

Internationalization and Firm Performance

State of the Empirical Research and the Need for Improved Approaches

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1 Internationalization as a Performance Driver of Firms

From the firm's point of view internationalization is seen as an instrument to increase its performance. This perspective is at least implicitly the fundament of nearly every theory about the internationalization of the firm. Also the general motives for the firm's internationalization like access to foreign markets and vital resources or the spread of risks are based on the expectation of an increased performance. Consequently, the firms of the industrialized world have – measured by their foreign sales and/or foreign employees – high degrees of internationalization. Table 1 illustrates this by showing the internationalization data for some randomly chosen US and German large and small firms.

However, empirical research trying to test the respective relationship is leaving us up to now with heterogeneous results. Even applying increasingly sophisticated theoretical models and methodological approaches research has not yet been able to answer the question whether there is a systematic internationalization-performance (IP-) relationship or not, and if so, what its character is like. For example, Contractor/Kundu/Hsu (2003) and Lu/Beamish (2004) found an S-shaped relationship while Chiang/Yu (2005) reported a supposed inversed S-shaped relationship. Based on those inconclusive and contradictory empirical results some researchers like Hennart (2007) argue now, that there might not be any systematic relationship at all. Given the pivotal role of this research question for the field of International Business the inconclusive and contradictory empirical results as well as the a priori, i.e. without any empirical foundation, assumption of the nonexistence of a systematic relationship are unsatisfying.

For finding ways how to deal with this problem it seems necessary to analyze previous studies in order to find conceptual and methodological caveats. Only the reduction of those caveats can improve future empirical research and by this help to answer the question whether there is a systematic IP-relationship or not.

Based on a review of 45 empirical studies of the IP-relationship (see Table 2), we provide a discussion of the theoretical fundament in section two of this paper. Given the numerous studies on the IP-relationship published since the 1960s we were not able to provide a complete review of all studies. Instead we selected those studies that provide a significant contribution to the theoretical foundation and/or to the empirical research. In the third section we address questions concerning the empirical test of the relationship. Finally, we derive some propositions for future research in section four.

2 Theoretical Framework

2.1 Theoretical Foundation of the Internationalization-Performance (IP-) Relationship – An Overview

The empirical studies of the IP-relationship analyzed in this paper apply multiple theoretical approaches to found their assumptions.¹ While only few research works focus on a single aspect – usually the portfolio theory or the resource-based view² – most of the researchers just summarize and in some parts elaborate possible theoretical arguments for a positive internationalization-performance relationship. In most cases, they conclude that given the numerous arguments a positive relationship is to be assumed.³

The main reasons for a positive relationship are (i) the resource-based argument under which we subsume aspects connected to the deployment of firm's resources abroad, (ii) the flexibility and arbitrage argument, (iii) industrial economical effects, (iv) arguments derived from the

¹ Within the reviewed studies only Buckley/Dunning/Pearce (1978) and Haar (1989) do not provide any theoretical foundation and refer to the results of previous studies instead to found a supposed relationship.

² We subsume the resource-based view under the resource based argument (see below).

³ Only Click/Harrison (2000) assume that internationalization destroys value.

portfolio theory, (v) and arguments based on organizational learning.⁴ Besides the arguments for a positive internationalization-performance relationship most studies also discuss arguments proposing a – at least at certain intervals – negative impact of the internationalization on firm performance. The main arguments are – even if the arguments cannot be sharply distinguished – (i) increasing costs of coordination and control (or transaction and management), (ii) the ”liability of foreignness” and (iii) risks connected to foreign activities. Below we first portray the five main arguments for a positive relationship. Later on we discuss the arguments for a negative relationship (at least at certain intervals) and finally, we review the dominant theoretical assumptions for the character of the relationship.

2.1.1 Main Arguments for a Positive IP-Relationship

2.1.1.1 Resource Based Arguments

The most common argument for a positive relation between internationalization and firm performance focuses on the profitable international use of resources which were developed on the home market and provide competitive advantages. Those competitive advantages are primary based on the assumption that the international firms possess a resource base and a resource combination which is superior to the resource base and resource combination of the local firms. Thus, those resources are to be considered as innovations on the foreign markets. However, an explicit definition of the resources generating competitive advantage is usually not provided. But, among others, technical knowledge, well trained employees, available capital, brands, structure and processes of the company as well as the capabilities of the management team or of the organization as a whole are quoted as examples (Grant, 1987, p. 81;

⁴ Additionally, some of the reviewed studies use –not completely selectively– the exploitation of country specific advantages and specialization, the extension of market power and market potentials, and advantages related to the development and introduction of new products as well as subsidies.

Morck/Yeung, 1991, p. 165; Delios/Beamish, 1999, p. 715; Annavarjula/Beldona, 2000, pp. 50-54; Ramírez-Alesón/Espitia-Escuer, 2001, pp. 293 f.; Lu/Beamish, 2004, pp. 601 f.). Some authors additionally argue that the utilization ratio of the competitive advantage generating resources increases along with a growing degree of internationalization.⁵ Since the marginal costs of the utilization of the resources on foreign markets are assumed to tend to zero, it is assumed that their increased utilization is linked with an increased financial performance (Caves, 1971, pp. 4 f.; Bühner, 1987, p. 27; Qian, 1997, p. 129; Ramírez-Alesón/Espitia-Escuer, 2001, pp. 293 f.; Lu/Beamish, 2004, pp. 601 f.).

2.1.1.2 Organizational Flexibility and Arbitrage

A second very common argument for a positive relationship between internationalization and firm performance is organizational flexibility. This argument is strongly connected with the idea that internationalization enables firms to realize arbitrage between different national markets. The reasoning is that firms gain flexibility by the number of countries in which they operate and thus can achieve higher profits by putting arbitrage potentials into effect. Arbitrage potentials are founded by price differences between several national factor and sales markets which are caused by market imperfections and differences of the legal framework. Furthermore, an international network of subsidiaries enables the firm to react to changes of a national market's conditions by shifting production or redirecting commodity flows (Dunning/Rugman, 1985, p. 230; Kim/Hwang/Burgers, 1993, pp. 276 f.; Allen/Pantzalis, 1996, p. 634; Ramírez-Alesón/Espitia-Escuer, 2001, pp. 294 f.; Denis/Denis/Yost, 2002, p. 1954; Capar/Kotabe, 2003, pp. 346 f.; Lu/Beamish, 2004, p. 599; Chiang/Yu, 2005, p. 130; Bausch/Krist, 2007, p. 322; Hennart, 2007, p. 426).

⁵ Some authors like Morck/Yeung (1991, p. 165) limit this argument to intangible resources. However, this does not change the general logic of the argument.

