Small Firm Growth

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ABSTRACT

We review and discuss the literature on small firm growth with an intention to provide a useful vantage point for new research studies regarding this important phenomenon. We first discuss conceptual and methodological issues that represent critical choices for those who research growth and which make it challenging to compare results from previous studies. The substantial review of past research is organized into four sections representing two smaller and two larger literatures. The first of the latter focuses on internal and external drivers of small firm growth. Here we find that much has been learnt and that many valuable generalizations can be made. However, we also conclude that more research of the same kind is unlikely to yield much. While interactive and non-linear effects may be worth pursuing it is unlikely that any new and important growth drivers or strong, linear main effects would be found. The second 'large' literature deals with organizational life-cycles or stages of development. While deservedly criticized for unwarranted determinism and weak empirics this type of approach addresses problems of high practical and also theoretical relevance, and should not be shunned by researchers. We argue that with a change in the fundamental assumptions and improved empirical design, research on the organizational and managerial consequences of growth is an important line of inquiry. With this, we overlap with one of the 'smaller' literatures, namely studies focusing on the effects of growth. We argue that studies too often assume that growth equals success. We advocate instead the use of growth as an intermediary variable that influences more fundamental goals in ways that should be carefully examined rather than assumed. The second 'small' literature distinguishes between different modes or forms of growth, including, e.g., organic vs. acquisition-based growth, and international expansion. We note that modes of growth is an important topic that has been under studied in the growth literature, whereas in other branches of research aspects of it may have been studied intensely, but not primarily from a growth perspective. In the final section

we elaborate on ways forward for research on small firm growth. We point at rich opportunities for researchers who look beyond drivers of growth, where growth is viewed as a homogenous phenomenon assumed to unambiguously reflect success, and instead focus on growth as a process and a multi-dimensional phenomenon, as well as on how growth relates to more fundamental outcomes.

1. INTRODUCTION

In the last decades, a large number of studies which focus on business growth have been published, with an increasing interest in small firms. As pointed out by previous reviews (Ardishvili, Cardozo, Harmon, & Vadakath, 1998; Coad, 2007; Delmar, 1997; Gilbert, McDougall, & Audretsch, 2006; Storey, 1994; Wiklund, 1998), dozens upon dozens of empirical research studies on this topic can be compiled. These studies represent a variety of academic specialty areas, including entrepreneurship, strategy, organizational theory, and industrial economics. Table 1 below lists some of the most cited studies on business growth, highlighting the fact that most studies on business growth are based on small and medium-sized firms. This collection of studies also illustrates the variety of perspectives and approaches applied to the study of growth.

- Insert table 1 about here -

Despite the fact that a large number of studies on small firm growth have been conducted, knowledge about the phenomenon is far from complete. The review authors just mentioned typically complain that a coherent picture is not easy to distil from the material.

This is likely due to differences in theoretical and epistemological perspectives and interpretations; operationalizations; empirical contexts; modeling and analysis approaches, as well as the inherent complexity and heterogeneity of the phenomenon itself. Thus, not only a superficial but also a rather deep reading of the extant literature easily leaves the reader confused and wondering. It seems that merely adding more studies will not solve this problem. Instead, a conceptual and empirical reorientation is likely to be needed in order to advance this area of research. Therefore, we comprehensively review the empirical literature on small firm growth in an effort to not only highlight and integrate what is known about this phenomenon but more importantly to take stock of what past experiences of researching this area implies for how the phenomenon can or should be studied in future research.

Thus, this survey has two purposes. The first is to review the extant empirical literature on small firm growth. Our review will focus on small and medium-sized firms (SMEs). This is a relevant empirical context as in most national economies SMEs make up more than 95% of the firm population and account for 60-70% of employment (OECD, 2004). Further, it is obviously through growth that small firms become large organizations. Yet, theories and models developed for large firms do not necessarily apply to SMEs. Small firms have been found, for instance, to differ in their competitive behavior from large firms, which has important implications for their performance and growth (Brouthers & Nakos, 2004; Chen & Hambrick, 1995; Moen, 1999). Coad (2006) investigated the differences in growth of small and large firms and found that the growth of small firms appears to be marked by a negative autocorrelation which becomes very strong for the fastest-growing small firms. He attributes this to a more erratic nature of growth for small firms, while larger firms appear to have smoother growth patterns, with positive – albeit small – autocorrelation of one year's growth to the next.

Our review is based on a large number of studies of small firm growth, published not only in leading management journals but also in books, monographs and other less accessible outlets. This is for two reasons. First, academics in all countries do not operate under the same incentive system. Therefore, important studies from outside North America do not necessarily appear in the 'usual suspects' set of journals. Secondly, otherwise marginal, 'non-standard' studies may point at important new avenues for the development of research on small firm growth. Thus, our review will be more comprehensive than that of predecessors which are typically based on studies published in a limited number of management journals.

The second purpose is to suggest a framework for integrating our knowledge on small firm growth to guide future research. This latter aim is particularly important because many previous reviews tend to see 'the glass half empty', emphasizing problems and shortcomings rather than suggesting concrete opportunities for future research. In particular, we will emphasize a) using growth as an intermediary variable rather than the ultimate, dependent variable, and b) paying more attention to different *modes* of growth. This entails considering differential antecedents as well as inter-relationships among growth modes, and disparate effects of different forms of growth.

From our review of the extant literature on small firm growth we have identified a number of key themes which we present. For each theme, we highlight points of convergence and divergence. This discussion will show not only the complexity and fragmentation of the phenomenon, but also the considerable body of generalizable knowledge about small firm growth that now exists. The key themes are the conceptualization of small firm growth; assessing small firm growth; factors driving or hindering growth; modes of growth (such as organic growth versus acquisitions); growth stages and transition; and the effects of small firm growth. Thus, this survey is organized as follows. After first discussing the nature of the phenomenon of small firm growth and its relation to entrepreneurship as well as size and age,

we move on to how growth can best be assessed. A major section, comprising of several sub-sections, is devoted to findings on factors that contribute to or hinder firm growth. Following this we offer a section on *how* small firms grow, if and when they grow at all. In particular, we discuss organic growth versus acquisitions; growth through networking and alliances, and international expansion. The next topic we treat is 'growth stages and transitions.' This has overlaps with several of the issues dealt with in other sections but as it represents a relatively separate stream in the literature we keep it as such. Before concluding, we also treat the effects of growth in terms of profitability and job creation. We choose to focus on these two aspects as they arguably represent the most important outcomes on the firm and societal levels, respectively. Then, by integrating what researchers have learnt so far with issues that have been overlooked we propose a framework for guiding future research and furthering management theory and practice (and, hence, education) on small firm growth.

2. WHAT IS GROWTH?

2.1 Growth as Process and Change in Amount

For discussing what firm growth is we find it wise to consult the only true classic in this area, Edith Penrose's 'The Theory of the Growth of the Firm' (Penrose, 1959). In this seminal book she characterizes the phenomenon of growth as follows: "The term 'growth' is used in ordinary discourse with two different connotations. It sometimes denotes merely increase in amount; for example, when one speaks of 'growth' in output, export, and sales. At other times, however, it is used in its primary meaning implying an increase in size or improvement in quality as a result of a *process* of development, akin to natural biological

processes in which an interacting series of internal changes leads to increases in size accompanied by changes in the characteristics of the growing object" (Penrose, 1959: 1). This distinction is important for the remainder of this manuscript. Most research has undoubtedly been directed at explaining differences in the *amount* of growth and neglected other aspects of the process of growth. The major body of literature on small firm growth is based on quantitative research, and takes growth-related measures as dependent variables to explain growth as increase in amount. The primary exception is the literature on stages-of-development (or organizational life cycles) where consequences of the process of growth are a key theme (see section 6).

In recent years, some authors have articulated their frustration about this limitation of the growth literature and offered alternative conceptualizations. For example, by looking at business growth in relation to developmental growth and connected to the dimension of learning, Ericson (2007) proposes that growth is 'lived' and should not be considered as an 'object' that presides over the individual. She argues that development growth would be exposed by and manifested in complex, interconnected human activities that reflect social practice in terms of encounters between people.

2.2 Growth as a Heterogeneous Concept

Despite a few such attempts to develop alternative conceptualizations of growth, this review will predominantly apply the dominant, size-change perspective. Even within this restricted conceptualization, growth remains a multi-faceted phenomenon. For example, Delmar, Davidsson and Gartner (2003) discuss heterogeneity according to what specific measure (e.g., sales; employment; assets) the firm grows and also as regards the appropriateness of these different measures relative to specific theories. They further treat heterogeneity in the

regularity or irregularity of growth over time, and in the type of growth (organic or acquisition based). Empirically they show that when the top ten percent 'high growth firms' in a large sample of firms was singled out according to six different growth indicators, over 40 percent qualified according to at least one criterion. However, only 16.6 percent made the hurdle for three or more criteria and a tiny 2.5 percent were classified as 'high growth firms' regardless of what criterion was used. Underlying this observation are very low correlations between some of the growth indicators, as these researchers also report. By means of cluster analysis they distil seven different types of 'high growth firms,' which show markedly different growth patterns and background characteristics. They conclude that firm growth is a multi- rather than uni-dimensional phenomenon and that different modes of growth may have different antecedents and effects. Consequently, they may also need different theoretical explanations.

In addition to what Delmar et al. (2003) discuss, growth can also take different forms, e.g., in terms of degree of vertical integration; related or unrelated diversification, and growth through licensing (Killing, 1978). Based on Lubatkin and O'Neill (1987), different types of diversification strategy can be recognized. Growth can take the form of entering into a new, non-overlapping product-market, which is related to the firm's technological or marketing skills base. This is often referred to as related diversification. Alternatively, growth can occur as integration of a part of the value chain that was previously contracted out; a type of growth commonly referred to as vertical integration. A third form is when the firm enters a product-market which is unrelated to the firm's present technological or marketing skills base, i.e., unrelated diversification. Fourthly, growth can come about by focusing on exploiting the existing product-market combination, i.e., through market penetration, the firm thereby remaining a single product (line) business (Levie, 1997).

In an empirical study of 381 young independent manufacturing ventures in France, Ireland, and Scotland, Levie (1997) found that for young growing firms, any amount and form of diversification was associated with more growth than no diversification. For all three countries, he also identified instances of a hybrid related/vertical strategy adopted by low technology firms in fragmented industries such as food and clothing. In these firms, entrepreneurs seem to develop a new concept of the industry, rewriting the rules of the game and turning a previously fragmented crafts industry into a coordinated market-led business, integrating supplies, product development, manufacturing and distribution.

While acknowledging the diversity of growth modes described above, the prototypical growth firm we have in mind throughout this review – unless otherwise stated – is one that experiences relatively stable growth in sales over considerable time, typically through market penetration and some diversification, and where this growth in sales is at least to some extent accompanied with accumulation of employees and assets. Under this assumption, organizational and managerial complexities increase with growth.

2.3 Is Small Firm Growth Necessarily Entrepreneurial?

Business growth is a topic of interest and relevance in many different areas of economics and management studies. As this manuscript appears in an entrepreneurship context the relationship between growth and entrepreneurship is of particular interest. Some scholars hold that "growth is the very essence of entrepreneurship" (Sexton, 1997: 97) or make differences in sales growth the criterion for distinguishing between entrepreneurial and non-entrepreneurial firms (Birch, 1987; McDougall, Covin, Robinson & Herron, 1994). Davidsson (1989a) argued that to the extent the owner-manager has a choice, going for growth is more entrepreneurial than not doing so when both alternatives are feasible, just as

starting a firm is considered more entrepreneurial than not doing so. Davidsson, Delmar and Wiklund (2002) later delved more deeply into the growth-entrepreneurship relationship and arrived at the following. If entrepreneurship is understood as the creation or emergence of new organizations (Gartner, 1988; Gartner & Carter, 2003), growth is not formally part of the definition of the phenomenon (cf. Meyer, Neck & Meeks, 2002). However, as most start-ups remain one-person businesses or at least very small for their entire existence (Aldrich, 1999; Reynolds & White, 1997) it makes sense to include what others would call 'early growth', because otherwise entrepreneurship research cannot fill the gap between non-existence and existence of established organizations as we know them from organization studies. If entrepreneurship is instead defined as *creation of new economic activity* or some close alternative to this notion (Low & MacMillan, 1988; Shane & Venkataraman, 2000; Stevenson & Jarillo, 1990) firm growth is an aspect of entrepreneurship if it is achieved through the introduction of new products or services. If it consists solely of demand-driven volume expansion for existing products or is achieved through the acquisition of business activities that were already up and running within another organization, growth is not an aspect of entrepreneurship. We will here be able to uphold these distinctions only to the extent that the design of the reviewed studies so allows.

The link between entrepreneurship and growth is also relevant when considering the theory of the firm, in which both entrepreneurship and growth play important roles. In Cassons's view (2000: 116), "the modern theory of the firm addressed four main issues: […] the boundary of the firm; the internal organization of the firm; the formation, growth and diversification of the firm; and the role of the entrepreneur". He maintains that the role of the entrepreneur is the most fundamental. Similarly, in Penrose's (1959) theory of the growth of the firm entrepreneurship is the *conditio sine qua non* of continuous growth. As Penrose (1959: 8) writes: "For a firm, enterprising management is the one identifiable condition

without which continued growth is precluded – this is one necessary (though not sufficient) condition for continued growth". Specifically, it is the continuous exploitation of new productive opportunities which drives the growth of the Penrosian firm.

Another link between growth and entrepreneurship is the frequent use of growth as the dependent variable in studies positioned as 'entrepreneurship research'. This connection is not entirely unproblematic. For example, Davidsson, Steffens and Fitzsimmons (2008: 4) argue that there is a 'pro-growth bias' in entrepreneurship research; a conclusion based in part on the following observations: "The preoccupation with growth is no doubt greater in entrepreneurship research than in strategy and general management research. A search on scholar.google.com for 'all in title' in Fried's (2003) top five entrepreneurship specialty journals reveals that the ratios for 'growth or expansion' to 'performance' as title words is 0.91, compared with 0.16 for the top six mainstream management journals. Using the same journals the ratio of 'profit(ability)' to 'growth or expansion' is 0.08 in entrepreneurship and 0.38 in mainstream management research outlets" (Davidsson et al., 2008: 2).

