

# Research on Small Firm Growth: A Review

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## Abstract

Studies of small firm growth are no longer short in supply. On the contrary, as demonstrated by recent reviews, dozens and dozens of empirical research studies on this topic can be compiled. This does not necessarily mean that we know everything we want to know about small firm growth. In fact, all of the authors of recent review articles 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; modelling and analysis approaches, as well as the inherent complexity 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.

Admitting that, we will focus in this paper on the fact that significant progress has been made and that we do actually know quite a bit now about the phenomenon of small firm growth; its antecedents and effects, and how it can or should be studied. It is not possible within the confines of a conference paper—and possibly outside the capacity of these authors—to give a complete account of that knowledge. What we will attempt is a summary of points of convergence within some key themes. We first discuss the nature of the phenomenon of small firm growth and its relation to entrepreneurship. Here we discuss the fact that the concept ‘growth’ is used both for ‘change in amount’ and for the process that leads to that change. We also note that part of the reason for lack of coherence in previous research is the heterogeneous nature of growth; firms can expand along different dimensions and show many different growth patterns over time. As regards the relationship between

growth and entrepreneurship we conclude that at least early growth of new ventures is part of the entrepreneurship phenomenon.

We then move on to how growth can best be assessed. This involves decisions about number of time periods; choice of specific indicator(s) and growth formulae, and the like. We conclude that ideally, growth should be assessed as size changes over multiple periods, preferably in a concurrent, longitudinal design. While sales growth is the most generally applicable measure, theoretical and industry-specific concerns should also influence the choice of indicator(s).

A major section is devoted to the long list of internal and external factors that have been hypothesized and shown to influence firm growth. It is probably the case that every theoretically reasonable suggestion for a growth determinant has been shown to have the predicted impact in some context. We argue that the problem is to develop better knowledge about the relative and combined effects of the many predictors under different circumstances. One way to deal with this problem is to increase the level of abstraction and regard the many particularities as aspects of more over-riding factors, some of which influence growth directly while others only have an indirect impact. Another is to give up ambitions of approaching full explanation but instead enhance our understanding of the interplay among a smaller set of specific factors. A third is to limit the study to a more homogenous empirical context and generalize only to that context until replications have shown broader generalization is warranted.

We then turn to *how* small firms grow, if at all. This concerns issues of organic vs. acquisition-based growth; internationalisation; integration; diversification, etc. One striking result here is the very marked difference between young and small vs. large and mature growing firms in that the former mainly grow organically while the latter achieve the bulk of their growth through acquisitions. This has some overlap with the next topic, which is 'growth stages and transitions', but as the latter is a relatively separate stream in the literature we keep it as such. We note that the critique of this literature seems to have led not to better research but to no research at all in this stream more recently. This is unfortunate because it represents the type of knowledge small firm managers typically need and demand.

Before concluding, we also treat the relationship between growth and profitability. Surprisingly few studies have investigated this crucial relationship. Recent findings indicate that firms that grow successfully do so by first securing profitability, and then go for growth. This is strong reason to caution against a universal and uncritical growth ideology. As it appears, firms that grow at low profitability often end up in the undesirable state of low growth and low profits instead. This also puts small-firm managers' widespread reluctance to pursue growth in a different light. Finally, we conclude the paper with a summary of what our review implies for the design of further studies on small firm growth.

**Keywords:** growth, assessment, determinants, effects, review

# The Phenomenon of Small Firm Growth

## Introduction

Reviewers of the literature often complain that despite the large number of studies that have been conducted in recent years it is not easy to distil a coherent picture of the phenomenon of small firm growth (see Ardishvili, Cardozo, Harmon & Vadakath, 1998; Delmar, 1997; Storey, 1994; and Wiklund, 1998). Admitting that, we will focus in this paper on the significant progress that has been made and that we do actually know quite a bit now about small firm growth; about its antecedents and effects, and about how it can or should be studied.

In discussing small firm growth we find it wise to first discuss what ‘firm growth’ actually *is*. In her seminal book Edith Penrose 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 paper. Most research has undoubtedly been directed at explaining differences in the *amount* of growth and neglected other aspects of the process of growth. Our use of the growth concept will reflect the previous use in the literature, i.e., the size-change perspective will dominate. 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.