2.1.1.3 Industrial Economical Effects

Economies of scale, scope and experience are also common arguments for a positive relationship. But those arguments are not always used conjointly. While about half of the reviewed studies relate to economies of scale, just one seventh of them mentions economies of experience (see Table 2).

The economies of scale argument usually refers – in difference to the very core of the concept – to the opportunity to gain fixed cost advantages. Such advantages can be achieved if the fixed costs of overhead units of the firm which are not directly connected to the production (e.g., human resources, marketing, R&D) can be distributed over an increased lot size which is due to internationalization. The most common example for fixed cost advantages is the distribution of R&D expenses over an increased production volume as more markets are served (e.g., Grant, 1987, pp. 79 f.; Kobrin, 1991, p. 18; Hitt/Hoskisson/Kim, 1997, p. 771; Ramírez-Alesón/Espitia-Escuer, 2001, p. 296; Contractor/Kundu/Hsu, 2003, pp. 5 f.; Chiang/Yu, 2005, p. 130; Bausch/Krist, 2007, p. 322; Hennart, 2007, pp. 425 f.). Additionally, some studies note that international sales are especially necessary in industries with a rapid technological development. In those industries it is important to achieve a large sales volume quickly in order to amortize R&D expenditures before the technology becomes obsolete (Kotabe, 1990, p. 626; Hitt/Hoskisson/Kim, 1997, p. 774).

2.1.1.4 Portfolio Theory

The theory of portfolio diversification was originally developed in the field of corporate finance by Markowitz (1959) who proved that the risk of a portfolio can be reduced by spreading the investments over uncorrelated assets. Based on this general approach some researchers argue that a firm can reduce its risk by spreading its activities over economically not inte-

grated countries and therefore not perfectly correlated markets (Shapiro, 1978, pp. 221 f.; Qian, 1997, p. 130; Reeb/Kwok/Baek, 1998, pp. 263 f.; Annavarjula/Beldona, 2000, pp. 50-53; Ramírez-Alesón/Espitia-Escuer, 2001, pp. 296 f.; Hennart, 2007, p. 425). Risks can be fluctuations of the cash flow, of the total profits, of the demand, the sales or the prices on factor markets as well as changing political conditions or the threat of bankruptcy (Shapiro, 1978, pp. 220 f.; Kim/Hwang/Burgers, 1989, p. 47; Kim/Hwang/Burgers, 1993, pp. 276 f.; Riahi-Belkaoui, 1998, p. 316; Annavarjula/Beldona, 2000, p. 55; Ramírez-Alesón/Espitia-Escuer, 2001, pp. 294-297; Hsu/Boggs, 2003, p. 26; Elango/Sethi, 2007, p. 370).

Another approach – also rooted in the portfolio theory – is to view international firms as a vehicle for individual investors to create internationally diversified portfolios. The basic assumption is that individual investors may know and appreciate the advantages of internationally diversified portfolios but have no or no satisfactory opportunities to form an internationally diversified portfolio according to their preferences due to entry barriers to certain national capital markets for individual investors or due to limitations in their information processing capacities. In those cases an investment in an internationally diversified firm might be an opportunity to indirectly create an internationally diversified portfolio which is rewarded by the investors with an increased firm value (Brewer, 1981, pp. 112 f.; Qian, 1997, p. 131; Mishra/Gobeli, 1998, p. 584; Annavarjula/Beldona, 2000, pp. 50-54; Denis/Denis/Yost, 2002, p. 1954).

2.1.1.5 Organizational Learning

A recently more and more used argument to found a positive relationship is organizational learning. It proposes that a firm can benefit from having a network of subsidiaries in numerous different countries because it is supplied by them with many diverse stimuli and new in-

formation. By processing those stimuli and information the firm can broaden its knowledge base and improve its capabilities and thus can increase its competitiveness – especially in contrast to mere national firms which are not stimulated in this way (Ghoshal, 1987, pp. 427 f. and pp. 431 f.; Kim/Hwang/Burgers, 1993, p. 276; Kogut/Zander, 1993, pp. 639 f.; Hitt/Hoskisson/Kim, 1997, p. 774; Barkema/Vermeulen, 1998, pp. 7 f.; Zahra/Ireland/Hitt, 2000, pp. 926-928; Vermeulen/Barkema, 2002, pp. 638 f.; Contractor/Kundu/Hsu, 2003, p. 6; Lu/Beamish, 2004, p. 599; Bausch/Krist, 2007, pp. 322 f.; Hennart, 2007, p. 426).

2.1.2 Arguments for a Negative Impact of the Internationalization on Firm Performance

2.1.2.1 Increasing Costs of Coordination and Control

The complexity of international business operations increases along with the degree of internationalization due to diverse legal and technological frameworks in the several countries, potential fluctuations of exchange rates, growing logistic requirements, trade barriers, cultural diversity, information asymmetry between the headquarters and the foreign units as well as the mere size of the organization. Considered together, all those factors lead to increasing management demands and cause by this increasing costs of coordination and control. They thwart the benefits generated by the international operations and may – at least at certain intervals or very high degrees of internationalization – even exceed them completely (Grant, 1987, pp. 81 f.; Allen/Pantzalis, 1996, p. 634; Hitt/Hoskisson/Kim, 1997, p. 773; Qian, 1997, p. 131; Gomes/Ramaswamy, 1999, pp. 174 f. and pp. 177 f.; Denis/Denis/Yost, 2002, pp. 1954 f.; Kotabe/Srinivasan/Aulakh, 2002, p. 80; Capar/Kotabe, 2003, p. 347; Goerzen/Beamish, 2003, pp. 1291 f.; Hsu/Boggs, 2003, p. 28; Lu/Beamish, 2004, p. 600).

2.1.2.2 Liability of Foreignness

The ‘liability of foreignness’ describes a competitive disadvantage of foreign firms compared to local ones. This disadvantage is on the one hand due to a lack of knowledge about the local conditions and on the other hand due to the risk of discrimination by the foreign customers or government. But the ‘liability of foreignness’ can be overcome in the course of time if the firm gains experience and reputation on the foreign market (Hymer, 1960, 1976; Kindleberger, 1969; Zaheer, 1995, p. 343; O’Grady/Lane, 1996, p. 326; Barkema/Bell/Pennings, 1996, pp. 162 f.; Zaheer/Mosakowski, 1997, pp. 439 f.; Lu/Beamish, 2004, pp. 599 f.; Barkema/Drogendijk, 2007, pp. 1133 f.; Bausch/Krist, 2007, p. 323).