In summary, there are several strong connections between entrepreneurship and growth. Some theorists argue that entrepreneurship is a requirement for the achievement of growth. In line with this, some conceptualizations acknowledge growth as instances of entrepreneurship if the growth is based the launch of new product or services or the entry into new markets. Others connect entrepreneurship also with 'mere' volume growth in the sense that growth is used as an outcome variable interpreted as evidence of successful entrepreneurial action in the previous stage, which would allow this growth to occur. This is often an implicit connection made in empirical studies.

3. HOW SHOULD GROWTH BE ASSESSED?

3.1 Assessing Change in Amount

3.1.1 Cross-sectional vs. longitudinal designs

Even if growth is viewed merely as change in amount it is inescapable that this change occurs over time. This means that firm growth should be researched longitudinally at least in the sense that assessment of the predictors precedes assessment of the outcome, i.e., the change in size. Although the use of longitudinal designs is increasing (see below), many previous growth studies are based on cross-sectional data. In order to assess development of research practice over time in this regard we reviewed growth studies published in two leading entrepreneurship journals between 1997 and 2008, namely *Entrepreneurship Theory & Practice* and *Journal of Business Venturing*. We selected the 39 articles referring to 'growth' in their title which investigated business growth and coded whether the study was cross-sectional or longitudinal. Specifically, we coded a study as cross-sectional if it involved one time period or as longitudinal if it considered at least two time periods. Encouragingly, longitudinal designs (22 out of 38; 57.9%) seem to increase over time and were overall more common than cross-sectional designs (16 out of 38; 42.1%) during this period.

- Insert Figure 1 about here -

Nevertheless, many studies continue to rely on cross-sectional data. This is a problem because inference of causality can only be made when there is a temporal ordering of events. This means that researchers have been involved in 'prediction of the past' or have made strong assumptions about causal order and/or non-changeability of the predictors over time.

Cross-sectional studies assessing growth from an earlier point in time up to the time of the investigation are also subject to selection (success) and hindsight (retrospection) biases. While those undertaking new studies should be aware that longitudinal research has its own set of problems (Menard, 2002) we would argue that further empirical contributions to most aspects of the literature on small firm growth ought to employ a longitudinal design.

3.1.2. The unit of analysis – What is 'the firm'?

From the change-in-amount perspective growth can be measured with a range of different indicators, the most frequently suggested being sales, employment, assets, physical output, market share and profits (Ardishvili et al., 1998; Delmar, 1997; Weinzimmer, Nystrom & Freeman, 1998; Wiklund, 1998). However, before turning to that issue another crucial decision – to which researchers too often only seem to pay cursory attention – has to be made. This is about choosing what entity the 'change in amount' refers to, i.e., what is 'the firm' in the research study? Davidsson (2004:83-89) discusses this matter at some length. First, there is a selection of possible empirical firms: establishments; legal entities; structures of several hierarchically-ordered legal entities with shared ownership and top level governance, and collections of seemingly stand-alone businesses controlled by the same individual or team. Davidsson and Wiklund (2000) illustrate the problem with the following example:

> *"[C]onsider entrepreneur X. In the late seventies, he stumbled into becoming a part-time small business owner-manager as a result of writing some accounting software for his wife's business. Others with similar needs showed an interest, and before long X was running a high-growth firm developing and selling software for business applications. The operations continued to grow by related diversification: consulting, IT-related education programs, software development for other applications than business, etc. Some of this developed organically while other parts were acquired. After a successful decade the firm had some 150 employees and ran activities in several places. Legally, however, they were all in the same limited liability company.*

Now the firm encountered severe difficulties for the first time. In order to regain some of the spirit of the young and small firm, entrepreneur X decided to break the firm into smaller, more independent units. He could do this in either of three ways (he choose one of these): (a) form a number of wholly-owned but semi-independent, separate legal units that represented the different lines of business under a holding company, which would retain a few central functions; (b) like (a) but with more complete separate companies, the holding company essentially being only the owner of the brand name and functioning as the group's internal bank; (c) like (b) but with transfer of majority ownership to the top management in the new units, entrepreneur X only keeping a minority stake via the holding company. In either case, one new company would represent the group's original core business: software development for business applications.

What is 'the firm' in this story? How much has it grown? In what sense is the resulting company group 'the same' entity as the original part-time business? Do we want it to be regarded 'the same' entity? If so, does that apply regardless of whether entrepreneur X chooses a, b, or c? Is it just the software development company that should be counted, or all business activities that are still under entrepreneur X's ownership control? These questions are not easy, but they need reasonable answers if we are to study 'firm growth' as a process over time."

Clearly it is important for the results what entity is regarded 'the firm'. Ironically, as illustrated by the above example this choice is complicated in longitudinal research by the fact that firms morph over time, for example developing from a single establishment firm to a multi-establishment firm and later to a diversified company group. Davidsson and Wiklund (2000) note that this is not a problem that occurs only in a small number of cases; instead they show that in a large scale study following firms over 10 years a slight majority of the firms underwent such changes that it could validly be asked whether they could meaningfully be regarded the 'same entity' as at the beginning of the period. If the entity cannot meaningfully be regarded 'the same', there is no meaningful way to calculate an amount or rate of growth, either.

A particularly tricky form to capture is when there is no holding company involved but a group of seemingly independent firms are in fact controlled by the same individual(s) and where they may regard or treat the units as parts of one business enterprise. Examining this type of constellation, Rosa and Scott (1999) found that new companies were often significantly linked to existing companies, and concluded that many start-ups may be better

regarded as part of growth strategies. They also suggest that the number of entrepreneurs who grow clusters of firms may be higher than those who build high growth firms that are detectable through conventional sampling methods. This means that not capturing entities that grow in this form may lead to an underestimation of the economic contribution of firm growth and an exaggeration of the contribution of start-ups.

One way of informing the choice of entity to which the 'change in amount' should refer is to consider alternative theoretical conceptualizations of 'the firm'. Davidsson (2004) as well as Davidsson and Wiklund (2000) discuss at some length how to best match the selection of empirical firm to the theoretical perspective that guides the study.

3.1.3. The choice of specific growth indicator

Having defined 'the firm' we can return to the issue of specific growth indicators. From the change-in-amount perspective growth is most frequently assessed as changes in sales or employment (Delmar, 1997). In within-industry studies even more specialized measures are conceivable, such as the number of seats for restaurants or theatres, and the number of vehicles for taxi or car rental companies (Bolton, 1971). The importance of the choice of growth indicator has recently been demonstrated in a careful, large scale assessment by Shepherd and Wiklund (2009). Essentially, they show that correlations across various growth indicators are often low (cf. Delmar et al., 2003) and they therefore warn that results are unlikely to replicate across growth measures.

In this situation the alternatives available to the researcher are to a) create a multiple indicator index; b) use alternative measures separately, and c) find the one, best indicator. If growth is conceived of as a latent construct with common causes but alternative

manifestations the multiple-indicator index makes sense (Davidsson, 1991). The underlying assumption is that the same explanatory factors drive or hinder growth across firms, but that this growth for some firms manifests itself as, e.g., radically increased sales turnover without much change in assets or employment, whereas for other types of firm the result is moderate and balanced growth across, e.g., assets, employment and sales. The sum of standardized versions of all three indicators would then be a better representation of the theoretical growth concept. If only one indicator were used, results would be weak and distorted.

Alternatively, the underlying theory predicts that certain antecedent would be related to, e.g., growth in sales and market share while other predictors are believed to influence growth in employment and profits, respectively. If so, the sensible course of action is to include and analyze different growth indicators separately (Delmar, 1997). The theoretical and empirical evidence is leaning in favor of this other notion. For example, based on theoretical ideas inspired by Transaction Cost Economics, Chandler, McKelvie and Davidsson (2009) could successfully explain when growth in sales and employment do and do not move closely together.

If only one indicator is used and the study has a cross-industry design there has been growing consensus that sales growth should be the preferred choice (Ardishvili et al., 1998; Hoy, McDougall & Dsouza, 1992; Weinzimmer et al., 1998; Wiklund, 1998). This is the most general of the alternatives, as all commercial firms need to have sales to survive. According to Barkham, Gudgin, Hart and Hanvey (1996) it is also the indicator small firm owner managers use themselves. In addition, it may be argued that sales often precede the other indicators; it is the increase in sales that necessitates increases in assets and employees, and which leads to rising profits or market share (Flamholtz, 1986). These favorable aspects of sales as indicator are reflected in 30.9 percent of the studies reviewed by Delmar (1997) using it, making it the most frequently used indicator. Almost as popular is employment

growth, which was the choice in 29.1 percent of the studies he reviewed. While this indicator is highly relevant for some purposes such as policy makers' interest in fostering employment growth through entrepreneurship (Davidsson & Wiklund, 2000), it is probably often applied for reasons of data availability. Very few managers see growth in employees as a goal in itself (Gray, 1990; Wiklund, 1998; Robson & Bennett, 2000) and because some growing firms outsource heavily, employment growth is not always highly correlated with sales growth (Chandler et al., 2009; Delmar et al., 2003; Shepherd & Wiklund, 2009).

Indicators other than sales and employment are less generally applicable and therefore not applied as frequently. The 'market' in market share calculations may be ambiguous; differences in market share may be irrelevant for small firms, and comparing shares for firms operating in different markets may be indefensible. The value of assets varies with the capital intensity of industries and is difficult to assess where the key asset is knowledge. Physical output can hardly be compared across industries (other than by comparing rates of change). While profits are universally relevant they reflect many other aspects of a firm (such as its accounting skills) apart from its size or changes thereof. Besides, it is perfectly possible for a large and/or growing (in sales or employment) firm to be unprofitable (Davidsson, Steffens & Fitzsimmons, 2009).

While sales may be the most universally applicable growth indicator it is not always the best one. As Penrose (1959: 199) stated almost half a century ago, "there is no way of measuring an amount of expansion, or even the size of a firm, that is not open to serious conceptual objections." As a case in point, the empirical results reported by Shepherd and Wiklund (2009) suggest measures of growth in employment or equity have better concurrent validity across different indicators than has sales growth. This would make sales less suitable as sole indicator unless the hypotheses under investigation refer specifically to sales growth. Further, high-tech companies with rather long development times, such as biotech companies,

are not able to display any growth in sales or revenues for long periods of time. Yet, during this period they might still grow in terms of assets – including knowledge assets such as patents – and employment. In other cases the revenue figure may be inflated by one-off divestment of business units rather than only capturing sales of products and services. When data covers several countries and/or time periods, differences in inflation rates are a complicating factor. Rather than using sales because others have proposed it, researchers are well advised to think seriously about what growth indicator(s) best matches their theory, their research questions, and the type of firms included in their own sample.

The distinction between organic growth and growth through acquisitions has been widely ignored in previous research (Delmar et al., 2003). When the key interest of the study is on the societal level this is a crucial distinction, as acquisition-based growth in itself does not bring any net addition to the economy. This distinction deserves more scrutiny also in studies on the firm level as the drivers and effects of the two forms of growth are likely to have differential managerial implications (Levie, 1997; Penrose, 1959). Therefore, when possible it seems a wise decision for researchers to choose a data collection procedure that allows them to partial out organic from total growth.

3.1.4. Specific growth formulas

Apart from choice of indicator the specific formula used to calculate growth may affect the results. This is an additional reason to include and analyze different indicators separately so as to detect and make sense of such differences (Davidsson & Wiklund, 2000; Delmar, 1997; Shepherd & Wiklund, 2009; Weinzimmer et al., 1998). In particular, it has been observed that effects of firm size on growth vary depending on whether an absolute or a relative measure is used. In short, relative (percentage) measures tend to ‘favor’ small firm growth

while the reverse is true for absolute growth measures. It may be argued that sophisticated researchers have no problem understanding this complication and that the inclusion of size as a control variable solves the problem. While it does in a technical sense, a range of other independent variables may be size-dependent in non-obvious ways, so that also their estimated effect on growth is sensitive to whether an absolute or a relative growth measure is used. Therefore, the size-sensitivity of specific formulas deserves deeper consideration than the mere inclusion of size as a control variable.

Further, the use of only first year and end year data for growth calculations has been criticized because it models growth as one giant leap (Davidsson & Wiklund, 2000) and makes the calculation overly sensitive to stochastic variation (Weinzimmer et al., 1998). On this ground, the latter suggest that the slope of the regression line over multi-period data be used as the measure of firm growth. To some extent such a practice also narrows the gap between the size change and process perspectives on growth, even though it still assumes growth to be linear and uni-directional.

To sum up this section on assessing the amount of growth is should be clear that there are numerous ways in which the focal entity and its size change over time can be conceptualized and operationalized. It is probably no exaggeration to suggest that the number of combinations of possible choices researchers can make in this regard is of the same order of magnitude as the number of studies on small firm growth that has been undertaken. This obviously makes the task of summarizing and making sense of findings across studies a very challenging task. Patterns of empirical results suggest that awareness of the distinctions between absolute vs. relative (percentage) measures, and between organic vs. acquisitive growth, may be particularly important. However, also after holding these aspects constant the correlations among different growth measures may not be high, especially if the study's sample is heterogeneous in terms of industry, firm size, firm age, etc.

3.2 Assessing Growth Processes

Fruitful research on growth as process arguably calls for a fundamentally different approach. The arms-length, quantitative study of determinants of growth does not put much flesh on the bone to understanding the issue from a process point of view. This can create a major challenge, as a number of the determinants fostering or hindering growth are not stable over time. Attitudes and motivation of founders/CEOs could for example change dramatically due to events in their business or private lives. A classic example in the literature is Stanworth and Curran's (1973) 'Frank Williams' case. Wiklund (1998: 87) discusses the difficulty as follows: "…we really do not know how much variables change over the studied time period, and whether or not this is a major problem. Growth, as such, is a change process and it could be that explanatory variables change quite substantially during this process. Until we do know, it must remain an unwise oversimplification to assume that nothing else but size changes." While existing studies manage to give an answer the question of how different determinants affect growth, they largely fail to explain the underlying processes of why these determinants might affect growth.