## The heterogeneity of growth

Even if restricted to the change-in-amount view, growth remains a multi-faceted phenomenon. For example, Delmar, Davidsson & Gartner (2003) discuss heterogeneity as regards according to what specific measure 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, very few firms were classified as ‘high growth firms’ regardless of what criterion was used. Underlying this 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 multidimensional phenomenon and that different forms of growth may have different determinants and effects. Consequently, they may also need different theoretical explanations (cf. Davidsson & Wiklund, 2000). On top of what Delmar et al. (2000) discuss, growth can also take different forms in terms of vertical integration, related or unrelated diversification, or be achieved through modes like licensing, alliances or joint ventures (Killing, 1978; Levie, 1997; Roberts & Berry, 1985). While keeping this in mind is important we will not be able to consistently consider all this heterogeneity throughout this manuscript. The prototypical growth firm we have in mind unless otherwise stated is one that experiences relatively stable growth in sales over considerable time, and where this growth in sales is at least to some extent accompanied by

accumulation of employees and assets, so that organizational and managerial complexity increases with growth.

### **Growth and entrepreneurship**

Some authors hold that “growth is the very essence of entrepreneurship” (Sexton, 1997: 97), making the relationship between growth and entrepreneurship a relevant question. Other scholars 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 concluded that when 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 established organizations as we know them from organization studies. When entrepreneurship is instead defined as *creation of new economic activity* or some close alternative to that (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 acquisitions of business activities that were already up and running within another organization, growth is not an aspect of entrepreneurship (cf. Davidsson, 2003, 2004). We will here be able to uphold these distinctions only to the extent that the design of the reviewed studies so allows.

## **Measuring Growth**

### **Assessing change in amount**

Growth is a phenomenon that necessarily happens over time. Hence, 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. Despite this fact, a large number of previous growth studies were in fact cross-sectional. 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 that assess growth from an earlier point in time up to the time of the investigation are also subject to selection (success) and hindsight (retrospection) biases. Hence, further empirical contributions to this literature ought to employ a longitudinal design.

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). 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). Among available alternatives the researcher has the choice 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 theory here is that the same explanatory factors facilitate 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 possibly distorted.

Alternatively, the underlying theory predicts that certain antecedents 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 analyse different growth indicators separately (Delmar, 1997). The theoretical and empirical evidence is leaning in favour of this other notion. For example, Chandler, McKelvie and Davidsson (2005) successfully used transaction cost theory to explain when growth in sales and employment do and do not move closely together.

Another defensible alternative would be to confine the study to the one growth indicator that is best matched with the theory in question. If only one indicator is used and the study has a cross-industry design there is growing consensus that sales growth should be the preferred choice (Ardishvili et al., 1998; Hoy, McDougall & Dsouza, 1992; Weinzimmer et al., 1998; Wiklund, 1998). It 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 results in rising profits or market share (Flamholtz, 1986). These favourable aspects of sales as indicator is reflected in that with 30.9 percent of the studies it is the most used in research reviewed by Delmar (1997). Almost as popular is employment growth, which was the choice in 29.1 percent of the reviewed studies. While the most relevant for some purposes such as policy makers' interest in fostering employment growth through entrepreneurship (Davidsson & Wiklund, 2000), this indicator 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 (Delmar et al., 2003).

The other indicators 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. While profits are universally relevant they reflect many other aspects of a firm apart from its size. Besides, it is perfectly possible for a large and/or growing firm to be unprofitable (Davidsson, Steffens & Fitzsimmons, 2005).

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." For example, 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. Also in studies on the firm level this distinction deserves more scrutiny as the drivers and effects of the two forms of growth are likely to have differential managerial implications (Levie, 1997; Penrose, 1959). Therefore, if the data collection procedure allows one to partial out organic from total growth it seems a wise decision to take that opportunity.

Apart from choice of indicator the specific formula used to calculate growth may affect results. This is additional reason to include and analyse different indicators separately so as to detect and make sense of such differences (Delmar, 1997; 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. 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 formulae 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.

### **Researching growth as a process**

The ideal design for research on growth as process would be fundamentally different, though. 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 & 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.