2.1.2.3 Risks Connected to Foreign Activities

According to Reeb/Kwok/Baek (1998, p. 266 f.) the risk of foreign operations has to be seen as a net effect. On the one hand the spread of the activities over different markets reduces the firm’s risk. But on the other hand the risk is also increased with an increased degree of internationalization. Reasons for this risk increase are incomplete information about the foreign markets, limited control over the activities of foreign managers as well as political insecurities and the risk of fluctuations of exchange rates. Additionally, the systematic risk of foreign operations might be increased by a ‘self fulfilling prophecy’ effect. This is founded by the argument that firm’s usually expect higher rates of return when evaluating overseas investment projects in comparison to home country investments. Assuming that higher rates of return can only be realized by taking greater risks this leads to a systematically increased risk of foreign investments (Reeb/Kwok/Baek, 1998, pp. 267 f.).

2.2 Conflicting Theories of the Character of the IP-Relationship

The well established assumption that international business operations create both advantages and disadvantages leads to the conclusion that the impact of a firm's internationalization on its performance has to be considered as a net effect. It is generated by the interaction of positive and negative influences. The strength of those influences varies as the degree of internationalization changes. This implies that the relationship between internationalization and firm performance is non-linear (Daniels/Bracker, 1989, pp. 47 f.; Hitt/Hoskisson/Kim, 1997, p. 773; Gomes/Ramaswamy, 1999, p. 174; Goerzen/Beamish, 2003, p. 1290; Hsu/Boggs, 2003, p. 26). However, up to now there is no consensus about the character of this non-linear relationship. In the previous studies U-shaped and inversed U-shaped as well as S-shaped and inversed S-shaped relations were theoretically derived and empirically shown (see Table 2).

Given those inconclusive and contradictory empirical results some researchers like Hennart (2007) argue now in an extreme way that there might be no systematic relationship at all. Another extreme position is held by the 3-Stage Theory of International Expansion. The proponents of this theory claim to have identified a general theory of internationalization with the potential to harmonize the seemingly contradictory empirical observations. Especially Contractor (2007) proposes a universally valid S-shaped relationship between internationalization and firm performance: While the initial costs exceed the benefits in an early, i.e. first phase of the internationalization process and therefore no profit is generated, it is assumed that the firm can derive profits from its international operations in a second phase until it reaches an excessive degree of internationalization at which the costs of coordination and control outweigh the benefits in a third phase (Contractor/Kundu/Hsu, 2003, pp. 7 f.; Lu/Beamish, 2004, p. 599 f.; Contractor, 2007, pp. 455-459; Glaum, 2007, pp. 21 f.).

Despite the heterogeneity of the previous observations the proponents of the 3-Stage Theory also see support for the theory's universal validity in the empirical dimension. They argue that

the samples used in the previous studies were dominated by certain industries or home countries and therefore represent only several sections of the S-curve (Contractor, 2007, pp. 466-468; Glaum, 2007, pp. 23 f.).

However, Glaum (2007) limits the power of the argument by noting that the 3-Stage Theory has until now been tested only indirectly at best. This is because the test of its assumptions requires a longitudinal study while the previous attempts to test the 3-Stage Theory utilized pooled data which ignore the time dimension (Glaum, 2007, pp. 23 f.). Additionally, the 3-Stage Theory can be criticized for being unselective about the time dimension and the degree of internationalization. The first phase is labeled “early phase” and the transition from the first to the second phase, which is tagged “later internationalization” is *inter alia* founded with increased knowledge derived from experience in operating an international business (Contractor, 2007, pp. 456-458). This argument obviously contains a time aspect. In the plot of the S-curve, however, the phases change according to the degree of internationalization (see for example Contractor, 2007, p. 455). This is probably due to the implicit assumption that the degree of internationalization increases over time. This simplification is, however, assailable: One reason is that it has been shown – especially in connection with arguments based on learning – that the time dimension has its own impact on firm performance (Vermeulen/Barkema, 2002; Thomas/Eden 2004, p. 92 and pp. 96 f.; Nadolska/Barkema 2007). Another reason is that the theory supposes that firms pursue only one strategic direction: towards increasing internationalization. By this it neglects the fact that firms can also utilize divestment strategies to reduce their degree of internationalization if their expectations are not met, which a significant number of firms does in reality (Ruigrok/Wagner, 2003, p. 77). Following this thought it would also be possible that a firm which has previously reduced its degree of internationalization takes new internationalization steps later on and then benefits from the experience gained during earlier internationalization episodes.

2.3 Review of the Theoretical Fundamentals

The critique on the theoretical foundation of a systematic IP-relationship aims mainly at the combined use of various arguments which can be considered eclectic in many cases. Further critical points are the simplifying assumption that there is only one ideal type of internationalization, the discussion's focus on foreign direct investment and the negligence of significant moderating factors.

2.3.1 Eclecticism

Eclecticism means to merge various theories and concepts, particularly single elements from different theory systems or streams of research, into a “new” system without trying to achieve a creative synthesis and – in extreme cases – without testing the single elements of the new theory for logical contradictions. This approach does not automatically imply inconsistencies in the new theory but does not attempt to exclude them either (Simon, 2007, p. 53).

In the case of the IP-research a study applies an eclectic approach – which is not to be confused with Dunning's eclectic paradigm (Dunning, 1977) – if it only lists possible theoretical reasons for a positive impact and for a negative one. It is also an eclectic approach if a study discusses the interplay of a bundle of reasons for a positive relationship and a bundle of reasons for a negative one. However, this is exactly what has been done in most of the studies supposing a nonlinear relationship as well as in the 3-Stage Theory. To avoid the pitfalls of eclecticism the single arguments have to be merged into a closed, comprehensive theory system ideally considering all possible interactions between those arguments. Furthermore, it should be explained under which prerequisites a certain influence is expected to show effects. For example, the simple equation: “More internationalization leads to more complexity and more complexity leads to higher costs” is insufficient since it provides no information for the

calculation of the net effect of the internationalization. In contrast, an adequate model would have to describe the character of the relationship between increasing internationalization and complexity as well as between complexity and costs in mathematical terms. Accordingly internationalization related profits have to be modeled, too. Only this allows for contrasting the costs with the profits of the internationalization. Within the studies reviewed for this paper considerations as described above are – if at all – merely conducted in an implicit form. The only exemption is the work by Thomas/Eden (2004, pp. 104-108) who develop and contrast an aggregated cost curve and an aggregated benefit curve.

2.3.2 Assumption of One Ideal Type of Internationalization

Another shortcoming of the papers under review is that they assume only one ideal type of internationalization. However, a more differentiated approach is required because in the real business world firms pursue internationalization for several, often parallel reasons leading to different types of internationalization (Hennart, 1982, p. 78; DIHK, 2007, pp. 27 f.; Hennart, 2007, p. 427 and p. 442). Even if the focus of the discussion is limited to foreign direct investment it should be obvious that setting up a new production facility, a sales organization, or a research laboratory fulfill completely different functions within the firm's internationalization (Hennart, 2007, p. 427). Since it is quite obvious that for different functions different theoretical rationales about their impact on the firm performance apply, a model should take those differences into account.