When growth is conceived of as a process there is little doubt that having several indicators of growth is preferable, and that these need to be assessed at several different points in time. Especially if the study is of a close-up nature a very rich image can be captured, including for example direct assessment of organizational complexity along several dimensions as the growth process unfolds. This is not to say processes cannot be studied quantitatively. However, it requires considerable resources and staying power on the part of the research team to study a substantial number of development processes in an intense manner (Raffa, Zollo & Caponi, 1996). While retrospective reconstructions of growth

processes do not lack value they are subject to potential biases due to hindsight and rationalization after the fact on the part of informants. To some extent this can be remedied with use of multiple informants and documents produced at the time, but – whether qualitative or quantitative in nature – a more ideal study would follow the growth processes as they evolve.

4. WHAT FACTORS FACILITATE OR HINDER GROWTH?

It is important to realize that growth is not the norm. Most firms start small, live small and die small. They never embark on a significant growth trajectory (Aldrich, 1999; Reynolds & White, 1997; Storey, 1994). One major reason for this is that the majority of start-ups are imitative businesses in mature industries, serving local markets (Aldrich, 1999; Reynolds, Bygrave & Autio, 2003; Samuelsson, 2001, 2004). As such, they do not have much growth potential.

For firms that do grow, a whole range of different determinants of growth have been studied. These can roughly be categorized into internal and external determinants. In the following, we will organize sections by this distinction. It should be noted that it is sometimes difficult to determine what factors are truly 'external' and 'internal,' respectively. For example, industry affiliation may be seen as a strategic choice made by the firm (Porter, 1980) or as an indicator of what the firm's task environment is like. Similarly, in Chandler and Hanks' (1994) conceptualization, qualities of 'the opportunity' are regarded as aspects of the environment. In more recent works 'opportunity' is often used interchangeably with 'business idea' and interpreted as an internal issue (cf. Short, Ketchen, Shook & Ireland,

2009). This indeterminacy is at least implicitly acknowledged in studies which combine internal and external factors and those approaches which offer more integrative models of growth. These types of studies will be reviewed separately towards the end of this main section of our review.

4.1 Internal Determinants

A range of different internal determinants have been studied regarding their effect on business growth. Compiling mostly UK studies from the late 1980s and early 1990s, but without combining them in an integrated model, Storey (1994) organized the evidence in the categories *the entrepreneur*, *the firm*, and *strategy*. Support for influence was found in all three categories. We will follow his categorization and present studies on internal factors along those three categories.

4.1.1 Factors related to the entrepreneur

Among the variables associated with the individual entrepreneur, according to Storey (1994) a majority of studies found that for *motivation, education, management experience, number of founders* and *functional skills* the influence on growth is positive, although the last factor had only been investigated in two studies.

Although the odd study may have failed to establish such a relationship (e.g., Jenkins & Johnson, 1997) there is compelling evidence that the owner-manager's growth motivation, communicated vision and goals have direct effects on the firm's growth (Baum & Locke, 2004; Baum, Locke & Kirkpatrick, 1998; Delmar & Wiklund, 2003; Kolvereid & Bullvåg, 1996; Mok & van den Tillaart, 1990; Wiklund, 2001; Wiklund & Shepherd, 2003). However,

it is also clear that most business founders have only modest growth aspirations for their firms. This has been demonstrated in several different studies across countries (Cliff, 1998; Clark, Berkeley & Steuer, 2001; Delmar & Davidsson, 1999; Dennis & Solomon, 2001; Human & Matthews, 2004). Based on replications across three large survey studies, Wiklund, Davidsson and Delmar (2003) found that the attitudes of entrepreneurs towards growth are influenced by their beliefs regarding the extent to which a company's larger size might compromise the well-being of the employees, the independence of the firm (relative to stakeholders), the ability to maintain satisfactory supervisory control, as well as the ability to ensure survival in a potential crisis. Tregear (2005) provides qualitative evidence of how entrepreneurs attempt to balance growth and lifestyle goals.

Abilities of the individual entrepreneur are at the heart of Jovanovic's (1982) model which assumes that individuals have different innate abilities but imperfect information about them when they start a business. A particularly interesting feature of his model is that entrepreneurs learn about their true abilities as the business survives and grows. Therefore, it is at no surprise that growth has been found to be an impetus for subsequent growth (Orser, Hogarth-Scott & Riding, 2000). *Unemployment* as start-up reason was mostly negatively associated with growth in Storey's (1994) review, while for prior self-employment, social marginality (ethnicity), training, age, prior sector experience and gender the evidence was mixed, or most studies suggested they had no effect on growth. Yet, in subsequent research the experience of growing other firms has been found to be an important catalyst for higher levels of growth in small firms (Wasilczuk, 2000). In a contingency study of new manufacturing firm performance Box, White and Barr (1993) found that the number of previous start-ups, years of entrepreneurial experience, industry experience, locus of control and environmental scanning activity play important roles for performance, operationalized as employment growth.

The size of the founding team has been found to be positively related to small firm growth. This positive effect has been explained with different team members making up for each other's competence deficits, i.e., based on a diversity argument (Cooper, Gimeno-Gascon & Woo, 1994). Yet, Ruef, Aldrich and Carter (2003) found team composition to be driven by similarity, not diversity. If so, the diversity argument would not hold for most teams because husband and wife teams may be suspected to create 'mom and pop' businesses with little growth potential. Accordingly, Baines and Wheelock (1998) found that owners pursuing and achieving growth tended to form partnerships with people other than their spouses. On the other hand, Ensley, Pearson and Amason (2002) found that top manager team cohesion in new ventures was actually positively related to new venture growth. One reason for this might be that past joint work experience among the founding team members increases their speed in decision making, as proposed by Eisenhardt and Schoonhoven (1990).

The lack of a gender effect is also important to comment on. This is one of the more certain generalizations, as the variable was included in most of the studies Storey (1994) reviewed. Other research suggests that women-owned businesses do not seem to underperform with regard to profitability, employment or orders (DuRietz & Henrekson, 2000), especially once appropriate demographic and other relevant controlling influences are taken into account (Johnsen & McMahon, 2005). When studies suggest that female-owned businesses grow less (e.g., Cooper, Gimeno-Gascon & Woo, 1994; Fischer, Reuber & Dyke, 1993) it is likely to be either an industry effect rather than a true gender effect, or a result of lower average growth aspirations on the part of female business owners, indicating neither less effective use of resources nor lesser ability to reach one's goals (Cliff, 1998; DuRietz & Henrekson, 2000; Watson, 2002).

Worth commenting is also the weak effect of career reasons on venture growth. Birley and Westhead (1994) found that classifying owner managers based on their reasons for starting the business did not help in predicting subsequent size or growth of the businesses. This evidence provided support for the view that although there are different reasons which lead individuals to start a business, once the business is established these reasons have little influence on its growth. Yet, as noted by Cassar (2007), these results could have been influenced by the cross-sectional nature of the data – that is, the respondents were surveyed several years after the creation of the business, and, thereby, provided retrospective accounts of their career reasons.

Consistent with Penrose's framework, growth studies acknowledge the importance of managerial capacity. In growing SMEs, for instance, managers need to have the necessary knowledge and expertise to make decisions about the scope of the firm and the scale of the operations (Daily et al., 2002); to access funding (Pissarides, 1999); to develop and cultivate network relationships (Lechner & Dowling, 2003); and to decide on the allocation of limited resources. Compared to large firms, small firms have less access to the experience and knowledge of external actors, such as consultants, and external directors, who might offset the shortcomings in their management. There is the realization that managerial capacity is particularly critical to compete in today's highly dynamic markets (Zahra & Filatotchev, 2004), where managers' failure to respond to the effects of rapid change can be very costly, especially for small firms. There is also support that for small firm growth the managers' ability to search and exploit opportunities is more important than in the availability of financial resources (Moreno & Casillas, 2007).

To sum up, studies suggest that founders' motivations, experience and skills influence the amount of growth of the firm. Many entrepreneurs have only modest growth aspirations, which can, however, increase as they learn about their true abilities. While founding team

size appears to have a positive impact on growth, no clear gender effects on growth can be confirmed, which contradicts a commonly held assumption.

4.1.2 Factors related to structural characteristics of the firm

As regards the firm's structural characteristics the evidence suggests that *firm age* and *size* as well as its *legal form* are systematically related to growth (Storey, 1994). Especially the discussion of age and size as determinants of firm growth has a long tradition, following the formulation of 'Gibrat's law' (Gibrat, 1931). Gibrat's law states that the rate of growth of a firm is independent of its size at the beginning of the period, and that the probability of a given growth rate during a specific time interval is the same for any firm within the same industry. However, empirical studies typically do not find support for the independence of firm growth from size and age (Becchetti & Trovato, 2002: 291). In Storey's (1994) review all studies found a significant effect of size but the sign varies, probably as a consequence of the specific growth measure employed (cf. discussion in section 3).

As regards the growth effects of age the arguments and evidence are mixed. On the one hand, Stinchcombe (1965) holds that young firms suffer from 'liability of newness' – that is, a greater risk of failure because of the lack of resources and relationships, which renders them unable to compete effectively against large organizations. The underlying source of liability has been debated, i.e., whether it is due to the young age or the small size of the venture (cf. Baum, 1996; Brüderl, Preisendörfer & Ziegler, 1992). A distinct 'liability of smallness' also seems to be present, meaning that larger new businesses (in terms of financial capital or the number of people employed at the time of founding) have better survival prospects than small new businesses (Aldrich & Auster, 1986; Brüderl & Schüssler, 1990).

On the other hand, a prevailing argument in the entrepreneurship literature is that young firms tend to be more entrepreneurial than older firms. They may also hold a 'learning advantage of newness' over larger firms, stemming from more flexible working environments and less rigid routines (Autio, Sapienza, & Almeida, 2000; Sapienza, Autio, George, & Zahra, 2006). Thus, they are expected to be in a better position to take advantage of growth opportunities than their larger counterparts. Accordingly, a number of empirical studies show that firm age is negatively related to growth (Dunne & Hughes, 1994; Evans, 1987). As we will discuss later, both age and size have strong effects on *how* firms grow, if they expand at all.

4.1.3 Factors related to firm strategy

As regards strategy variables the evidence is much less conclusive than for the structural firm variables discussed above. For variables that were included in five or more of Storey's (1994) studies a relatively consistent positive effect was found for *technological sophistication*, *market positioning*, and *new product introduction*. In individual studies several other strategy variables were also shown to be influential but collectively the evidence was weak, mixed, or the factor had been included in too few studies for any conclusions to be drawn.

Effects of the firm's strategic orientation on growth have been reported in several studies (Bamford, Dean & McDougall, 1997; O'Gorman, 1997; Wiklund & Shepherd, 2005). Freel and Robson's (2004) study focuses on the relationship between innovation (in both products and processes) and SME growth. Their findings indicate a positive relationship between novel product innovation and growth in employment. Yet, they also suggest important differences between manufacturing and service firms. Product innovation (both incremental and more radical) appears to be negatively associated with growth in sales or

productivity in manufacturing firms, while incremental process innovations appear to be positively associated with growing sales and productivity in service firms.

A comprehensive, longitudinal study, which combined strategy and human capital arguments found that firms based initially on technical entrepreneurial know-how expand their market abilities by 1) collaborating with large firms, 2) collaborating with professionals and consultants, 3) using external (technical and market) competencies, and 4) acquiring new market competencies through diversification of the entrepreneurial group's activities or new market-oriented employees (Raffa et al. 1996). By contrast, firms initially based on strong entrepreneurial market knowledge faced more difficulties in supplementing their know-how with technical skills. Entrepreneurial Orientation (EO; i.e., innovativeness, pro-activeness and risk-taking) has been found to often be higher in small firms, and when discussing integrated models below we will elaborate on the positive effect of EO on growth. Some caution is recommendable, though, as it has been shown that the different sub-dimensions of EO may have differential effects on firm performance (Lumpkin & Dess, 2001). Wiklund and Shepherd (2005) were able to demonstrate that the effect of EO – in this case on a performance index combining growth and financial indicators – is moderated by environmental dynamism and capital availability. This is direct evidence that strategy needs to be adapted to the environment and a likely reason why few findings on strategy are generalizable across many studies. This may also explain why some studies arrive at counter-intuitive results on strategy. For example, Bamford, Dean and McDougall (1997) as well as McDougall et al. (1994) found that broad strategies were more successful with respect to small firm growth, thus questioning the otherwise common niche argument (Storey, 1996; 1997).

The existence of contingencies and interaction effects also points at where research on small firm growth stands today. Rather than assuming linear, additive effects research

increasingly focuses on fit and combined effects. Representing different disciplines, Chandler and Hanks (1994) and Audretsch (1995) were both forerunners in this trend. There are several reasons for this development. Generally increased methodological sophistication of entrepreneurship research is one, probably fuelled by disappointment over relatively weak results in many earlier studies. Increased theory-drivenness is another, especially as there has also been a shift from theories that regard firms as essentially similar micro-units (Hannan & Freeman, 1977; Porter, 1980) to those that emphasize their uniqueness (Barney, 1991; 1997; Wernerfelt, 1984; 1995). The use and usefulness of analysis of moderators is not limited to strategy variables. While Storey (1994) found mostly positive effects of education and management experience, others have emphasized that these effects are surprisingly weak (e.g., Davidsson, 1989a). The reason for the latter is easy to understand in the light of moderation results reported by Wiklund and Shepherd (2003). They find that education and experience have much stronger relationship to growth if growth aspirations are also high. That is, ability gained through experience and education does not deterministically force business founders to expand their firms. If they aspire to do so, however, education and experience seem instrumental in reaching that goal.

Yet another important firm-related factor has been identified by Thakur (1998) who argues that an effective exploiting of growth opportunities requires putting capable systems in place. Resources are required to create effective organizational form, and a rudimentary structure is necessary to generate the resources. This type of argument is recurrent in the stages-of-development literature, which we will review in section 6.

In short, in response to getting weak and contradictory results when searching for main effects in heterogeneous and varying samples, research on strategy variables related to small firm growth has become more sophisticated. It thus has started drawing on contingency and interaction effects, rather than assuming linear, additive effects. This approach allows

capturing more adequately the uniqueness of companies' strategies in relation to heterogeneous growth processes.

