam (1986) arguing in favor of operational performance indicators and evaluate whether they are a good alternative or a supplement to improving empirical IB studies.

In Tables 4 and 5, we outline propositions on the appropriateness of measuring theoretical arguments by means of financial and operational indicators (building on our assertions A1-A12). The overall financial performance indicators – especially the predominant profitability ratios – are able to measure internationalization benefits only as a second-tier instrument. They involve every cost and benefit position of the income statement and therewith manifold – and sometimes countervailing – effects involved in theoretical arguments. Furthermore by using overall profitability ratios at the corporate level, no differentiation between national and international activities is made. We agree with other authors in the field (Verbeke and Brugman, 2009; Eckert et al., 2010) that for answering whether multinational firms perform better than national ones, differentiating between national and international activities' outcomes is likewise a promising route to go. We argue that it is beneficial to use performance measures with the least unexplainable variance.

While risk indicators are promising for the operationalization of theoretical arguments, which directly refer to reduced risks (i.e. risk and portfolio aspects), operational indicators are preferable to financial performance indicators in most other cases. Location-specific or CSA may lead to growing sales (product-market operational performance) owing to favorable treatment by consumers. They may also lead to lower costs (internal process operational performance) owing to the favorable treatment by, for instance, suppliers and governments. This growth in sales and reduction in cost positions might

transfer into a higher net income and therewith better financial performance, yet the first and direct impact is on operational performance (see A1). Theoretical arguments referring to knowledge and learning are also better operationalized by means of operational performance. If product innovations are involved, these most directly affect sales and market share; if process innovation learning is involved, this most directly affects production costs (see A4). Likewise arbitrage benefits, e.g. lower input prices or lower labor costs, will most directly decrease the ratio of the costs of goods sold to sales, yet won't necessarily also increase financial performance, as further aspects impacting financial performance might outweigh these effects. For instance, increased information costs might outweigh the decrease in material costs. If the cost of goods sold or material cost intensity were used instead, the beneficial impact on the cost structure would be directly measurable (see A7). Such potential countervailing effects are also underlined by the findings of Gomes and Ramaswamy (1999), who show a positive relationship between multinationality and return on assets performance, but a negative relationship between multinationality and an operational performance indicator. Similarly, arguments related to economies of scale and scope, to lifecycle, and to FSA implications are best reflected in either a product-market or internal process operational performance indicator. Economies of scale and scope are supposed to increase cost efficiency or productivity (see A5 and A6). Prolonging products' lifecycle by foreign transfers most directly increases sales volumes and may lead to economies of scale owing to these higher sales volumes (depending on the organization of production). Firm-specific advantages – whether products or processes – may lead to higher sales volumes or higher efficiency in internal process outcomes. And, a higher efficiency in operational processes is most directly reflected in respective operational performance measures.

Does the measure best reflect the following arguments of the M/P-literature?								
Financial performance				Operational performance				
Profit-ability	Market value	Indicators involving risk	Product-market outcomes	Market share	Sales growth	Internal process outcomes	Cost efficiency	Productivity
Benefits of foreignness								
A1: CSA, OLI	No, there is only a second tier influence on overall profitability indicators via the reduction in cost positions, which will be observable if all other positions entering the profitability analyses are constant.			Yes, benefits of foreignness are more directly reflected in operational performance indicators related to foreign sales growth and lower costs.				
Benefits of multinationality								
A2: Risk, portfolio	Yes, yet only if a measure involving risk (e.g. beta), weighted average costs of capital and share prices is referred to.			No				
A3: Strategic/ Operational flexibility, real options	No, flexibility is assumed to most directly increase organizational effectiveness performance.			No		Partly, if the ability to shift between different locations increases an MNE's bargaining power vis-à-vis both local government and trade unions.		
A4: Knowledge/ Learning, CSA, OLI	No, only second-tier influence			Yes, if product innovation increase sales		Yes, if process innovations reduce costs		
A5: Economies of scale and scope	No, economies of scale and scope are best reflected in cost efficiency indicators, i.e. in operational performance figures			No		Yes		
A6: Lifecycle FSA, RBV, market power	No, only second-tier influence			Yes, prolonging lifecycles/transfer of FSA may increase sales		Yes, if higher sales volumes enable economies of scale or if FSA enable economies of scale		
A7: Arbitrage	No, only second-tier influence			No		Yes, if arbitrage leads to lower costs		

Table 4: Match between Theoretical Internationalization Benefits and Empirical Performance Measures

Turning to the theoretical costs of internationalization, it looks very similar (Table 5). Overall profitability measures are a second-tier measure of internationalization costs.