2.3.3 Focus on Foreign Direct Investments

Foreign direct investments are certainly an important form of internationalization. However, compared to the total amount of international activities their share is relatively small. For example, a recent survey of German firms by the DIHK (Deutscher Industrie- und Handelskammertag, association of the German chambers of industry and commerce) indicated that – even if the firms’ success is based on a combination of several forms of international activities – the mere export trade is still dominant. About 88 percent of the firms in the survey mainly engage in export trade (DIHK, 2007, pp. 22-24). Additionally, sometimes the different forms of international activities cannot be separated from each other (Contractor, 2007, p. 469). For example establishing a sales subsidiary in a foreign country (still) requires exporting from the home country to this foreign country. Furthermore, there are some alternatives to foreign direct investments for which at least similar impacts on the firm performance can be assumed. Hennart (2007, pp. 435 f.) uses the development of an international network of suppliers as an example of an alternative to the installation of production facilities by means of foreign direct investment. Treating the problem in a sufficient manner requires two approaches: Either reasons are presented explicitly why only one type of international activity is under study or a model is developed that is able to cover all possible types of international activities. Each approach would contribute to a more precise understanding of the term internationalization.

2.3.4 Disregard of Significant Moderating Factors

Moderating factors are factors that influence the relationship between two other variables. Widely accepted factors influencing the relationship between internationalization and firm performance are the home country, host country, industry, age, size, degree of product diversification, immaterial assets, strategy, timing and speed of the internationalization process.

The home country, for example, has an impact on firm performance within the internationalization process by providing a certain home market size and a legislative framework which may be supportive of an internationalization or not. The home market size determines, e.g., the degree of the economies of scale which the firm can gain from home market operations.⁶ If the firm has a large home market and therefore a high degree of economies of scale this might serve as a competitive advantage in international markets when competing with firms that have small home markets (Bausch/Krist 2007, p. 339). But a large home market may also be connected to a relatively low exposure of the firm and the managers to different (foreign) business environments causing high learning costs when venturing abroad (Ruigrok/Amann/Wagner, 2007, p. 352). And a liberal legislation protecting free competition and cooperative arrangements that foster the (informal) diffusion of experiential knowledge across firms, may foster a international mindset in firms which may be supportive during their internationalization (Ruigrok/Amann/Wagner, 2007, p. 355).

The firm size, as another example, it is an indicator for the availability of financial, managerial, and information resources. This resource availability plays a key role in the decision to internationalize and especially small firms often lack the financial resources necessary for investing in assets like internationalization experience (Bausch/Krist, 2007, pp. 328 f.).

While current studies are taking particularly firm size, immaterial assets, home country and industry into account there are few attempts to integrate those moderating factors into a closed model of the impact of internationalization on firm performance. But as long as there is no integrated model and the theoretical approaches refer explicitly or implicitly to certain home countries, host countries and/or industries, instead, it is impossible to draw universally valid conclusions.

⁶ The extent of the economies of scale a firm can realize depends besides the market size on some other variables like the market share. But at a given market share the economies of scale increase with the market size.

3 Review of Empirical Approaches to the IP-Relationship

Not only the theoretical foundation but the empirical testing of the IP-relationship, too, raise some significant questions in terms of their specific impact on the quality of the scientific process. Such a quality can be defined by using the criteria reliability and validity. Closely connected to validity and reliability are the model fitting (i) measurement of the degree of internationalization, (ii) measurement and causality of firm performance, (iii) adequate use of control variables, and (iv) stability of the IP-relationship over time as well as (v) availability of appropriate data.

3.1 Measurement of the Degree of Internationalization

A theoretical construct is measured validly if its operationalization measures the concept which it is supposed to measure (Bagozzi/Youjae/Phillips, 1991, p. 421). So, before reasoning about the results of an empirical study of the IP-relationship it has to be discussed whether the operationalization utilized to measure the degree of internationalization fits the theoretical construct “internationalization” applied in the underlying theoretical model (Glaum/Oesterle, 2007, p. 311; Glaum, 2007, pp. 13 f.). At first glance this claim seems trivial but it is definitely not trivial since most of the studies reviewed in this paper do not meet this criterion. Additionally, there was a prominent but seemingly inconsequential discussion concerning the question of validity of the measurement of the concept internationalization in the literature a few years ago (Sullivan, 1994; Ramaswamy/Kroeck/Renforth, 1996; Sullivan, 1996; Hennart, 2007, pp. 44 f.).⁷

⁷ Picking up Sullivan’s idea many later studies utilize multi-dimensional measures to operationalize the degree of internationalization but there are very few reflections about the validity of those measures.

Regarding the method applied to measure the degree of internationalization many researchers criticize that there is no generally accepted standard (Allen/Pantzalis, 1996, p. 633; Contractor/Kundu/Hsu, 2003, p. 12; Hsu/Boggs, 2003, p. 28). Given the high attention paid to questions concerning the firm's degree of internationalization by both academia and practitioners the absence of a generally accepted standard seems dissatisfactory (Allen/Pantzalis, 1996, p. 633). Some researchers argue furthermore that the absence of a generally accepted standard might be one reason for the contradictory results of the previous empirical studies (Annavarjula/Beldona, 2000, p. 48; Thomas/Eden, 2004, p. 92).

3.1.1 Uni-Dimensional Measures

In most of the reviewed studies the degree of internationalization was operationalized by uni-dimensional measures (Annavarjula/Beldona, 2000, p. 56). There are two categories of uni-dimensional measures. The first one refers to the "depth" of the internationalization, one example being the ratio of foreign sales to total sales (FSTS), which is the most commonly used measure overall. Further widely used measures of this category are the foreign assets to total assets ratio (FATA) and the foreign employees to total employees ratio (FETE) (Annavarjula/Beldona, 2000, p. 56; Hsu/Boggs, 2003, p. 27; Thomas/Eden, 2004, pp. 92 f.). The main weakness of those measures is that they split the world into just two regions: the home country and overseas. Such a bipolar view is not suitable to reflect today's reality of an international competition in which firms attempt to capitalize on country specific competitive advantages and design their international value chains accordingly (Cavusgil/Knight/Riesenberger, 2008, p. 4; Deresky, 2008, p. 4). This is because the ratios provide no information about the geographical, cultural and functional spread of the firms' activities (Kim/Hwang/Burgers, 1993, p. 280; Tallman/Li, 1996, p. 184; Fisch/Oesterle, 2003, p. 5). For example, using such ratios two companies can be considered having an equal degree of internationalization al-

though one of them focuses its activities on a single large market and the other one operates in several relatively small markets. Thus, this operationalization is not appropriate if the underlying theoretical model for a non-linear relationship argues in terms of an increasing complexity due to the diversity of host markets (Glaum, 2007, p. 15; Hennart, 2007, p. 443).