4.2 External Determinants

Then again, do the internal aspects really matter, or do external forces largely determine the firm's growth, as suggested by the population ecology perspective (Hannan & Freeman, 1977)? For firm performance in general, Hawawini, Subramanian and Verdin (2003) found that industry factors, across different indicators, on average matter very little. But the authors also suggest that industry-specific factors may have a different meaning for different types of firms within an industry (2003: 14). Kangasharju (2000) suggests demand for the firm's products as the major external determinant of small firm growth, and secondly the market actions of competitors, the supply of production factors, and the features of the local business environment.

Environments vary along dimensions such as dynamism, heterogeneity, hostility and munificence (Dess & Beard, 1984), and these external factors may to a considerable extent determine how much the firm grows. For example, it has been clearly demonstrated that rapidly growing firms are more often found in industries and regions that are more dynamic (Carroll & Hannan, 2000; Davidsson & Delmar, 2006; Jovanovich, 1982). As regards *growing* industries, the results of the comprehensive meta-analysis by Capon, Farley and Hoenig (1990) – which we will have reason to comment on in greater detail later –implies that many firms grow simply because the growth of their industry allows them to grow. Growth firms in industries that are stagnant overall are often found in dynamic growth niches within these industries (Storey, 1997; Wiklund, 1998). This seems to correspond to Penrose's (1959: 222 and onwards) discussion on the opportunities for small firms to enter and grow in

a market niche, which she calls the *interstices* in an economy. These are productive opportunities which small firms see and believe they can take advantage of, left open by large firms. As regards the *innovativeness* of the industry, while in highly innovative industries the failure rate for new entrants is also higher, Audretsch (1995) demonstrated that for those who survive the first few years both survival and growth is higher in subsequent years for firms in more innovative industries.

As mentioned above, it is also well established that environmental dynamism has a positive influence on firm growth. In line with this, Dahlqvist, Davidsson and Wiklund (2000) found a significant negative effect of a rural location when testing the effect in a multivariate model. The growth effects of other dimensions of the geographic environment, such as heterogeneity and hostility (Dess & Beard, 1984), are less well established. While confirming the positive effect of dynamism (in his case *increase* in dynamism), Wiklund (1998) found a weak negative effect of environmental hostility, and no effect of heterogeneity. It is likely that these other environmental conditions are associated with contradictory effects so that the overall effect can be zero or tilt over in either direction depending on the specific context. For example, resource munificence may facilitate the building of capacity to grow but also attract more new entrants that compete for the market potential for growth. It has been argued that in heterogeneous markets, entrepreneurial opportunities are more likely to arise as developments in one market creates demand for a firm's products in related areas (Zahra, 1991). However, heterogeneity may also indicate that the market is fragmented into small niches across which individual firms would find it difficult to expand.

The effect of expanding into *new* and unfamiliar geographic environments has been little studied other than in the context of internationalization, which we will review in a separate sub-section below. Notable exceptions are the studies by Barringer and Greening

(1998), and Greening, Barringer and Macy (1996). The former argue (1998: 490) that opening a new geographic site puts the firm in a situation similar to a start-up process in that the firm must select a location, hire and train staff, establish organizational legitimacy, motivate and supervise employees, and develop a structure to accommodate future growth. This, again, is a reminder that different forms of growth are likely to have different antecedents and different effects. As regards legitimacy, the implication is that a geographically dispersed firm operate under different levels of environmental hostility in different locations, making the likely effect a matter of *where* it can expand (more rapidly) rather than how much it will expand in total.

Chandler et al. (2009) take an interesting new angle to how environmental (resource) munificence influences not how much firms grow, but *how* they grow. They hypothesize that theoretical predictions inspired by Transaction Cost Economics will get more support in resource-scarce environments than in resource-rich environments. Their empirical analyses confirm that such is the case.

In all, it is clear that not only internal but also external factors influence the growth of small firms. The growth of the industry and the dynamism of the region seem to generally have positive effects. The dynamism of the industry may make it harder to survive, but eventually the survivors tend to be rewarded with better growth prospects. Other aspects of the environment apparently have effects that are more context-specific and therefore differ between studies.

4.3 Growth Barriers

Barriers to growth are to a considerable extent the mirror image of the drivers of growth (Barber, Metcalfe & Porteous, 1989). However, certain factors – external ones in particular – are more commonly discussed from the perspective of their negative influence. Examples include various institutional factors. Noting that indisputable evidence for the effects of institutional arrangements is almost impossible to establish, Davidsson and Henrekson (2002) hold that the consistency of the theoretical arguments and empirical data makes a strong case for the notion that in the case of post WWII Sweden, certain institutions have systematically discriminated against the growth of independent businesses. The specific institutions they investigated included, e.g., regulation of certain sectors of the economy; taxation; wage-setting institutions, and labor market legislation. Carlsson (2002) employed a broader perspective on institutions in his comparison of technology clusters in Sweden and Ohio. The factors he investigates included the science base, mechanisms for technology transfer, density of networks, and what he calls 'entrepreneurial climate.' Again, the conclusion is that Swedish institutions have hampered firm growth. It would be rather pointless to re-iterate all the specifics of the above-mentioned studies' results here as they are contingent on initial conditions in particular contexts. The important point is the support for the theoretical position that institutional arrangements are important; which particular institutions that work as growth barriers in a particular country at a particular time will, of course, vary.

Carlsson's (2002) study also considered capital availability and the author points this out as one of the institutional factors particularly likely to explain differential growth patterns for firms in Sweden and Ohio. Other studies have also pointed at provision of external debt and equity capital as important for promoting small firm growth (e.g., Becchetti & Trovato, 2002; Riding & Haynes, 1998). However, it would be naïve to conceive of the economy as populated by small firms that are all full of willingness and potential to grow if only the financial means were available. We will not attempt full coverage of this complex and thorny

issue here. Penetrating this topic quite thoroughly, Storey (1994) arrived at the conclusion that there is no general market failure that motivates a major role for government in improving the financing of small firms. As regards private external capital the issue is loaded with motivational concerns, agency problems, procedural justice issues and possible detrimental effects of over-funding (Cressy & Olofsson, 1996; Sapienza, Korsgaard & Forbes, 2003; Wiklund, Davidsson & Delmar, 2003). For these reasons even those firms that face profitable growth opportunities may refrain from growth or go for growth only if they can do so based on retained earnings or financial bootstrapping (Winborg & Landström, 2001). The issue is far more complex than just being a matter of providing enough external capital for these firms that have growth potential but lack the resources to realize it.

We noted above that the precise institutional barriers firms encounter will vary across space and time. What barriers a firm with growth ambitions must deal with will also vary by industry. For example, Orser et al. (2000) found that high-tech firms perceived access to capital as an important growth barrier, while companies in the service sector were found to be more concerned about transaction burdens, such as exchange rates or tax levels.

4.4 Integrated Models Combining Internal and External Determinants

Thus, the evidence suggests that firm growth is to a certain extent externally determined. On the other hand, studies that include explanations on different levels tend not to highlight environmental characteristics as being the most influential (Davidsson, 1991; McKelvie, Wiklund, & Davidsson, 2006).

Taken together the sensible conclusion is that growth is to a considerable extent a matter of willingness and skill, but that fundamental facilitators and obstacles in the

environment cannot be disregarded. The extent to which the firm governs its own destiny is also likely to vary across firms and situations. For example, the image that emerges from Davidsson and Delmar's (2006) research is that firms in the subgroup they define as high growth find ways to reach their growth goals regardless of environmental conditions, while the majority of 'other firms' seems to swing up and down with the development of the economy at large. Over a deep recession and recovery, the 'other firms' in their study first markedly decreased and then increased employment. Since they are defined on that basis it is no surprise that the curve for 'high growth firm' was located much higher on the growth axis and never hit negative numbers. The compelling feature, however, is that there was no downturn at all for this category of firm. A closer look reveals that this was achieved by increasing the amount of acquisition-based growth in hard times; just like other firms the high-growth firms are largely unable to expand organically under such conditions.

Evidently, many different internal and external factors could under some circumstances affect firm growth, and consequently a very long list of specific growth determinants has been suggested in the literature. This poses a challenge for studies aiming at as complete as possible an explanation of the phenomenon of small firm growth, rather than testing effects predicted by a particular theory. On the one hand the study has to include a broad range of explanatory variables; on the other hand some abstracted sense-making is needed, i.e., the grouping of the many specific variables under a smaller number of over-arching themes. Davidsson (1989a; 1991) set out to achieve more abstracted sense-making of that kind by integrating the long 'laundry list' of low-level specifics appearing in the small firm growth literature of that time. Hence, he regarded all manifest variables as aspects of three exhaustive, higher-order factors: *ability*, *need* and *opportunity* (this latter concept being an amalgam of firm- and environment level factors roughly denoting 'feasibility' rather than 'venture idea'). He further distinguished between objective and perceived versions of these

variables, arguing that while perceptions guide behavior the outcomes are also influenced directly by objective circumstances whether they are perceived correctly or not. As the study was cross-sectional only the objective factors could be related to actual growth in the empirical analysis; the analysis of perceptions used growth aspirations as the dependent variable. His results show that while all three factors affect growth, the variables indicating variance in the *need* for growth were the most influential. They also had the most stable effects across industries. The same pattern for relative importance emerged when objective and perceived ability, need and opportunity were related to future growth aspirations.

A few studies cover a range of factors on different levels. Sandberg and Hofer (1987) developed and tested a model of new venture performance suggesting that new venture performance is a function of the industry structure, venture strategy, and the founding entrepreneur. Chrisman, Bauerschmidt and Hofer (1998) extended this model by including resources and organizational structure, processes and systems developed by the venture to implement its strategy and achieve its goals. They stress how new venture performance is a function of the critical decisions and behaviors of entrepreneurs in recognizing entrepreneurial opportunity, assembling resources needed to pursue opportunity, developing a strategy to align resources to exploit opportunity, and designing an organization capable of putting the strategy into action (p. 21). Eisenhardt and Schoonhoven (1990) is another example of an integrative model involving growth drivers on multiple levels. Specifically, they hypothesize and find significant and positive main effects of founder team characteristics (size, cohesion and diversity combined); strategy (moderate levels of innovation) and industry (growth; but not concentration). In addition, they explore and find a strong interaction effect between the strength of the founding team and the growth rate of the industry. Being theory-driven, focusing on a narrow population (semiconductor start-ups in the US 1978-85) rather than a heterogeneous sample, and examining non-linear as well as

moderated relationships, this study was well ahead on the entrepreneurship research game of its time. To this day it remains an exemplary study. However, despite looking at influences at several levels the study is not an attempt at providing as complete as possible an explanation for the growth and non-growth of young firms. Its focus on a rather atypical industry and growth that in several cases extends well beyond anything that can be called a small firm stage in the firms' development also limits the value of the study as a source of insights that are applicable to SMEs more generally. Building on Davidsson (1989a, 1991) but starting a decade later, Wiklund (1998; 1999) took a more explicitly theory-driven approach. He combined three theoretical perspectives in his model: the *resource-based view*, the *motivation perspective*, and *strategic adaptation.* With this choice of foci he at least implicitly considered both Davidsson's quest for concentrating on more abstracted sense-making, and Sandburg and Hofer's (1987) consideration of influences at different levels of analysis. In his model, strategy – operationalized as Entrepreneurial Orientation; *EO* (Lumpkin & Dess, 1996) – is hypothesized to be directly related to growth, whereas resources, motivations, and characteristics of the environment are assumed to indirectly affect growth via strategic adaptation. His results confirm that all included categories of variables influence growth. However, in empirical estimation aspects of motivation and the environment were ascribed direct effects alongside their effects via strategy. Subsequent analyses have shown that the EO→performance link increases in strength over time, at least over periods of moderate length (Wiklund, 1999). Taking this into consideration his results support the notion that strategy has the strongest and most direct influence on growth. This is an important addition to Davidsson's (1991) conclusions, as explicit consideration of strategy was lacking in his study.

While both Davidsson's and Wiklund's models capture many factors and distinguish between indirect and direct effects, they do not include interactive (or moderated) effects.

Eisenhardt and Schoonhoven (1990) did examine interactions but put narrow limits on the industry and explanatory variable range covered in the study. Achieving both completeness in terms of inclusion of growth drivers and at the same time examining their interactive effects may be beyond the capacity of any researcher, or even the statistical software used. An alternative strategy is then to confine the study to one level of analysis (or one disciplinary perspective) and to limit other influences by drawing a sample from a relatively homogeneous empirical context. An excellent example is Baum and Locke's (2004) psychological study of determinants of firm growth. Confining their study to a population of North American architectural woodwork firms and including a small number of firm- and environment level control variables, these researchers found strong direct effects of the founders' goals, communicated vision, and self-efficacy on growth over a six-year period. In line with their theory, they also found mostly indirect effects of passion, tenacity and new resource skills. In a less carefully operationalized study, and using a more heterogeneous sample, these relationships may well have been undetected. By focusing on a narrowly defined industry Baum and Locke (2004) could keep many potentially confounding influences constant in their study, thus arriving at stronger results for those variables in which they had a theoretical interest.

5. MODES OF SMALL FIRM GROWTH

5.1 Organic Growth vs. Acquisitions

In her seminal work, Penrose (1959) highlighted the existence of different modes of growth, most prominently organic growth versus growth by acquisitions. She argued that organic

growth can be limited by three broad factors: managerial ability as an internal factor; product or factor markets as external factors, and uncertainty or risk as a combination of internal and external factors. In line with findings reported above for individual and strategy-related factors, she also argued (1959: 44-5) that as organic growth does not take place automatically. Purposeful planning and the allocation of resources towards the purpose are necessary. Thus, in order to be able to take advantage of growth opportunities in the market, specialized resources and managerial abilities need to be available to the firm. During the process of expansion, new managerial services need to be created, and a general improvement in skills and efficiency takes place. Over time, managers increase their experience, which shows in the knowledge they acquire and in changes to their ability to use this knowledge. This experience and knowledge will remain unused if the company fails to grow further. Therefore, knowledge provides an inducement for further expansion.