Uncertainty in dealing with new products and processes and reduced economies of scale and scope owing to the shift of production to a new market most sustainably affect firms' cost efficiency and productivity (i.e. the internal process performance, see A10). Likewise, internal process performance is negatively affected by all arguments related to increasing costs, such as discriminatory liabilities of foreignness (A11-A12), control, coordination, and complexity costs (A9). Hence, for measuring the costs of internationalization, indicators concentrating on internal process outcomes are the first choice.

Does the measure best reflect the following arguments of the M/P-literature?							
Financial performance				Operational performance			
Profit-ability	Market value	Indicators involving risk		Product-market outcomes		Internal process outcomes	
				Market share	Sales growth	Cost efficiency	Productivity
LOF due to complexity							
A8: Distance, control/coordination, TCE, internalization	No, they are most directly reflected in operational performance indicators.			No		Yes, e.g. in G&A and other cost efficiency indicators	
A9: Strategic constraints	No, only second-tier influence			Partly, as they might be responsible for relatively lower sales		No, these are costs are not immediately visible in cost accounts	
LOF due to uncertainty							
A10: Unfamiliarity and uncertainty	No, only second-tier influence			No		Yes, reflected in e.g. higher personnel costs	
A11: Unfamiliarity hazards	No, only second-tier influence			No		Partly, reflected in higher costs of goods sold, marketing expenditures, G&A or taxes	
LOF due to discrimination							
A12: Distance, Discriminatory	No, only second-tier influence			Partly, as they might be responsible for relatively lower sales		Partly, reflected in higher costs of goods sold, marketing expenditures, G&A or taxes	

Table 5: Match between Theoretical Internationalization Costs and Empirical Performance Measures

Interim Conclusion

First, our analyses document a mismatch between theory and empirical measurements in the M/P literature. Researchers do not measure what they intend to measure - overall profitability measures are not as appropriate for a direct evaluation of certain benefits and costs of internationalization as could have been suggested by the high reliance on these indicators. This is an important finding for several reasons: Most obviously, this could be one aspect in explaining the inconsistencies in empirical results on the M/P relation, which range from positive and negative links, to curvilinear U-shaped, inverted U-shaped, and S-curve relationships (see Yang and Driffield, 2012; Kirca et al., 2011). We assume that the strong reference to financial performance indicators was in the past driven also by aspects, such as data availability.

Second, the analyses enable the identification of better ways to operationalize theoretical arguments. Operational performance indicators are better able to directly measure what researchers assert in their hypotheses. This is true for theoretical benefits of internationalization referring to knowledge, learning, CSA and OLI, economies of scales and scope, lifecycle FSA and RBV arguments (i.e. the top arguments referred to in the field). This is likewise true for theoretical costs of internationalization referring to complexity, uncertainty and discrimination. If authors refer to theoretical benefits and costs related to operational performance (and organizational effectiveness) but then measure overall financial performance, they ignore or exclude important determinants of success and thereby forego the opportunity to directly operationalize what they hypothesize on. While operational performance indicators might be more difficult to collect (and might in most cases also not be a remedy as regards distortions from accounting principles), they show several advantages over financial performance indicators to advance theory and research, yet also to advance recommendations to actively manage the M/P-relation as discussed below.

Value of Operational Performance Indicators for Theory and Research

Looking at financial performance indicators to operationalize internationalization benefits and costs is a first, yet important step in research, which has received insufficient attention in the past discussion. In most studies, "...it is assumed that M brings various types of benefits, but these are not measured or assessed directly in empirical work. Instead, what is measured directly is the M/P-link, whereby any observed positive relationship is simply attributed to the hypothesized benefits, but without really knowing