The second category of uni-dimensional measures refers to the “width” of internationalization. Measures focusing on the international spread of firms’ activities fall into this category. These are, e. g., the number of the firm’s foreign units and the number of countries in which the firm operates (Hsu/Boggs, 2003, p. 27; Thomas/Eden, 2004, p. 92). However, the measures referring to the “width” of internationalization do not – in contrast to those referring to its “depth” – capture the relevance of the international business to the firm since they provide no information about how much value is created by the foreign units. Thus, they are also not sufficient to provide a full picture of a firm’s international activities.

Further provisions to the use of uni-dimensional measures derive from the statistical measurement theory. One argument is that the use of uni-dimensional measures bears the risk that the results might be biased due to a systematic error immanent in the indicator chosen. Another argument is that it is nearly impossible to determine the reliability of a uni-dimensional measure because further indicators are required in order to run a factor reliability test. Additionally, the probability to capture a theoretical construct appropriately by a uni-dimensional measure is in general low since uni-dimensional measures can display only an aperture of a complex theoretical construct (Bagozzi/Youjae/Phillips, 1991, p. 421; Sullivan, 1994, pp. 326 f.; Annavarjula/Beldona, 2000, p. 56; Fisch/Oesterle, 2003, p. 5).

3.1.2 Multi-Dimensional Measures

Based on the critique on the uni-dimensional measures Sullivan (1994) proposes a multi-dimensional measure for the degree of internationalization. His indicator, the DOI (degree of internationalization) is calculated by an additive combination of the five indicators FSTS, FATA, share of foreign subsidiaries to total subsidiaries, the international experience of the firm's top management and the cultural spread of the firm's activities (Sullivan, 1994, pp. 331-335). Ramaswamy/Kroeck/Renforth (1996), however, criticize the DOI for the absence of a theoretical foundation and for its blind additive combination of the underlying indicators. However, they stress that the development of a multi-dimensional measurement approach has to be seen as a significant improvement of the research methodology (Ramaswamy/Kroeck/Renforth, 1996, pp. 168 f. and p. 175).

Further multi-dimensional measures proposed in the literature like Ietto-Gillies's (1998) Network Spread Index also possess weaknesses (Fisch/Oesterle, 2003, pp. 5 f.) or focus explicitly on specific aspects like the globalization measure by Fisch/Oesterle (2003) or the Global Specialization measure by Asmussen/Pedersen/Petersen (2007) and thus do not claim to provide a full picture of firms' internationalization. In summary, it has to be concluded that the approaches of capturing the degree of internationalization by multi-dimensional measures also do not provide a complete and generally accepted indicator, yet. Given the massive weaknesses of the uni-dimensional indicators those approaches are, however, to be seen as important steps towards an improved measurement of the degree of internationalization.

3.1.3 Model Based Problems of Internationalization Measurement

The problem how the degree of internationalization should be measured goes even deeper since a valid operationalization of a construct needs to be based on a theory. Thus, as long as

there is just a loose bundle of arguments, i.e. those arguments do not fit very well and are therefore far away from representing a comprehensive theory, it will be impossible to find a valid measure for the degree of internationalization (Ramaswamy/Kroeck/Renforth, 1996, p. 176; Glaum, 2007, p. 13, Hennart, 2007, pp. 443 f.).

Against this background the absence of a generally accepted standard to measure the degree of internationalization has to be reassessed since the establishment of a comprehensive theoretical framework has to be considered as a prerequisite for such a standard. If a study aims, in contrast, at testing only single theoretical arguments the operationalization should be tailored to capturing the mechanism underlying the specific argument. In this case a standard measure would even be counterproductive because it could distract attention from the specific characteristics of the argument under examination (Fisch/Oesterle, 2003, p. 4; Glaum, 2007, pp. 14 f.). The results of a study which is focused on a certain theoretical argument can, however, only be meaningfully compared with the results of studies targeting the same argument.

3.2 Measurement of Firm Performance

3.2.1 Fundamental Concerns About the Measurement of Firm Performance

The operationalization of firm performance is another challenge on the way towards a meaningful empirical research of the IP-relationship (Hult et al., 2008). Generally, firm performance is – like internationalization – a multi-dimensional construct which has to be operationalized validly. At first glance this is relatively easy to handle since there is a broad range of performance measures well accepted both in academia and among managers. These are on the one hand accounting based figures and on the other hand capital market based indicators. However, the broad range of possible performance measures raises the question which indica-

tor should be chosen – especially since most of the previous studies do not provide any explanation for the choice of the utilized indicator (Annavarjula/Beldona, 2000, p. 60).

A closer look on the measurement of firm performance reveals that single indicators like profit, growth or market share are no suitable measures due to the multi-dimensional character of the construct “performance”. Another caveat is that the discussion of firm performance is often based on the assumption that firms are strategic actors who are exclusively concerned with economic results while current research in business is (again) increasingly questioning this fundamental assumption. Picking up the ideas developed by March/Simon (1958) and Cyert/March (1963) recent research (Goerzen/Beamish, 2003, p. 1291 and p. 1303) understands the firm to be a coalition (March, 1962, pp. 672 f.; Cyert/March, 1963, p. 27) in which several, not necessarily compatible interests of the firm’s stakeholders have to be balanced. In the case of the IP-relationship the role of managers in public corporations is particularly interesting. Since managers and not shareholders are the important decision makers in such companies (Berle/Means, 1932) the risk arises that their decisions aim primarily at the satisfaction of their own interests instead of the achievement of the shareholders’ goals. During the internationalization processes such opportunistic behavior appears predominantly as “empire building”. This means that managers might prefer a dysfunctionally high degree of internationalization because they expect some advantages from it. Advantages may be a higher income as well as non-monetary rewards like power or prestige increasing with the firm’s size and internationality (Morck/Yeung, 1991, p. 166; Click/Harrison, 2000, pp. 14 f.; Denis/Denis/Yost, 2002, pp. 1954 f.; Glaum, 2007, pp. 4 f. and pp. 11 f.). Additionally, there is a growing acceptance of the relevance of non-monetary firm goals like safeguarding employment or the development of reputation (Goerzen/Beamish, 2003, p. 1303).