Penrose suggested that at any time companies have a "variety of inducements to expand in one or more specific directions" (p. 65). These inducements, again, can be found inside and outside the firm. External inducements to grow include, for example, the growing demand for a particular product; changes in technology which call for larger-scale production, and discoveries or inventions which appear particularly promising to exploit. Included here are changes which might adversely affect a company and against which a company could protect itself through expansion in particular directions (such as backward integration or diversification). Penrose criticized the lack of attention paid at the time to internal influences on the direction of expansion. She argued that internal obstacles to expansion arise when some services or resources needed for expansion are not available in sufficient amounts in the firm – mainly in form of managerial capacity or technical skills. Likewise, internal inducements to expansion arise from the existence of currently unused

productive services, resources, and specialized knowledge, which according to Penrose are always to be found in any firm (p. 66).

She provides several arguments for why companies might choose to acquire existing companies for expansion. The costs as well as managerial and technical difficulties of entering a new field could be reduced by taking over another company, as for example plants can often be acquired at less than their reproduction costs. However, growth by acquisition does not necessarily mean that a company is entering a field for which it would otherwise have had no qualifications. The acquisition of another company might be a profitable endeavor precisely because the firm has particular qualifications in the new field. “Thus the existing resources of a firm will not only limit the extent to which successful expansion can be effected through acquisition, but will also influence the direction of external expansion” (Penrose, 1959: 129). That is, they will often lead companies to acquire related or concentric activities.

Despite Penrose’s elaboration on organic growth versus growth by acquisition, few empirical studies have examined such issues in samples of small firms. One of the studies has been done by Davidsson and Delmar (2006), who backtracked to 1987 the entire population of Swedish firms that had 20 or more employees in 1996. They found that among firms that showed significant growth the small and young firms had a much stronger tendency to grow organically than what was the case for large firms. The differences in growth mode by size and age classes they found are quite dramatic. For example, in the smallest size class almost all growth is organic. This share then drops monotonously and sharply across size classes. In the largest size class (>2,500 employees) firms that are classified as ‘high growth firms’ based on total employment growth actually shrink quite dramatically in organic terms. Similarly, among high-growth firms that are five years or younger the organic share is about

90 percent, whereas among those that are older than ten years only 16 percent of the growth is organic.

McCann (1991: 191) argues that dominance for internal venturing among young and relatively inexperienced firms is not surprising as such firms hardly have the resources to grow aggressively via acquisitions. Empirically, Kraemer and Venkataraman (1997) focused on firms that possessed inventions at start-up and found that these were more likely to venture internally than through acquisitions or strategic alliances. In a more broadly based study (albeit restricted to manufacturing firms) of young, growing firms in France, Ireland and Scotland, Levie (1997) obtained results similar to Davidsson and Delmar's (2006) although size and age differences are not quite as dramatic in his study. This is probably partly due to the fact that his study excludes all firms that have less than 50 employees. Levie's study also explored diversification and integration strategies. The results reveal that the great majority of firms grow in volume within a single industry or engage in related diversification. Very few firms engage in vertical integration or unrelated diversification. While volume growth and some related diversification dominate the picture Levie's data suggest a select minority of high growth firms utilize a broader range of growth modes.

If few studies have examined the existence and prevalence of growth modes among small firms, even fewer have tried to estimate how the pursuit of different forms of growth affect the firm over time. Salvato, Lassini and Wiklund (2007) argue that acquisitions can be a way to release entrepreneurial activities in a firm. They hold that under "certain conditions, acquisitions may be a response to resource maturity, ossification, and simplicity, as they revitalize a firm and improve its ability to anticipate or react adequately to external conditions" (2007: 283). Based on qualitative research on 18 Italian companies, the authors propose that these positive outcomes accrue when growth via acquisition is coupled with the development of acquisition capabilities, namely the accumulation, storage, and exploitation

of fresh organizational knowledge. Their findings are in line with Vermeulen and Barkema (2001) who proposed that acquisitions might revitalize acquiring organizations and foster their long-term survival. In a unique study, Lockett et al. (forthcoming) have recently provided large-scale, empirical support for these notions. Their analyses show that acquisition growth in one period facilitates organic growth in the following period. Conversely, organic growth in the first period reduces the amount of organic growth achieved in the next period.

All in all, Penrose's theorizing as well as results from the limited empirical work that has been undertaken suggest that inquiring into antecedents and effects of different modes of growth may be a very fruitful area of investigation in future studies.

5.2. Networks and Alliances

Much like the modes of growth discussed above, expansion through networks and alliances can be seen as alternatives to the narrow understanding of growth as sheer volume expansion of existing activities. The role of networks has long been a prominent topic in entrepreneurship research, both in the discussion of entrepreneurs' personal networks (e.g. Birley, 1985) and firm networks (e.g. Butler & Hansen, 1991). A number of studies explicitly link networks to firm growth (Donckels & Lambrecht, 1995; Hansen, 1995; Jarillo, 1989). Supposedly, the external linkages function as a valuable source of knowledge, especially in knowledge intensive industries (Yli-Renko, Autio & Sapienza, 2001). This resonates with Killing (1978) and Roberts and Berry (1985) who suggest that licensing, alliances and joint ventures are important for high growth firms. Accordingly, Barringer and Greening (1998) found that about half of the firms in their sample of high growth firms had engaged in strategic alliances.

According to Street and Cameron (2007) the benefits extend also to small firms in less knowledge intensive industries. As an example of this, Blundel (2002) pointed out the relevance of network linkages for capability development and subsequent growth of two artisan cheese makers in the UK. In a longitudinal study of Australian SMEs across all types of industries, Watson (2007) found a significant positive relationship between networking and growth. However, the study also reminds us that what drives growth does not necessarily equal what drives success – a topic to which we shall have reason to return – as there was no apparent association between networking and profitability.

Important are also geographically concentrated networks, or clusters (Porter, 1998). Research shows that firms located in geographic clusters benefit from their local network and exhibit high growth rates. For instance, Gilbert, McDougall, and Audretsch (2006) examine whether technological spillovers explain the performance of new ventures in clusters. Their findings indicate that ventures located within clusters absorb more knowledge from multiple sources and experience higher growth and innovation performance.

Thus, the evidence appears to point to the relevance of networks and alliances for growth, but not necessarily to be positively related to other measures of performance.

5.3 Internationalization as Growth and Growth through Internationalization

Much researcher interest has been devoted to a particular form of geographic expansion: internationalization. In a broad sense, internationalization can be seen as a part of a firm's growth and developmental process, as it involves the establishment of supply- and market-related activities across national borders (Jones, 1999; Welch & Luostarinen, 1988). Thus, embarking on international operations encompasses Penrose's primary meaning of growth,

"an increase in size or an improvement in quality as a result of a process of development" (Penrose 1959/1995, p. 1). Some even say that internationalization is a synonym for the growth of economic activities over a national country's border (Ruzzier, Hisrich, & Antoncic, 2006).

While early research mainly investigated internationalization of large enterprises (Buckley & Casson, 1976; Dunning, 1988; Hymer, 1976/1960), more recently a number of studies have investigated factors driving or limiting internationalization in small firms. This entails studies of decision-maker characteristics, firm characteristics, and foreign as well as domestic environments (e.g. Andersson & Wictor, 2003; Dimitratos, Lioukas, & Carter, 2004; Karagozoglu & Lindell, 1998). Especially research on inter-firm relationships and networks is gaining momentum, as demonstrated by the number of studies focusing on the role of networking (cf. section above) in the internationalization of small firms. Central to this research are the benefits associated with networking. For instance, the articles in a special issue of Small Business Economics (2001) show that networking provides opportunities for growing overseas, but that entrepreneurs need to be alert to identify and act on these opportunities (Dana, 2001). Likewise, Chetty and Campbell-Hunt (2003) investigate the relationships between rapid international growth and business networks. They argue that business networks can help small firms overcome the limitations created by explosive growth. Namely, they find business networks to be a vehicle for internationalization out of a small domestic market in a sudden internationalization process, involving significant organizational changes and increases in capabilities.

There are also studies which explain (small) firm internationalization as a gradual, sequential process (Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975). These studies suggest that firms proceed from no regular exports to exports through independent representatives and the establishment of sales subsidiaries to the establishment of production

facilities abroad. This step-wise process is mainly explained in terms of the firms' gradual increase of market knowledge (Johanson & Vahlne, 1977). This approach has been criticized for being too deterministic and stressing only the early stages of internationalization (Melin, 1992). Its validity has also been questioned in the light of today's highly global environment, where knowledge about foreign markets is better distributed across national borders (McDougall, 1989).

More recently attention has been devoted to what has been labeled, inter alia, 'infant multinationals' (Lindqvist, 1991), 'international new ventures' (McDougall, et al., 1994), and 'born globals' (Madsen & Servais, 1997). These are new entrepreneurial ventures with high aspiration and potential for growth (Bloodgood, Sapienza & Almeida., 1996) which "from inception, seek to derive significant competitive advantage from the use of resources and the sale of output in multiple countries" (McDougall et al., 1994: 153). We will here adopt McDougall et al.'s notion of international new ventures (INVs).

In a seminal work, Oviatt and McDougall (1994) divide INVs into three groups: new international market makers, geographically focused ventures, and global start-ups. The first group, new international market makers, consists of INVs which are either import/export start-ups or multinational traders. Their competitive advantage depends on "1) unusual abilities to spot and act on (sometimes by charging high-fees) emerging opportunities before increased competition reduces profits in markets they had established; 2) knowledge of markets and suppliers; 3) ability to attract and maintain loyal networks of business associates" (Oviatt & McDougall, 1994, p. 58). The second group comprises geographically focused start-ups. These firms derive their competitive advantage from serving the specialized needs of a particular region of the world through the use of international resources. Important in this group is the coordination of multiple value-chain activities, such as technological development, human resources, and production. According to Oviatt and

McDougall (1994), firms in the third group, global start-ups, represent the 'most radical manifestation' of INVs. These firms coordinate multiple international activities in several locations around the world. They do not simply adjust to global markets. Global start-ups actively try to take advantage of opportunities for acquiring resources and selling outputs wherever in the world they obtain the highest value.

Empirically, several studies investigate the reasons behind the emergence of ventures that grow overseas almost from their birth. For instance, McDougall et al. (1994) argue that to explain the formation of INVs the following factors are important: the characteristics and competences of the founders (their ability to combine resources across national borders), the reasons why these individuals decide to compete in international markets rather than in domestic markets (the international spirit), and the type of international activities they undertake (hybrid of strategic alliances and networks). Several empirical studies have also attempted to identify the specific characteristics which distinguish INVs (see Rialp, Rialp, & Knight, 2005 for a review). Along with the founder knowledge, such as their experience of international markets (Bloodgood et al., 1996), other factors such as firm knowledge intensity (Autio, Sapienza, & Almeida, 2000) or access to networks (Blomstermo et al., 2004) have been found relevant for international market development.

Some studies have explicitly regarded internationalization as a form of growth and begun to investigate the growth implications of small firm internationalization. For example, Yli-Renko et al. (2001) studied how knowledge acquired from intra- and inter-organizational relationships can function as a key driver of the international growth of technology-based new ventures. Similarly, Autio et al. (2000) showed that early internationalization and knowledge intensity of INVs are associated with faster international growth. A study by Zahra et al. (2000) focused on the acquisition and integration of technological know-how from internationalization and its impact on firm performance. Along the same lines Naldi

(2008) showed that internationalization promotes the acquisition of new market and technological knowledge, which in turn has important growth implications for SMEs. Specifically, the knowledge acquired from internationalization contributes to a firm's growth advantage in international markets and to its further internationalization. In addition, it provides the basis for new entrepreneurial actions such as venturing into new markets and reaching new international customers. However, the new knowledge base has no, or very little, effect on SMEs' growth in domestic markets. Apart from contributing specifically to the literature on the international growth of small firms, Naldi's (2008) study is an example of heeding calls for recognizing firm growth as a multi-dimensional phenomenon (Delmar et al., 2003; Shepherd & Wiklund, 2009) in that she theorizes and assesses different drivers of different forms of growth.

Interestingly, unlike most research on firm growth, the literature on small firm internationalization acknowledges that the process is not always unidirectional. Rather, studies also show how firms reduce their international activities or withdraw from international operations (e.g., Benito & Welch, 1997); how they withdraw from foreign direct investment and return to exporting (Chetty, 1999), or – less dramatically – drop single products or product lines (Calof & Beamish, 1995). By contrast, we know of no studies focusing on processes of 'downsizing' or shrinking of small firms.

Thus, the process of internationalization as a form of growth provides a suitable arena for future studies on growth attempting to capture the non-linearity, heterogeneity and multi-dimensionality of small firm growth.

6. GROWTH STAGES AND TRANSITIONS

6.1 Different Life-cycle and Stage Models

Apart from attempts at finding growth facilitators and obstacles there exists a whole body of literature, which is more concerned with the processes of growth. This type of research is often presented in the form of life cycle or stages models that encompass the entire life span of an organization (e.g. Adizes, 1989; Churchill & Lewis, 1983; Greiner, 1972; Hanks, Watson, Jansen & Chandler, 1994; Flamholtz, 1986; Galbraith, 1982; Quinn & Cameron, 1983; Churchill & Lewis, 1983; Scott & Bruce, 1987; Kazanjian, 1988, and many more). These models attempt to provide a more dynamic view on the development of organizations and their growth (cf. Aldrich, 1999: 196-201).

Usually, *life-cycle models* abstractly represent a cycle of emergence, growth, maturity and decline. Whetten's (1987) work on organizational growth and decline is an example of this type of research, as is Adizes's (1989) model which distinguishes between the growing and the aging sides of the life-cycle curve. Interestingly, a number of these life-cycle models – while discussing growth at the organizational level – implicitly maintain that these changes over the history of an organization would be the manifestation of a similar population-level phenomenon (O'Rand & Krecker, 1990).

The vast majority of models considers mainly the firm's development process up to the maturity stage and focus on the generic problems organizations encounter during growth. These have been referred as developmental models, or *stage models*. Firms are assumed to grow in distinct stages, each stage concluded by a set of typical problems and organizational responses. Since the late 1960s and early 1970s, exemplified by Greiner's (1972) prominent Harvard Business Review article 'Evolution and revolution as organizations grow', many articles and books on stage models appeared. Since that time the existence of stages of

development and growth have been almost taken for granted in entrepreneurship and management research as well as in textbooks and practitioner-oriented outlets. The popularity of the growth-stage approach can in part be explained by high perceived face validity; Eggers, Leahy and Churchill (1994) reported that 100% of entrepreneurs in their study were able to identify unambiguously their company as being in one of five defined stages.