which hypothetical benefit categories actually mattered (if any).” (Verbeke and Forootan, 2012, p. 335). Ultimately, operational effectiveness, organizational effectiveness, and financial performance (indicators) are interrelated: high operational performance (e.g. cost efficiency) is supposed to ceteris paribus lead to better financial performance (which becomes obvious recalling the calculation of financial performance indicators). Likewise, organizational effectiveness performance is supposed to be reflected in better financial performance in the medium or long term, as performance improvement is at the heart of strategic management and organization theory (Venkatraman and Ramanujam, 1986; Ginsberg and Venkatraman, 1985). Likewise, financial performance influences organizations and therewith operational and organizational performance. These performance figures can be related to different levels within the firm, the corporate, the business, the (foreign) subsidiary level etc. Irrespective of the interrelationships between the three concepts of performance measurement, and irrespective of the conceptualization at different levels of the firm, we argue in favor of broadening the scope of performance measurement from financial, in particular to operational performance indicators (see the simplified model given in Figure 3). This will have a much more direct character of measuring what theory assumes and might impact the explanatory power of research models in a positive way, as noise and variance attributed to other factors are minimized.

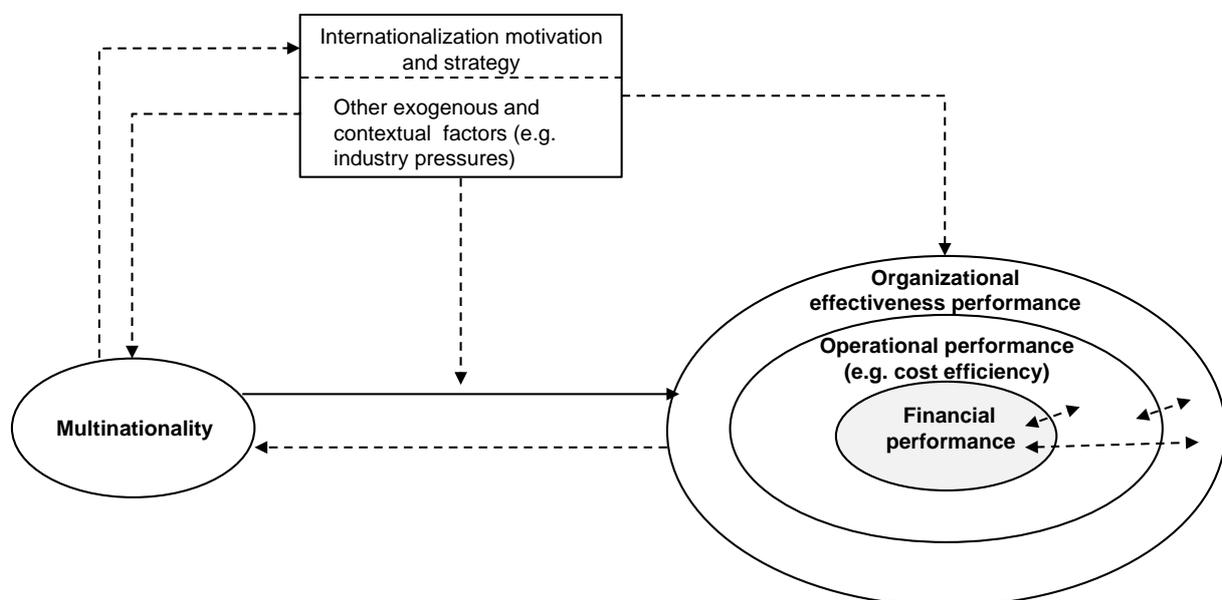


Figure 3: A Model of the M/P-Relationship

(Sources: based on: Venkatraman and Ramanujam, 1986; Verbeke and Forootan, 2012)

Ensuring that we measure what we intend to measure is a prerequisite to build sound empirical models of the M/P-relation. Such models are firstly, able to directly test theo-

retical hypotheses and will therewith contribute to theory testing and building in the field. These models are, secondly, a prerequisite to correctly test potential moderating and mediating effects of contextual factors and strategic management variables. Only if (multinationality and) performance facets are operationalized in the way intended by the researcher, can findings support the derivation (and testing) of hypotheses on management implications and contextual factors (as discussed in, for instance, Verbeke and Forootan, 2012).