3.2.2 Explanatory Power of the Performance Measures

Besides those fundamental concerns, the conceptual difference between accounting based measures and capital market based measures has to be considered for both the choice of appropriate performance measures and the interpretation of the results of empirical analyses. While the accounting based measures contain information about the performance achieved in past periods capital market based measures reflect also – or maybe even mainly – expectations about the firm's future development. Thus, firm performance can be evaluated completely differently depending on the applied measure (Click/Harrison, 2000, p. 4; Thomas/Eden, 2004, p. 98). Thomas/Eden (2004) find this conceptual difference to be an opportunity to study short-run and long-run effects of internationalization separately. The authors suggest to capture short-run effects by using accounting based measures and long-run effects by applying capital market based measures (Thomas/Eden, 2004, p. 98). In contrast, Glaum (2007) criticizes the utilization of capital market based measures in general, since this approach neglects the fundamental assumption of information efficiency of capital markets. On information efficient capital markets rational investors expecting an increase of the firm performance due to its internationalization would act on this expectation immediately after the announcement of a new internationalization step. Thus, an observation over time would not show this effect. However, if the assumption of information efficiency of capital markets is accepted this effect can be utilized for event studies. Event studies examine the reaction of a firm's stock price to the announcement of a new internationalization step by comparing it with a theoretically assumed "normal" development, i.e. without the new internationalization step. In this context it is, however, to be kept in mind that the internationalization of firms is usually an incremental long-term process within which single steps are difficult to observe (Glaum, 2007, p. 17).

The data derived from the firm's accounting are also vulnerable to biases since firms have – aside from criminal “creative accounting” as in the case of Enron – several legal means to influence the way in which gains and losses are given an account (Hutzschenreuter/Voll, 2007, p. 826; Glaum, 2007, p. 16). For example, the return on assets (ROA) is not only influenced by the firm performance but also by the depreciation method chosen (Gomes/Ramaswamy, 1999, p. 182). This problem is even more serious in an international context due to heterogeneous national accounting rules and regulations (Annavarjula/Beldona, 2000, p. 60; Glaum, 2007, p. 16).

3.2.3 Causality of Firm Performance

Most studies under review for this paper run a rather naïve approach viewing performance as a direct outcome of internationalization. However, looking at the real business world, it should be discussed whether a firm's performance has really been affected by its internationalization. For example, the German car manufacturer Porsche reported a record profit for the year 2006/2007 and had extensive international activities. But the record profit was mainly caused by financial market transactions connected to the acquisition of Volkswagen shares (Porsche Automobil Holding SE, 2007, pp. 18 f.). In this case, a performance indicator which includes the profits generated by those financial market transactions would bias the results of a statistical analysis of the IP-relationship since there is no connection between Porsche's internationalization and those financial market transactions.

However, even when performance is causal to a firm's internationalization it is usually influenced by a number of additional factors like the firm's capital structure (Hutzschenreuter/Voll, 2007, p. 826). Those factors have to be identified and to be considered in form of control variables in the process of the statistical analysis. Control variables allow for the sta-

tistical differentiation between the impact of the variables included in the model and other influencing factors. This topic is strongly interlinked with the concerns about moderating effects because especially those variables which are known to be moderating but are not taken into consideration in the model should be included as control variables. However, the use of control variables is a double-edged sword. On the one hand they are necessary to control for influences which are not specified in the model. But on the other hand they influence the results of statistical estimations. An estimation's result depends to a considerable part on the control variables taken or not taken into account (Hennart, 2007, p. 444; Contractor, 2007, pp. 469-471). Additionally, some of the factors influencing firm performance like the capabilities of the management team or network effects resulting from the interaction of several foreign business units can hardly be operationalized for the application in comprehensive quantitative empirical analysis.

Finally, the discussion about causality should also consider that there might be a reversed causality between internationalization and performance. Cyert/March (1963, pp. 278 f.) argue, for example, that only successful firms possess organizational slack which is necessary to generate inventions. Following this idea, it could be assumed, that only successful firms own the free resources required to undertake internationalization steps.

3.3 Disregard of the Process Character of Internationalization

Since most of the numerous previous studies are based on cross-section data, they allow for approximate findings only concerning the relationship between internationalization as a process phenomenon and firm performance but not for answering the question if this relationship is stable over time (Gomes/Ramaswamy, 1999, p. 174; Kotabe/Srinivasan/Aulakh, 2002, p. 81). Also those studies which used data from several periods did usually not control for

time stability (Gomes/Ramaswamy, 1999, p. 178; Glaum, 2007, p. 24). However, it is reasonable to regard the relationship as not stable over time since both internal factors of the firm and the firm's macroeconomic environment may change over time (Grant, 1987, p. 88; Geringer/Tallman/Olsen, 2000, pp. 59 f.; Fisch/Oesterle, 2003, p. 4). Thus, an empirical study should be based on longitudinal-section data to provide findings about the time stability of the internationalization-performance relationship (Kotabe/Srinivasan/Aulakh, 2002, p. 81; Glaum, 2007, p. 26).

3.4 Data Availability

Finally, the availability of data is another limiting factor for the research of the relationship between internationalization and firm performance. As early as 1973 (p. 292), Dunning noted: "In practice, the matter is often settled by the data available and the economist has to cut his coat according to the cloth given him, or obtained by himself!" This note is still valid today. On the one hand, meaningful findings require an adequate amount of data. On the other hand, the statistical confirmation of sophisticated theoretical models requires a raising accuracy of the data. But with raising accuracy requirements it becomes difficult to collect the necessary data because detailed data are often not or only for a limited number of cases available. And even if the data is available, collecting them is usually a very work intensive and expensive task, anyway. By this, studies on the IP-relationship depend to a considerable part on the available data and the available resources as well. As a consequence the availability of data is often the overriding criterion for the selection of measures for the degree of firms' internationalization in research practice (Fisch/Oesterle, 2003, p. 4).

But the application of readily available data can also lead to biases. For example, the foreign sales to total sales ratio reported by US companies according to the US accounting standards

(FASB 14)⁸ is a widely used but at least potentially biased key figure. Due to the fact that the FASB 14 requires companies to report foreign sales only if they account for at least 10 percent of the total sales every firm with a lower degree of internationalization is implicitly neglected.⁹ By this, the internationalization-performance relationship might be underestimated (Capar/Kotabe, 2003, p. 350). This critique is challenged by other studies with the argument that foreign activities resulting in a low foreign sales to total sales ratio are probably based on export trade rather than on foreign direct investment and thus neglecting them should not bias the results significantly (Gomes/Ramaswamy, 1999, p. 180). However, the application of such data is to be considered problematic.