However, a first reason for caution is that the number of stages and sub-stages identified by the scholars varies significantly (O'Farrell & Hitchens, 1983). Different textbooks specify three (e.g. Sahlman et al., 1999), four (e.g. Timmons & Spinelli, 2003), five (e.g. Kuratko & Hodgetts, 2007) and six stages (e.g. Baron & Shane, 2005). In a recent review of 104 scholarly publications on stage models, Levie and Lichtenstein (2008) found that while most models are based on three, four or five stages, there are examples of models specifying nine or even eleven distinct stages of development.

Independent of type of publication, all models start with an initial stage which is typically characterized by a simple organizational structure, direct supervision, and particular importance is attributed to the founder or entrepreneur: e.g. Greiner's (1972) 'creativity' ; Churchill and Lewis' (1983) 'existence'; Quinn and Cameron's (1983) 'entrepreneurial'; Kazanjian and Drazin's (1989) 'conception and development', and Adizes' (1989) 'infant' stages. In the following stage, the firm achieves its initial product market success (Miller & Friesen, 1984). Here, a first division of managerial tasks occurs, but control is still achieved through personal supervision (O'Farrell & Hitchens, 1983). This stage corresponds to Greiner's (1972) 'direction' stage, Churchill and Lewis's alternative 'survival' or 'success' stages; Kazanjian and Drazin's (1989) 'commercialization' stage; Adizes' (1989) 'go-go' stage, and Garnsey's (1998) 'resource generation' stage. The subsequent stages are characterized by an increased bureaucratization of the organizational structure and by the

separation between management and control: e.g. Churchill and Lewis' 'resource maturity' and Quinn and Cameron's (1983)'s 'formalization and control' stage.

In a related fashion there is a literature on growth transitions and typical managerial growth problems, which does not necessarily discuss a set number of stages that firms are assumed to go through (Arbaugh & Camp, 2000; Fombrun & Wally, 1989; Hambrick & Crozier, 1985; Hofer & Charan, 1984). In addition, while the main focus in the stage-of-development literature is on the problems caused by growth and as well as their solutions, there are also examples of contributions that point out some positive outcomes of the growth process itself. For example, Rollag (2001) argues that rapid growth helps to socialize the employees into a venture more quickly.

6.2 Critique and Further Developments

Stages or life-cycle models are on the one hand intuitively appealing as they directly address the issue of new venture growth and accurately point at the gradual nature of firm evolution. However, life-cycle models only allow a uniform path of growth in a deterministic way (e.g., Fombrun & Wally, 1989). They build on assumptions that organizations pass through all the stages of the life cycle and that there would be an optimal configuration for each stage (cf. Wiklund, 1998). In reality, young ventures, for example, might simply experiment with new organizing principles within the same stage, and these would not be accounted for. In addition, stages models are cyclical in the sense that they do not tend towards equilibrium, but rather return to a starting point (cf. Stubbart & Smalley, 1999). Life-cycle models in particular see the process as primarily dependent on the time factor. In other words, organizations follow the same consistent pattern over time as they grow and decline (Hofer & Charan, 1994). A further point of criticism is that the models mainly focus on the evolution of

formal structures, though it is well known that informal structures and processes (such as the informal networking of the entrepreneurial team) are of great importance (Birley & Stockley, 2000). By introducing varying degrees of determinism and focusing on formal structures and processes the models tend to understate the role of the entrepreneur or entrepreneurial team. Their motivation, decisions, and actions have a great impact on the growth process, but are hardly considered in some of these models. The models also imply that managerial action should be narrowly prescribed if growth is to occur (Tang, Jones & Forrester, 1997).

In addition – and importantly – many of the models share the problem of lacking systematic empirical evidence (Gibb & Davies, 1990). A growth model that fares better in that regard is Hanks et al.'s (1994). Explicitly setting out to tighten the life-cycle concept these researchers cluster analyzed a sample of 126 high technology organizations in order to establish whether distinct development stages could be discerned empirically, and, if so, which they were. They found four clusters that correspond to development stages of increasing complexity and to dynamism that first increases and then decreases. The different clusters also differ as regards firm age and a range of internal characteristics. What makes their results even more realistic, however, is that they found two additional clusters that did not fall naturally into a stages model. These were firms that either never had entered into a path of dynamic development or those that had more or less permanently left such a path. Hence, the Hanks et al. (1994) categorization responds to the criticism of previous models being overly deterministic and lacking systematic empirical backing (cf. also Churchill & Lewis, 1984).

The Hanks et al. (1994) study is subject to limitations such as being based on one particular industry and geographic setting (Utah), and inferring transitions through stages from age differences in a cross-sectional analysis. Admitting this, theirs is definitely one of the most rigorous attempts towards a research-based stages model. Ironically, the popularity

of stages models seem to have declined dramatically since its publication, much like Woo, Cooper and Dunkelberg's (1991) critical examination of 'types of entrepreneurs' seems to have made that research stream peter out. One of few recent efforts in this research stream is Garnsey's (1998) attempt to extend Penrose's work to early growth (as Penrose is mainly concerned with established firms). Garnsey explicitly discusses growth reversal or stability as common growth paths. Unfortunately, even though she acknowledges that it would be important to understand the micro processes of growth (1998: 551) Garnsey also stays at an abstracted level, thus making her findings less directly relevant for managers.

The current tendency of researchers to shun the problem of the organizational consequences and adaptations following from growth is unfortunate as research-based knowledge on growth processes and transitions would have high practical relevance; perhaps even more so than research findings on growth facilitators and obstacles. Process knowledge can make entrepreneurs aware of possible crises and solutions, and researchers should be able to present better alternatives to the portrayals of inevitable growth problems and universally applicable snake oil cures that one finds in the non-research based management literature. We would therefore encourage renewed efforts in this area. However, in doing so it is important to avoid the inherent problems with this type of research.

An important vantage point for that purpose can be a recent contribution to this literature by Levie and Lichtenstein (2008). They conduct an in-depth analysis of 104 scholarly papers published on stage models over a 45 year period to address the questions 'How accurate are stage models of growth?', 'Do companies grow through stages as assumed by these models', and 'Is there any consensus in stages theory?'. The authors find that there has not been a movement towards consensus on stage model features, nor has one model become dominant in the field. Rather dramatically, they find that two of the principal propositions shared by these stages models appear to have no support when tested with large

samples, namely a) that businesses would develop through a specific number of stages and b) that these stages would represent an immanent program of development. This leads Levie and Lichtenstein (2008) to conclude that stages of growth modeling has hit a dead end. As a way out they propose a 'dynamic states model of entrepreneurial change', which retains the most intuitive and often accurate propositions of previous stage models, while replacing its major assumptions to better align with current organization theory and practice. More concretely, the authors replace the underlying assumption of stage models that organizations grow as if they were organisms with the assumption that each state represents management's attempts to most effectively/efficiently match internal organizing capacity with the external market/customer demand. Thus, the immanent program of development is substituted by an adaptive process of retaining the sustainability of a business model.

7. THE EFFECTS OF GROWTH

7.1 Desirable and Undesirable Effects of Growth

Both in academic and non-academic literature, firm growth is frequently equated with success (cf. Baum, Locke & Smith, 2001; referring to Covin & Slevin, 1997, and Low & MacMillan, 1988). This tendency is particularly pronounced in the entrepreneurship literature (Davidsson et al., 2008). However, as pointed out in the growth stages and transitions literature reviewed above, growth can lead to a number of undesirable consequences or 'growing pains' (Flamholtz & Randle, 1990). Research indicates that small firm owner-managers are generally aware that growth can have both desirable and undesirable effects, and hence growth is something of a dilemma for them. In research directly addressing small

firm owner-manager's expectations as to the negative and positive consequences of growth it has been found that expectations of economic gain is not a dominant growth motivator; that almost all respondents expect both negative and positive outcomes, and that negative expectations are overall somewhat more frequent or pronounced than positive ones (Davidsson, 1989b; Wiklund et al., 2003). The strongest dominance for negative expectations concerned the issue of vulnerability; a majority believed that increased size would make their firms less able to survive a severe crisis. This is likely a misconception as the bulk of evidence suggests a positive relationship between size or growth on the one hand, and survival on the other (Aldrich & Auster, 1986; Stinchcombe, 1965; Storey, 1994).

As was briefly mentioned in a previous section, Wiklund et al. (2003) further show that consistently across three separate studies and various sub-sample breakdowns the strongest negative effect on overall growth willingness stems from expectations that growth would have adverse effects on employee well-being, which they interpret as fear of losing the informal, family-like character of the small organization. As regards this concern the research literature lends some support to the owner-manager's fears: small organizations have certain advantages that risk being lost if the organization grows larger (Arrow, 1983; Barker & Gump, 1964; Mosakowski, 2002). As has also been mentioned above many owner-managers resent the idea of achieving growth based on substantial influx of external capital (Sapienza et al., 2003). Clearly, then, small firm owner-managers expect growth to bring both positive and negative outcomes, and they are not all wrong in doing so.

The following section will discuss two outcomes in more detail, namely profitability and creation of new jobs. Arguably, the former is one of the most important potential effects of growth for the (owner-)managers of firms, while the latter represents a key interest among policy-makers.

7.2 Is Growth Profitable?

Regarding the relationship between growth and profitability, Davidsson (1989b) noted that 40 percent of the small firm owner-managers in his sample did not believe growth would improve their personal income stream, thus effectively removing one important reason to pursue growth. But are the owner-managers' perception correct? An assumption that growth drives profitability appears in several strands of research. Such arguments are often based on *scale economies* (Besanko et al., 2004) or, in a related manner, *experience effects* (Stern and Stalk, 1998). Somewhat different rationales for a positive effect of growth (or size) on profitability appears in arguments about *first mover advantages* (FMAs) (Lieberman and Montgomery, 1988) and *network externalities* (Katz and Shapiro, 1985). Thus, theories suggest growth will be positively associated with profitability either because of growth reducing the unit cost, or by helping the firm to establish a stronger market position. However, the empirical support for a strong and general growth-profitability relationship is limited. Industrial Economics research has indicated that scale economies are not much of a barrier to entry; that *minimum efficient scale* is typically reached at a rather small size; that very limited cost advantages are usually gained beyond that minimum, and even that it is possible to operate significantly below it without severe cost disadvantage, leading to observations of surviving new entrants operating for long times at sizes far smaller than the industry average (Geroski, 1995; Hill, 1988; Siegfried and Evans, 1994).

In empirical studies in other traditions the correlations between measures of growth and profits range from relatively substantial positive (Cox, Camp and Ensley (2002); Chandler and Jansen, 1992; Mendelson, 2000), to those that are weakly positive yet statistically significant (Baum and Wally, 2003; Cho and Pucic, 2005; Kim et al, 2004; Peng, 2004), to those reporting no statistically or practically significant relationship (Markman and

Gartner, 2002; Roper, 1999; Sexton, Pricer & Nenide, 2000), to those showing a significant negative relationship (Reid, 1995). One might have thought that the issue was settled once and for all when on the basis of a meta-analysis of 320 studies published in 1921-1987, Capon et al. (1990: 1148) concluded that "Growth, analyzed in 88 studies, is consistently related to higher financial performance." However, a close examination of their results reveals that a significant positive association between growth and financial performance is only found in cross-industry studies. In analyses within industries the effect is minuscule in magnitude and statistically non-significant (Capon et al., 1990:1154; Table 5). This means that the results do not suggest that firms that grow more than their direct competitors become more profitable. Rather, the meta-analytic result reflects that firms in growing industries benefit from the higher growth- *and* profit rates of their industries. Similarly, studies of the relationship between market share or market share growth on the one hand, and profitability on the other, suggest that any positive relationship may be either industry-specific or spurious (Brush, Bromiley, & Hendrickx, 2000).

In summary, the empirical evidence on the relationship between firm growth and profitability is inconclusive. Despite the theoretical arguments, there is little evidence of a general tendency for firms to become more profitable as a result of their growth. This indicates that although the two dimensions of performance sometimes move together there are frequent other instances when the growth-profitability relationship is neutral or negative.

Against this background Davidsson et al. (2009) recently set out to examine which firms are most likely to reach the favorable position of combining above-average growth with above-average profitability. Is it the case that firms grow to become more profitable or that firms showing high profitability manage to grow without sacrificing their high profitability? Based on a resource-based framework they argue for the latter: firms showing high profitability are likely to have a resource-based advantage that allows them to be profitable

and which forms a sound basis for growth. Firms that grow without such an advantage are likely to have to 'buy' their growth through price cuts and/or heavy marketing, which would reduce rather than increase profitability. They test these ideas using large, SME-dominated data sets from two countries, Australia and Sweden. Their results show, as theoretically expected, that firms originating in the high profit/low growth category were in each analysis about two to three times more likely to end up in the desirable high growth/high profit category as were firms originating in the high growth/low profit category. The latter category was instead strongly over-represented among firms regressing to a low profit/low growth position. That is, not only did these firms fail to become more profitable as a result of their growth; they were also unable to sustain the high growth over time.

Davidsson et al. (2009) are not alone in their critical view of the growth-profitability relationship. For example, using a completely different theoretical approach and data, Ramezani et al. (2002:65) conclude that "Our empirical results indicate that maximizing growth does not maximize corporate profitability or shareholder value." These results are a strong reason to caution against a universal and uncritical growth ideology and for small firm owner managers – whenever possible – to secure a sound level of profitability before they go for growth. While perhaps appropriate under some circumstances (as when scale economies, first mover advantages or network externalities really are key issues in the logic of an industry), as a general rule the idea of growing in order to become profitable seems to be a questionable prospect.

7.3 Firm Growth and Job Creation

From a societal point of view the creation of new jobs – resulting in increased tax revenue and reduced welfare costs – is often the vantage point for an interest in firm growth. The

majority of gross new jobs in the economy is no doubt the result of growth of already existing firms, rather than entry of new firms. In the case of Sweden the proportion has been estimated as roughly one third for entry and two thirds for expansion (Davidsson, Lindmark & Olofsson, 1998). On reflection this should come as no surprise as there are many more established firms in an economy than there are new entrants. The more important question concerns where net additions of jobs come from. Davis, Haltiwanger and Schuh (1996a; 1996b) point out that this is a tricky issue because in arrears a given total surplus can be attributed to many different subcategories of the economy. For example, it is entirely possible for all of the categories 'firms in industry X'; 'firms in size band W', and 'firms run by teams of three or more owners' to show a larger job surplus than the total surplus for the economy at large.