Value of Operational Indicators for Management

The heavy reliance on financial performance figures is also found in business practice. Management often is forced to report and concentrate on financial indicators to meet the requirements of shareholders and financial markets. Yet, in order to evaluate strategic choices and control the firm's success, such overall financial indicators are in most cases inappropriate. These figures are too far away from the performance challenges attributed to supply chain management, leadership and aspects of maintaining competitiveness in diverse markets to guide good decision making and skill development by managers which are necessary for a beneficial geographic diversion of a firm (Eckert et al., 2010). Operational performance indicators are of much greater value here, because they are more closely related to goals and strategies pursued by a firm's management. Operational indicators are advantageous, as they more directly relate to the firm's operations and practices and broaden the focus to measure business performance (Venkatraman and Ramanujam, 1986). They better reflect the intentions of companies when doing business abroad: Management is interested in actively shaping the multinationality and performance relationship for instance via their strategies and their leadership. Although a positive overall financial performance shall be a result of these efforts, other costs and benefits arising from international activities, such as a higher productivity achieved through better-trained workers, might better reflect the measure's impact. Exactly these effects need to be tested to guide decision-making in MNEs.

CONCLUSION, RECOMMENDATIONS FOR FURTHER RESEARCH, AND LIMITATIONS

Almost 30 years ago, Venkatraman and Ramanujam (1986) noted that using more operational performance indicators, such as market share, new product introduction, or efficiency measures in strategy research would enhance empirical studies, because they open the 'black box' of overall performance implications. However, we observe that operational performance measures only play a minor role in empirical IB research designs. Researchers continue to focus on overall financial performance indicators. We find that this focus on overall financial performance indicators is not justified by the specific benefits and costs of internationalization involved in theoretical streams. On the contrary, the theoretical internationalization benefits and costs more directly apply to operational performance indicators (product-market or especially internal process indicators). Concerning overall financial performance, which is based on net income, operating profit, or gross profit, the key research variable is influenced by various factors that may differ from those the researcher seeks to measure. This may be one reason for misleading empirical findings in the field (in addition to further aspects, e.g. the measurement of multinationality, and the analysis of the M/P relation, e.g. Verbeke and Forootan, 2012).

To properly test theoretical arguments on the M/P relation, we make the following recommendations. Researchers need to be more specific in their choice of performance measure; there is no need to standardize performance measurement. There is a need to be more careful in selecting the most fitting performance measure for the individual design especially with reference to the theoretical arguments referred to (and interrelated facets such as foreign entry mode, see also Hult et al., 2008). Researchers are encouraged to shift the focus in performance measurement from overall financial to operational indicators; here, we agree with claims by other authors: Li (2007) emphasizes the potential benefits of utilizing cost efficiency indicators such as costs of goods sold, administrative costs, R&D costs, advertising costs, and depreciation and amortization costs. By directly referring to operational performance, which ultimately leads to financial performance, research designs become more specific. Finally, researchers should consider more than one performance measure; indicators often cover only some rather than all theoretical aspects. Therefore, following Hult et al. (2008), empirical research designs may be improved by measuring multiple business performance types.

While our findings strongly underline the recommendations provided for future M/P studies, we note several limitations. First, our findings are based on work by Matysiak and Bausch (2012), who were able to investigate a fair amount of studies on their main theoretical arguments and the measure used as a dependent variable. While we are of the view that their work is representative for the IB field, it only covers a sample of the IB studies conducted; researchers are invited to enlarge the focus. Second, our manuscript concentrates on one aspect in the quality of M/P designs - the measurement of performance; further analyses of other quality attributes are of value (e.g. measuring internationalization, designing the M/P link, involving management aspects). Third, our evaluation of performance measures focuses on the critical evaluation of current indicators used; future research might dig deeper into the performance measurement theory far beyond the IB literature. Fourth, our manuscript remains uncritical with regard to the general limitations of research on success factors, such as survival bias, key informant bias or retrospective bias (Nicolai and Kieser, 2002). Other authors also argue that the information about the dependent variable might also have an impact itself on the possible causes (March and Sutton, 1997). Nevertheless, MNEs are eager to learn how to optimally manage information costs in different international settings; they need answers to questions, such as whether centralization of decision-making power at headquarters really increases global scale efficiency, or what the extent of efficiencies is, that is achieved by optimizing global configuration of activities (e.g. Garbe and Richter, 2009). In this respect Homburg and Krohmer (2004) defend 'good' empirical success factor analysis as one source for a substantial progress in management science. Notwithstanding these limitations, we are confident that the findings discussed and recommendations given in this article will improve future M/P research, if taken up by IB scholars.

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