4 Conclusion

In spite of numerous attempts there is no general theoretical and empirical assertion about the IP-relationship, yet. However, the two approaches trying to deal with this situation are not convincing, too. Those approaches are (i) the assumption that there is no systematic relationship at all and (ii) the assumption that the 3-Stage theory despite all unanswered questions is a general theory. Thus, further research should identify starting points for an improvement of concepts and methods applied in further studies. This is a major prerequisite for producing new meaningful findings on the IP-relationship. The discussion provided in this paper reveals that there are still significant deficits in the theoretical foundation as well as the empirical confirmation of the models.

Regarding the theoretical foundation it has to be concluded that no comprehensive theory on the IP-relationship exists up to now. Additionally, many moderating forces as well as the fact that different types of internationalization can be employed in parallel are neglected in the

⁸ FASB 14: Statement No. 14 of the Financial Accounting Standards Board.

⁹ Some of the studies using those data do not even mention this problem.

models. Thus, future research is encouraged to interlace the loosely coupled theoretical approaches into a comprehensive theory or to develop several distinguished basic models. A comprehensive theory should provide an actual synthesis of the theoretical approaches and should take into account both the interplay between as many variables as possible and different types of internationalization.

Such a comprehensive theory would also be a significant prerequisite for a valid measurement of the construct “internationalization” and by this for a meaningful empirical study of the IP-relationship. Furthermore, the discussion lined out that multi-dimensional measures should be preferred over uni-dimensional ones due to serious lacks in the conceptualization of uni-dimensional measures. The research on the IP-relationship requires not only a valid measurement of the degree of internationalization but also an adequate operationalization of firm performance. The latter is especially true because we have to deal with the causality problem. Further prerequisites are a deliberate choice of control variables and a dataset which consists of longitudinal data covering all relevant variables (see Figure 1).

In the light of those multiple challenges on the way towards a comprehensive and empirically testable model of the IP-relationship one last question should be raised. It is to be asked if the so far preferred data oriented approaches represent really the ideal solution. Maybe a more qualitative, case study oriented approach would be more appropriate to generate a fundamental understanding of the underlying mechanisms which could serve as a starting point for new modeling attempts.

Concluding, it is to be remarked that the relationship between internationalization and firm performance is not only a core question of International Business research but also of the field of Business Administration in general. It should not be discouraging that there are still many unanswered questions. It should just be viewed as a positive challenge for future research.

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Firm	Total Sales (Mio. EUR)	Foreign Sales (Mio. EUR)	FSTS-Ratio
General Motors Corporation	132,206	58,815	0.44
General Electric Co.	126,086	99,663	0.79
Volkswagen AG	108,897	81,999	0.75
Siemens AG	72,400	59,806	0.83
BASF SE	57,951	45,984	0.79
BMW AG	56,018	44,100	0.79
ThyssenKrupp AG	51,723	33,233	0.64
Bayer AG	32,385	27,560	0.85
Nike, Inc.	11,917	7,459	0.63
ArvinMeritor, Inc.	4,672	2,336	0.50
Under Armour, Inc.	443	32	0.07
Werner&Mertz GmbH	268	134	0.50
Roth&Rau AG	146	86	0.59
UNITEDLABELS AG	43	20	0.47
Tipp24 AG	40	5	0.13
USU-Gruppe	31	2	0.06

Table 1: Internationalization Data of some US and German firms (2007), Source: Own compilation.

	Year	Arguments for a positive relationship											for a negative relationship		
		resource based arguments	organizational flexibility and arbitrage	economies of scale	economies of scope	economies of experience	portfolio theory based arguments	arguments based on organizational learning	exploitation of country specific advantages and specialization	market power	market potentials	advantages related to the development and introduction of new products	subsidies	increasing costs of coordination and control	risks connected to foreign activities
Buckley/Dunning/Pearse	1978														
Brewer	1981						X								
Lall/Siddharthan	1982	X		X			X		X				X		X
Kim/Lyn	1986	X					X								
Bühner	1987	X		X			X			X					
Grant	1987	X	X	X			X		X				X		
Daniels/Bracker	1989		X					X		X					
Geringer/Beamish/daCosta	1989	X		X	X	X							X		
Haar	1989														
Kim/Hwang/Burgers	1989	X					X		X						
Kim/Hwang/Burgers	1993		X	X	X		X	X	X						
Al-Obaidan/Scully	1995	X		X	X		X	X					X		
Allen/Pantzalis	1996		X				X						X		
Tallman/Li	1996	X	X	X	X		X		X				X		
Gomez-Mejia/Palich	1997	X	X	X	X	X	X		X				X		
Hitt/Hoskisson/Kim	1997	X	X	X	X	X		X		X	X		X	X	
Qian	1997	X		X	X	X	X		X				X		
Mishra/Gobeli	1998	X					X								
Reeb/Kwok/Baek	1998						X						X	X	
Riahi-Belkaoui	1998	X	X	X	X	X	X		X			X			X
Delios/Beamish	1999	X	X				X		X						
Doukas/Pantzalis/Kim	1999	X	X												
Gomes/Ramaswamy	1999	X	X	X							X		X		
Riahi-Belkaoui	1999		X				X								
Click/Harrison	2000	X											X	X	
Geringer/Tallman/Olsen	2000	X		X	X		X		X				X		
Zahra/Ireland/Hitt	2000							X							
Lu/Beamish	2001	X	X	X	X		X	X	X	X			X	X	X
Ramírez-Alesón/Espitia-Escuer	2001	X	X	X	X		X	X	X		X	X	X		
Christophe/Pfeiffer, Jr.	2002	X					X						X		
Denis/Denis/Yost	2002	X	X				X						X		
Kotabe/Srinivasan/Aulakh	2002	X	X	X	X			X	X		X		X		
Vermeulen/Barkema	2002		X					X							X
Capar/Kotabe	2003	X	X	X	X	X		X	X	X	X		X	X	
Contractor/Kundu/Hsu	2003		X	X				X	X	X			X		X
Goerzen/Beamish	2003	X	X					X		X			X		
Hsu/Boggs	2003			X	X		X		X		X		X		
Ruigrok/Wagner	2003			X	X			X							
Lu/Beamish	2004	X	X	X	X		X	X	X	X			X	X	X
Thomas/Eden	2004		X					X	X	X				X	X
Chiang/Yu	2005		X	X						X		X	X		X
Christophe/Lee	2005	X		X	X			X	X				X	X	X
Elango/Sethi	2007	X	X	X	X		X	X		X	X				
López-Duarte/García-Canal	2007	X						X	X						X
Ruigrok/Amann/Wagner	2007		X	X				X					X		X