Studies in the US and UK have claimed that a small minority of rapidly growing firms – so called 'flyers' or 'gazelles' – are the real creators of net new jobs in the economy (Birch & Medoff, 1994; Birch, Haggerty & Parsons, 1995; Storey, 1994). However, this may not be true for all economies at all times. For example, studies in Sweden have not been able to find a minority of gazelles that sum up to impressive absolute numbers of new jobs (Davidsson & Delmar, 2003; 2006). On the contrary, the entry and early, modest growth of a large number of 'mice' seems to be the major source of net new jobs in Sweden (Davidsson et al., 1996; 1998).

The differences in results may in part be due to real country differences. For example, the small home market in a country like Sweden may lead to smaller numbers of firms that grow really big. Alternatively, the firms that do so move abroad or at least their expansion occurs in other countries and may be concealed from the figures available to the researcher. Above we have also noted Rosa and Scott's (1999) observation that cases of high growth may be concealed by the entrepreneurs' choice of organizational or governance structure.

However, it is also important to realize that to a certain extent the notion that a small number of high growth firms is responsible for a very large share of employment gains can be the result of a method artifact. If a cohort of firms is followed over time and there is any outcome variance at all – even completely stochastic variance – it will always be the case that a small proportion of firms eventually accounts for a large proportion of the jobs created *by that cohort* (cf. Davidsson, 2004: 160-163). The greater the outcome variance and the longer the analysis period, the more marked will be this effect. However, this does not prove that the elite of high-growth firms create a large proportion of all new jobs *in the economy*. In order to establish the latter, the job creation of *all* gazelles in the economy has to be compared with total job creation in the economy.

Be that as it may, the authors of a systematic survey of 20 studies of 'gazelles' recently concluded in favor of the importance of this select sub-set of firms (Henrekson & Johansson, 2008). Their analysis revolves around the following four propositions:

> *Proposition 1*: In a population of firms, net employment growth is generated by a small number of high-growth firms, so-called Gazelles.
>
> *Proposition 2*: On average, Gazelles are younger than other firms.
>
> *Proposition 3*: On average, Gazelles are smaller than other firms.
>
> *Proposition 4*: Gazelles are overrepresented in high-tech industries.

The authors report clear support for the first two propositions. While small firms are over-represented the third proposition gets only mixed support because the large 'gazelles' sum up to very significant employment effects. Interestingly, the fourth proposition is not supported. Despite previous studies showing growth and dynamism of the industry positively influencing firm level growth (cf. above), Henrekson and Johansson (2008) conclude from

their review of studies of ‘gazelles’ that high-growth firms are found in all industries and appear over-represented in services.

Henrekson and Johansson (2008) note that the results might change if the focus is put on organic rather than total job growth. However, they hold that across the two studies that were able to provide such analyses the results pointed in the same direction as reported above, only more markedly so. For example, the tendency for larger gazelles to grow through acquisitions (Davidsson & Delmar, 2006) means that the support for Proposition 3 will be markedly stronger if the analysis considers organic growth only.

The distinction between organic growth (more likely to represent genuinely new jobs) and acquisitive growth (representing transfer of jobs to another organization) is not the only reason to be cautious about translating firm level effects to the level of the economy at large. Even those firms that grow organically may do so at the expense of other firms, whose employment consequently shrinks. Yet other firms contribute to the growth of the economy by reducing the need for manpower for a given output. Therefore, head counting on the firm level is a very narrow sighted analysis for societal purposes. When the interest truly is in the size of employment in the economy and its changes it seems advisable to start at a more aggregate analysis and then try to tease out – on region, industry and firm levels – how the aggregate effects emerge from firm level entry, exit, expansion, contraction, and transfer of economic activities across borders.

8. TOWARDS AN INTEGRATIVE FRAMEWORK FOR FUTURE RESEARCH ON SMALL FIRM GROWTH

Our review has demonstrated that small firm growth is a complex phenomenon. The concept 'growth' denotes both a change in amount and the process by which that change is attained. Further, the growth can be achieved in different ways and with varying degrees of regularity, and it manifests itself along several different dimensions such as sales, employment and accumulation of assets. This complexity has naturally led researchers to adopt different approaches to studying growth and to use different measures to assess it. Further, although our review shows that it can fruitfully be regarded as a growth issue, the research on small firms' internationalization has largely developed as a separate stream. Similarly, other relatively separate literatures have evolved, which effectively focus on different modes of growth although mostly without regarding the studies first and foremost as growth studies. This goes for topics like mergers and acquisitions, diversification, and integration – research streams which have largely ignored the particularities of small firms and which in turn have been largely ignored among researchers focusing on small firm growth.

Despite this complexity and fragmentation a considerable body of generalizable knowledge about small firm growth now exists, which is what we have tried to highlight in this manuscript. One could easily emphasize the problems instead: weak conceptualization of the phenomenon of organizational growth; lack of integration of the different findings into a more comprehensive theory of growth; lack of high-quality in-depth studies; unwarranted uni-directional conceptualizations of growth; rather weak links between empirical findings and theory-building, etc. However, the luxury of seeing such deficiencies can only be enjoyed because many researchers put considerable effort into researching firm growth, thus little by little uncovering the true complexity of the phenomenon. What previous research – and taking stock of it – has achieved more than anything else is to clarify what aspects of this complex phenomenon has been relatively well researched, and which remain virgin ground,

respectively. The remaining validity of some of the criticism of previous research only means that there are interesting research opportunities for followers to do better.

So what are these research opportunities? We choose to organize our discussion of future research needs around Figure 2.

Insert Figure 2 about here!

Let us turn first to the question how *Antecedents* relate to the *Amount* of growth. This is the firm growth sub-topic which consciously or not has attracted the most interest in previous empirical research. We would hold that there is little need for further studies that try to identify factors that facilitate, predict or hinder growth. A sufficient number of such factors have been identified in the literature already; the likelihood that any important ones would have been neglected is slim. Neither do we think it very meaningful to further explore the relative importance of different factors for the growth of 'small firms in general.' The population of small firms is too heterogeneous for this to be a very meaningful exercise, and the effects probably too specific to particular industries; geographic entities; cohorts and/or periods for such results to have much theoretical value. As revealed by Figure 2, the Antecedents → Growth Amount relationship is just one out of nine possible foci for scholarly analysis of small firm growth (not counting combinations of foci). Many of the other relationships are under studied and present interesting opportunities for researchers to make interesting contributions. At the very least we would think investing in new and comprehensive empirical studies of Antecedents → Growth Amount would have limited value until one has first taken more systematic stock of the knowledge that is already

available. This could take the form of formal meta-analyses of extant research, including the assessment of moderators (e.g., specific growth measure used), and applying various theoretical tools to attain a deeper understanding of the meaning of the results that such an exercise unveils.

When this groundwork has been properly done it is conceivable that comprehensive empirical studies of the growth of 'small firm in general' would have great value. A well-designed study of that kind should probably apply a high level of abstraction. Further, it needs to pay attention to the interplay between different influences, as discussed in our above review. This said, we find it likely that a potentially even more fruitful way forward would be to conduct theory-driven studies of growth within more homogeneous samples of firms. Baum and Locke's (2004) psychological study is an exemplar in this regard. Eisenhardt and Schoonhoven likewise concentrated on a single industry, and also included interaction effects across levels of analysis. Using homogenous samples is a way of controlling for the otherwise often confounding influence of variables one does not have a theoretical interest in (Kish, 1987). Moreover, the use of homogeneous samples allows one to use operationalizations that are maximally relevant for the one particular type of firm or industry. The issue of broader generalization, we would hold, is better dealt with through replication across several different samples, each of which is internally relatively homogeneous, than by trying to include all different types of small firms in the same study.

Turning now to studies of how the *Amount* of growth relates to various *Effects*, a general observation is that in studies of firm growth, positive 'ultimate' effects of growth are often implicitly or explicitly assumed without being tested. As implied by our above review of research on the effects of growth we believe it is time for researchers to do better than just assuming that firm growth is an end in itself. When growth is the dependent variable used, researchers should explain why and for whom they believe firm level growth to be important.

Further, we need more studies that explicitly relate growth to important management level goals such as profitability and firm value (cf. Cho & Pucic, 2005). The effects of growth in terms of management challenges that have to be dealt with are an issue we will return to shortly.

In policy-motivated research it is frequently assumed that head counting on the micro level translates to corresponding employment effects on aggregate levels of analysis. Phenomena such as acquisition-based growth and one firm growing just to crowd out employment in another firm suggest that such an assumption is overly simplistic. For the purpose of policy as well as for testing industry- or region-level theory the relationship between firm growth and economic development is better studied by letting the prevalence of high growth organizations compete with other measures of economic dynamism for explaining aggregate level economic development.

Different *modes* of growth is a clearly under-researched area in the small business literature. It is so under-researched, in fact, that studies that merely map out the phenomenon would have considerable value even if they say nothing about antecedents and effects. The question of modes would also benefit from increased integration of the knowledge that has been gained in already existing literatures that relate to growth. Internationalization is one such example, which we have here made an attempt to integrate with the growth literature. Other such areas of theorizing and empirical research, which clearly can inform our knowledge of growth whether framed in that way or not, are those dealing with diversification and integration. The fact that they so far have rarely dealt specifically with small firm issues does not mean that application in that area would not be fruitful. Research and theorizing concerning acquisitions have not typically focused on the problems of small firms, either; nor have they always portrayed the phenomenon as a growth issue to be compared with other modes of growth. However, the few empirical attempts that have been

made to investigate issues of modes of small firm growth (other than internationalization) have yielded some very interesting results that certainly deserve being followed-up. Studies are needed that can confirm or call in question, e.g., Davidsson and Delmar's (2006) result that there is a very strong relationship between (small) firm size and the tendency to grow organically; Lockett et al.'s (forthcoming) finding regarding differential effects of organic and acquisitive growth on further organic growth, and Levie's (1997) observation that a distinct minority of rapidly growing firms display an array of different modes of achieving growth. Still more importantly, a theoretical understanding of what such relationships mean needs to be developed. For example, do small firms grow organically because they are more innovative or because they lack the resources to choose the (possibly safer and sounder) acquisition route to increased size?

We noted early in this manuscript that Penrose (1959) pointed out that 'growth' does not only mean 'change in amount.' It sometimes also denotes the *process* by which this change comes into being. This is a sorely under-researched area and therefore another one where mere mapping of the phenomenon has value, although relationships with antecedents and effects are of the greatest interest. While the 'stages-of-development' or 'life-cycle' literature can be rather elaborate on process issues, and while considerable communalities exist across many such accounts, the empirical evidence is not impressive. The quantitative material, when existing at all, is typically cross-sectional and retrospective. To the extent concurrent process data underlie the theorizing it is often gathered rather unsystematically from the small, non-random sample of firms for which the theorist happens to have consulted.

What is needed here are case-based studies where the cases have been sampled on sound, theory-based criteria, as well as quantitative work on samples that are known to likely represent some relevant population of firms. These studies would need to avoid retrospection bias and the 'prediction of the past' of cross-sectional research by studying concurrent growth

processes with a longitudinal design. They also ought to take on board Levie and Lichtenstein's (2008) criticism and suggestions regarding the fundamental assumptions that underlie the research. Preferably they should also be theory-based to the extent possible. The question is just what extent that is. The most recurring and/or intriguing themes from the 'stages-of-development' literature should, of course, be put to test. Strong *concepts* from various more fundamental theories in economics and management undoubtedly have their place in a process context as well. However, most established theories arguably remain relatively silent on the process issues themselves, i.e., on how the realities represented by those concepts interrelate and develop over time. Therefore, the topic of growth processes is arguably an area where some exploration is not only excusable, but needed.

Are broadly-based, quantitative studies of concurrent growth processes a feasible prospect? Maybe, and maybe not. One issue just mentioned is the (possible lack of) theoretical preparedness for such an exercise. In addition, it would undoubtedly be a type of project that requires significant financial resources as well as long term commitment of the research team. Assuming sufficient theoretical preparedness has been secured for the systematic, large-scale study of growth processes – including their antecedents and/or effects – an interesting parallel and possible source of inspiration here is the *Panel Study of Entrepreneurial Dynamics* (PSED) and its international counterpart studies (Davidsson & Gordon, 2009; Gartner, Shaver, Carter, & Reynolds, 2004). This type of research has shown considerable promise as a means of studying firm start-up processes in large samples, especially with the help of a large number of time stamped 'gestation activities'. In much the same manner, it is conceivable that growth processes could be studied through repeated surveys of a cohort reporting time-stamped, growth-related events, obstacles, achievements, etc. In comparison to the PSED research endeavor a similar study of growth would have huge advantages in terms of cost and precision of sampling since the firms – unlike early stage

start-ups – are readily identifiable and their industry affiliation is known. This would make it possible to obtain a relatively homogeneous sample at reasonable cost. On the downside it cannot be know which or how many of the firms in the sample will embark on significant growth trajectories during the studied period. This suggests that the sample would have to be fairly large to include a sufficient number of growth processes, and that either the focus of the study would have to be broadened to 'development' processes or large parts of the sample would be selected out by some screening mechanism at an early stage of each round of interviews.

We argued above that as regards *modes* and *process* the current state of knowledge is so under developed that mere mapping out of the phenomenon would constitute worthwhile contributions. This said, publication in high tier journals usually required more than description. However, this may not necessarily imply a need to analyze antecedents and/or effects in terms of Figure 2. As indicated by the bidirectional arrows among the three aspects of growth there are many theoretically and practically relevant questions to be asked and answered regarding these inter-relationships. For example, how does the use of alternative modes of growth relate to the total amount of growth that is achieved? Conversely, do aspirations for high amounts of growth entice entrepreneurs to employ other or more varied modes of growth, as hinted at by some prior studies? How and why does the mix of growth modes change in a firm's growth process over time? Do firms that demonstrate sustained growth over long periods of time achieve this through a process characterized by steady, continuous growth or one where growth spurts and periods of consolidation alternate? While not completely untouched by prior research questions like these have not been pursued as the main focus by multiple studies of small firm growth.