		Internationalization measure					Sucess measure					Result									
	Year	FSTS	FATA	number of foreign subsidiaries	foreign sales weighted by region	multidimensional measure	miscellaneous	ROS	ROE	ROA	market-to-book value	Tobin's q	miscellaneous	no relationship	positive linear	negative linear	U-shaped	inverted U-shaped	S-shaped	inverted S-shaped	relationship only indirect investigated
Buckley/Dunning/Pearse	1978						X						X	X							
Brewer	1981						X						X	X							
Lall/Siddharthan	1982	X											X			X					
Kim/Lyn	1986	X		X			X					X		X	X						
Bühner	1987						X		X	X			X		X						
Grant	1987						X	X	X				X		X						
Daniels/Bracker	1989	X	X					X		X								X			
Geringer/Beamish/daCosta	1989	X						X		X								X			
Haar	1989	X								X				X							
Kim/Hwang/Burgers	1989					X				X			X								X
Kim/Hwang/Burgers	1993					X							X								X
Al-Obaidan/Scully	1995						X						X		X	X					
Allen/Pantzalis	1996			X		X	X						X								X
Tallman/Li	1996	X					X	X						X	X						
Gomez-Mejia/Palich	1997					X				X	X			X							
Hitt/Hoskisson/Kim	1997				X					X								X			
Qian	1997					X			X	X			X								X
Mishra/Gobeli	1998	X		X								X			X						
Reeb/Kwok/Baek	1998	X	X										X			X					
Riahi-Belkaoui	1998	X								X									X		
Delios/Beamish	1999			X			X	X	X	X					X						
Doukas/Pantzalis/Kim	1999			X			X						X								X
Gomes/Ramaswamy	1999					X				X			X					X			
Riahi-Belkaoui	1999	X											X		X						
Click/Harrison	2000	X	X				X			X		X	X			X					
Geringer/Tallman/Olsen	2000	X					X		X	X			X			X					
Zahra/Ireland/Hitt	2000						X		X				X		X						
Lu/Beamish	2001			X			X	X		X							X				
Ramírez-Alesón/Espitia-Escuer	2001					X	X					X	X								X
Christophe/Pfeiffer, Jr.	2002				X		X					X	X		X	X					
Denis/Denis/Yost	2002					X					X					X					
Kotabe/Srinivasan/Aulakh	2002						X			X			X		X						
Vermeulen/Barkema	2002			X			X			X					X	X					X
Capar/Kotabe	2003	X						X									X				
Contractor/Kundu/Hsu	2003					X		X		X									X		
Goerzen/Beamish	2003					X					X				X	X					
Hsu/Boggs	2003	X							X	X			X					X			
Ruigrok/Wagner	2003	X								X			X				X				
Lu/Beamish	2004					X				X		X							X		
Thomas/Eden	2004	X	X	X		X	X		X	X			X						X		
Chiang/Yu	2005		X						X												X
Christophe/Lee	2005	X	X			X	X					X					X				
Elango/Sethi	2007	X											X		X			X			
López-Duarte/García-Canal	2007						X					X	X								X
Ruigrok/Amann/Wagner	2007	X								X								X			

Table 2: List of the studies reviewed, Source: Own compilation.

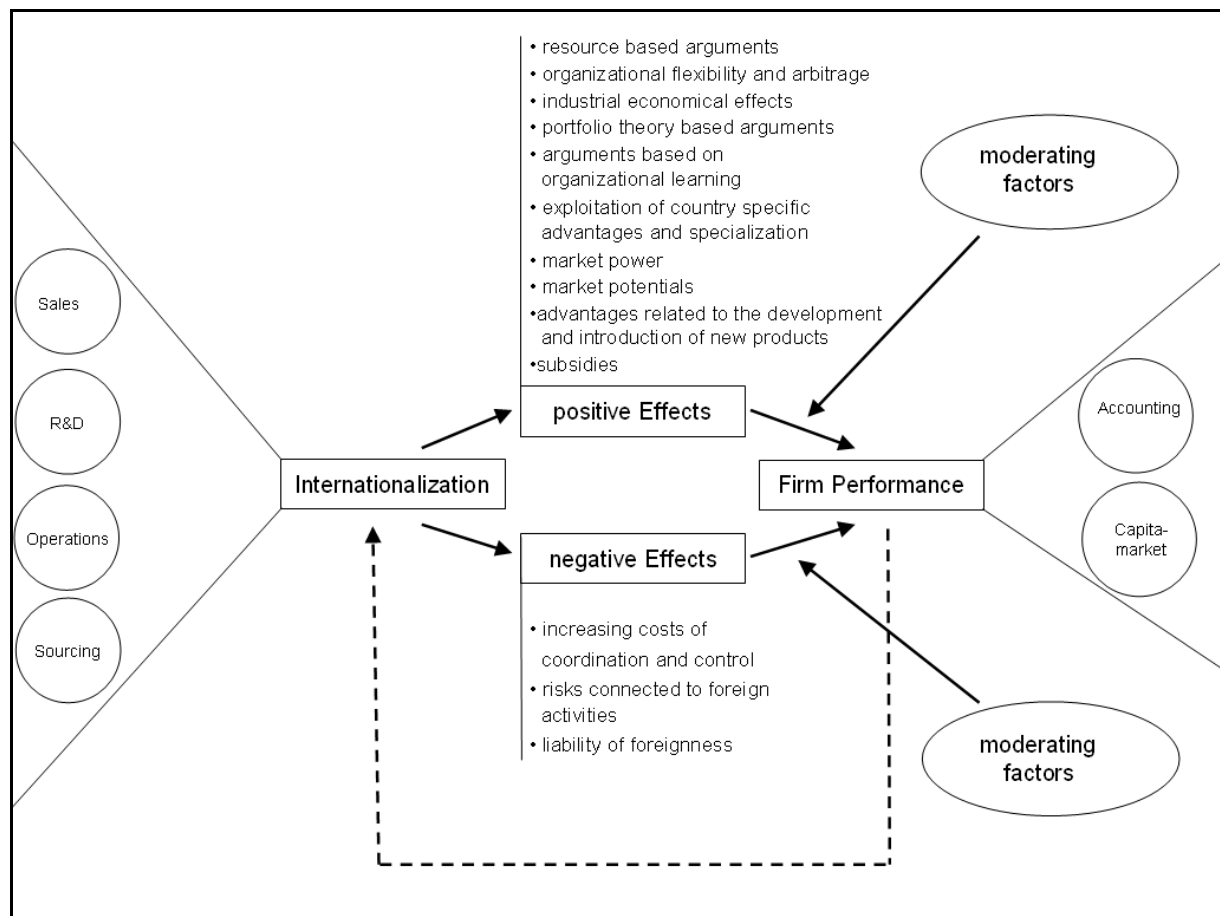


Figure 1: The essential arguments and variables at a glance, Source: Own figure.