It was argued above that the influence of antecedents on the amount of growth was the most thoroughly researched area of those implied by Figure 2. Our review also showed

that quite a number of broad generalizations can be made regarding such relationships. Nevertheless, it can also be argued that this is not the type of results that best serves the needs of management practice. This is so in part because these 'growth factors' are often variables that the manager can do little about, and in part because the relationships represent probabilistic truths that may not bear much truth at all in most individual cases. That is, the most relevant 'growth factor' in each individual case may be some idiosyncratic factor that is not even represented by the generic variables used in research, or at least a much more concrete manifestation of such a factor, on which the research naturally stays silent. Thus, it can be questioned whether broadly based generalizations about the antecedents of growth can *ever* be precise enough to be of much immediate value for managers themselves, even if they should have some value as a diagnostic tool for management consultants.

It may be speculated that there should actually be more communality across firms as regards what management challenges different forms of growth *leads* to (effects), regardless of what 'success factors' (antecedents) first led to that growth. If so, the type of study that holds most promise from the perspective of furthering management practice (and, hence, education) would be one that combines aspects of *Amount*, *Mode*, and *Process*, and relates them to *Effects* in terms of a range of management challenges such as acquiring and coordinating a growing resource base, adapting organizational structures and systems, and effectively dealing with recruiting, training, promotions and other people issues in the growing firm. This no doubt partly coincides with what the literature on 'stages,' 'life-cycles' and 'management transitions' have tried to address, although these literatures often postulate a singular process and allow for but a very narrow range of growth modes. It also represents an expanded version of the type of process study we advocated above, with all its research challenges – and more. It is a research task that would require a comprehensive, multi-year

program under competent and dedicated leadership, but one which – if successfully undertaken – would really make a difference.

Most researchers will, of course, never get the opportunity to design and carry out such an effort. Perhaps they will never to be part of one, either. Fortunately, there is and will be room for more restricted contributions, for example on the growth effects of a couple of factors highlighted by some particular theory. Arguably, inclusion of interactions as well as consideration of mode and/or process will increase the value of such contributions. In explicitly starting from a well articulated theory such a study would already be an improvement relative to most of the predecessors. As our review has highlighted, the other ways in which there is opportunity for improvement largely concern the classical research virtues of making sure the sample and the measures match with the theory. It is thanks to previous research that we now can understand how we can do a better job in that regard. Finally, future studies should either make a strong case for why firm growth is interesting in its own right, or explicitly include in the design those outcomes that growth is otherwise only assumed to lead to.

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Figure 1 *Design of growth studies in leading entrepreneurship journals: Cross-sectional vs. Longitudinal (Cumulative frequencies over time)*

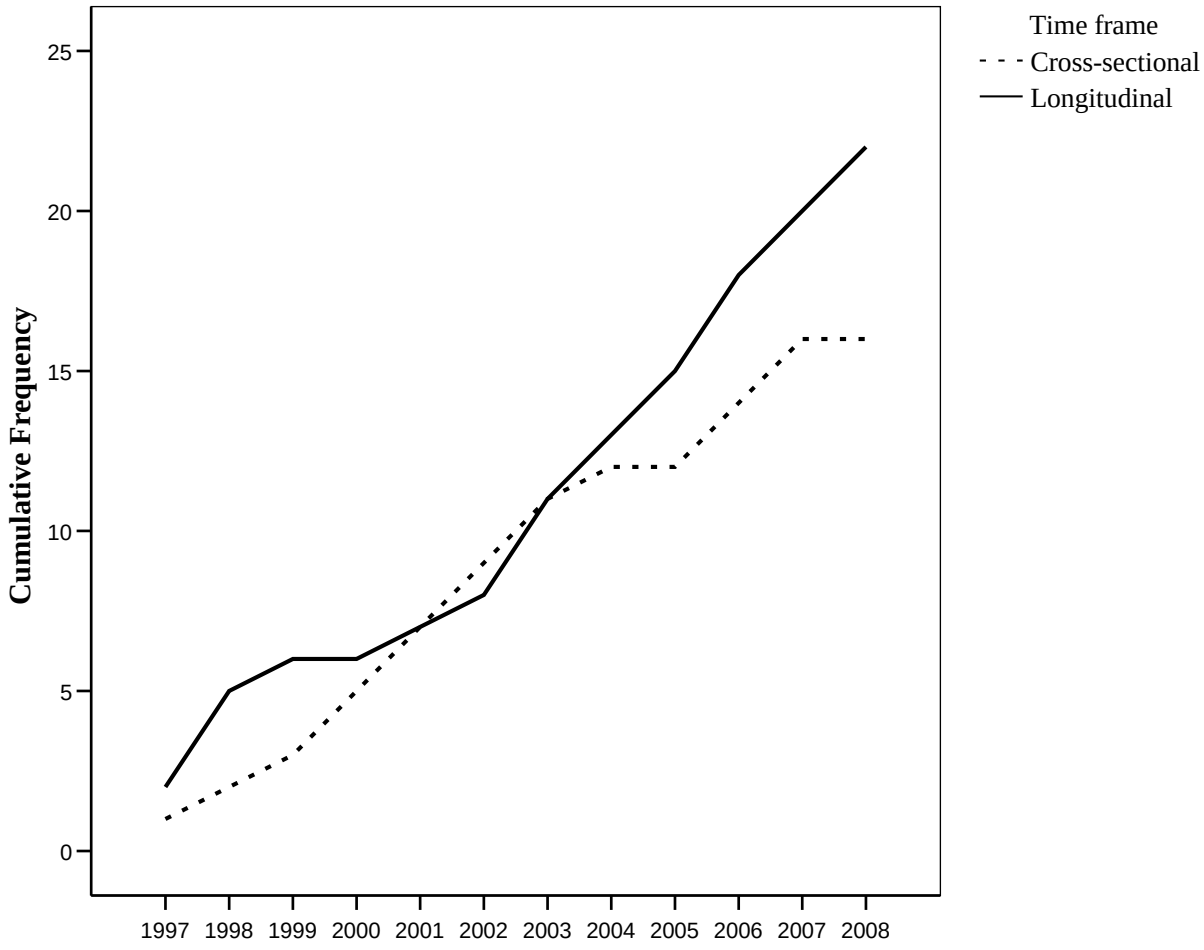

Table 1: Journal publications containing the search term 'business growth' in the title (apparently incl. keywords), cited more than 50 times according to Harzing's Publish or Perish (as of July 2009)

Author(s) (year)	Title of publication	No. of citations	Type of publication	Type of study	How is growth measured?	Main findings regarding growth
Churchill & Lewis (1983)	The five stages of small business growth	787	Harvard Business Review	Questionnaire to owners and managers of small businesses, 83 responses	Composite of value added (sales less external purchases), geographical diversity and complexity (number of product lines sold, extent to which different technologies are involved in the products and processes that produce them, and the rate of change in these technologies)	Five stages of development (existence, survival, success disengagement or growth, take-off, resource maturity); financial, personnel, systems and business resources as most important company factors for growth; and the owner's goals, operational abilities, managerial abilities and strategic abilities as the most important person-related factors
Cliff (1998)	Does one size fit all? Exploring the relationship between the attitudes towards growth, gender, and business size	180	Journal of Business Venturing	Personal interviews with 229 small business owners in Canada	Entrepreneur's growth decision and desired pace of expansion	Male and female entrepreneurs seem equally likely to desire business growth; females more likely to establish maximum business thresholds and more concerned about the risks associated with fast-paced growth
Steinmetz (1969)	Critical stages of SME growth: when they occur and how to survive them	123	Business Horizons	No empirical data	Increase in personnel, increase in sales, and improved profitability	Small business is forced to pass through three critical phases of growth or else will die. Phase 1: direct supervision stage; phase 2: supervised supervision stage; phase 3: indirect control stage
Davis, Haltiwanger,	Volatility and dispersion in business	87	NBER Macroeconomics	Employs COMPUSTAT and the Longitudinal	Employment growth rate	The volatility and dispersion of business growth rates are

Jarmin & Miranda (2006)	growth rates: publicly traded versus privately held firms		Annual	Business Database (LBD), which contains annual observations on employment and payroll for all firms in the private sector in the US		considerably greater for privately held firms than for publicly traded firms. Volatility and dispersion decline sharply among privately held and increase sharply among publicly traded firms in the studied period (1976-2001)
Wiklund, Davidsson & Delmar (2003)	What do they think and feel about growth? An expectancy-value approach to small business managers' attitudes towards growth	76	Entrepreneurship Theory Practice	Three independent phone interview studies over a ten-year period; 1,248 cases	Attitude towards growth as dependent variable: whether a 100% increase in the number in five years time would be seen as mainly positive or negative	Non-economic concerns are more important than the possibility of personal economic gain or loss, particularly the well-being of the employees
Roper (1997)	Product innovation and small business growth: a comparison of the strategies of German, UK and Irish companies	79	Small Business Economics	Product Development Survey with 533 responses in Ireland; 1374 in Germany; 1722 in UK	Turnover and employment	Strong positive association between innovation and turnover growth, less direct link between innovation and employment growth
Robson & Bennett (2000)	SME growth: the relationship between business advise and external collaboration	71	Small Business Economics	2474 SMEs in Britain	3 measures of SME growth: % change in employment; % change in firms' turnover; % change in profitability per employee	Collaboration with suppliers (nationally and internationally) has strong positive relationship with employment and turnover growth; collaboration with local suppliers has strong positive relationship with growth in profitability; little evidence of impact of government-backed providers of business advice on performance

Keeble, Bryson & Wood (1991)	Small firms, business services growth and regional development in the United Kingdom	66	Regional Studies		Growth in firms and employment in information-intensive businesses	
Davidsson, Kirchhoff, Hatemi-J & Gustavsson (2002)	Empirical analysis of growth factors using Swedish data	64	Journal of Small Business Management	Census of all businesses with 20+ employees in Sweden in 1996; annual data for 1987-1996 (11,196 companies)	Total employment growth	Business age (younger firms grow more); beginning size (smaller firms grow more), independence of ownership; type of business activities (industrial sectors), and legal form most important factors related to growth
Upton, Teal & Felan (2001)	Strategic and business planning practices of fast growth family firms	61	Journal of Small Business Management	65 fast-growth family firms from a sample of winners of the Ernst & Young Entrepreneur of the Year Program in the US	Growth in sales	The majority of high-growth family firms prepared written plans; shared information with employees; focused on high quality producing
Roper (1999)	Modeling small firm growth and profitability	55	Small Business Economics	Competitive Analysis Model Project (CAM) database of 785 small firms in Northern Ireland	Turnover growth rates	Firms' turnover growth and return on assets are only weakly related in the short term, above average growth rates are therefore no guarantor of high profitability; small firm performance is shown to strongly depend on strategic choice, with turnover growth being particularly strategy dependent
Donckels & Lambrecht (1995)	Networks and small business growth: an explanatory model	53	Small Business Economics	Phone interviews with 900 Belgian entrepreneurs	Dichotomous variable (growth/no growth)	Contacts with national and international entrepreneurs found to be the most important network determinant for growth

Weinzimmer (1997)	Top management team correlates of organizational growth in a small business context: a comparative study	50	Journal of Small Business Management	Comparative partial correlation analysis on samples of 74 small firms and 114 large firms	Sales growth rates, standardized for size	Functional heterogeneity of the top management team positively related to growth in small firms; TMT size is positively related to small firm growth;

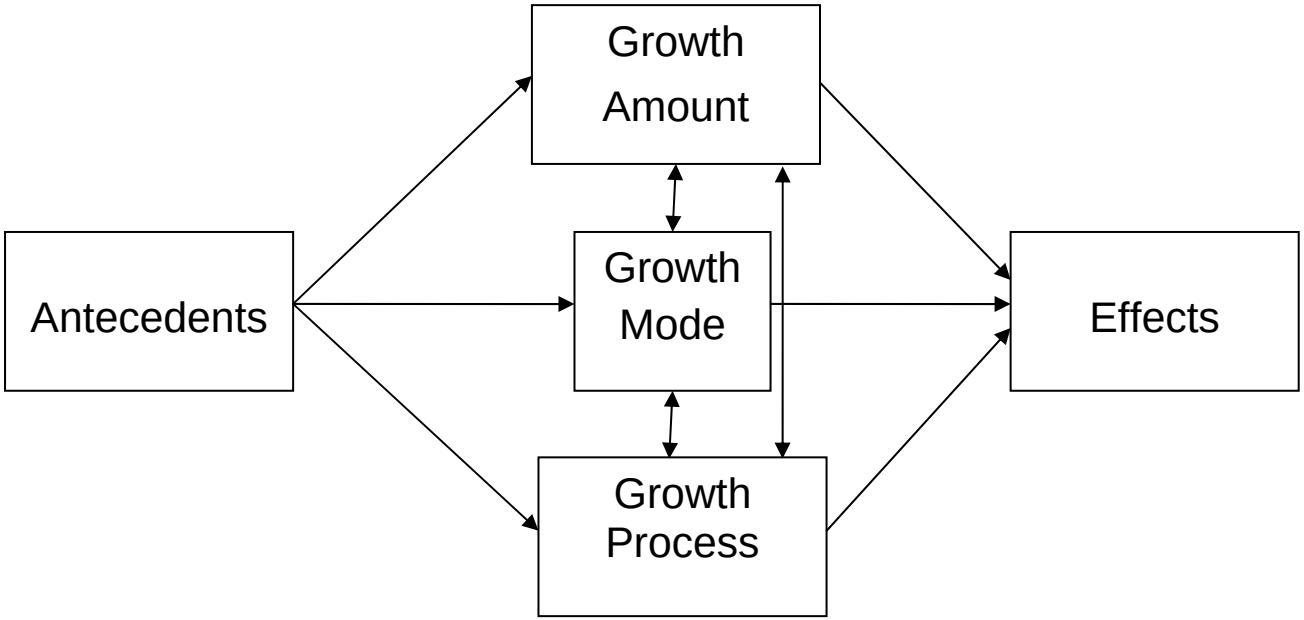

Figure 2. *Alternative foci for studies of small firm growth*