## **Growth antecedents and determinants**

### **Internal vs. external factors that influence growth**

To this point, this review could give the impression that growth was the norm. But, this is not the case. On the contrary, 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 business 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.

Yet, independent of the potential, it is also important to realise that most business founders have modest growth aspirations for their firms. This has been demonstrated in several different studies across countries (Cliff, 1998; Delmar & Davidsson, 1999; Dennis & Solomon, 2001; Human & Matthews, 2004). But does the managers' willingness to grow really matter, or do external forces largely determine the firm's growth, as suggested by the population ecology perspective (Hannan & Freeman, 1977)? Environments vary along dimensions such as dynamism, heterogeneity, hostility and munificence (Dess & Beard, 1984), and these external factors rather than the managers' motivations and strategic actions may largely 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, 1997, 2001; Jovanovich, 1982). 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. 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, 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 the large firms.

The growth effects of other dimensions of environments 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.

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; Wiklund, 1999). Although the odd study may have failed to establish such a relationship (e.g., Jenkins & Johnson, 1997) there is also 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), as has the firm's strategic orientation (Bamford, Dean & McDougall, 1997; O'Gorman, 1997; Wiklund & Shepherd, 2005).

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 (1997; 2001) research is that firms in the subgroup they define as high growth find ways to reach their growth goals relatively 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 result, 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; like other firms the high-growth firms are largely unable to expand organically under such conditions.

It should also be noted that it is sometimes difficult to determine what factors are truly 'external' and 'internal', respectively. For example, in Chandler and Hanks' (1994) conceptualisation qualities of the opportunity are regarded as aspects of the environment. Davidsson (1989a, 1991) likewise associates the opportunity concept with environmental factors. In more recent works 'opportunity' is often used interchangeably with 'business idea' and interpreted as an internal issue (cf. Davidsson, 2003, 2004).

### **Integrated models of small firm growth**

The existence of a large number of internal and external factors that could affect firm growth creates a challenge for studies aiming at approaching full explanation of the phenomenon. While also other individual studies cover a range of factors on different levels (e.g. Eisenhardt & Schoonhoven, 1990; Sandberg & Hofer, 1987), Davidsson (1991) and Wiklund (1998) represent two out of few attempts to formally integrate a broad range of growth determinants in a causal model and to test it empirically.

In Davidsson's model all manifest predictors are regarded as aspects of three exhaustive factors: *ability*, *need* and *opportunity*. He further distinguishes between objective and perceived versions of these variables but as his study was cross-sectional only the objective factors could be related to actual growth in the empirical analysis. His results show that all three factors affect growth but also that 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 emerged when objective and perceived ability, need and opportunity were related to future growth aspirations.

Wiklund combined three theoretical perspectives in his model: the *resource-based view*, the *motivation perspective*, and *strategic adaptation*. 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  $EO \rightarrow$  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 Davidsson's and Wiklund's models capture many factors and include mediated effects, they do not include interactive (or moderated) effects, which recent research has suggested are important (cf. below). Investigating both mediation and moderation at the same time 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 and recent 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 find strong direct effects of 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 study using a more heterogeneous sample these relationships may well have remained undetected.

### **A closer look at some specific growth predictors**

Compiling mostly UK studies from the late 1980s and early 1990s, but without combining them in an integrated model, Storey (1994) organizes the evidence in the categories *the entrepreneur*, *the firm*, and *strategy*. Support for influence is found in all three categories. Among the variables associated with the individual 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. *Unemployment* as start-up reason was mostly negatively associated with growth, whereas 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.

Some of these generalizations deserve elaboration. The positive effect of team size (number of founders) has been rationalized as different team members making up for each other's competence deficits, i.e., a diversity argument (Cooper, Gimeno-Gascon & Woo, 1994). Yet, Ruef, Aldrich and Carter (2003) found team composition to be driven by similarity, not diversity. Ensley, Pearson and Amason (2002) found that top manager team cohesion in new ventures is 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. 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 under perform with regard to profitability, employment or orders (DuRietz & Henrekson, 2000). 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).

As regards the firm the evidence suggests that *firm age and size, sectoral affiliation, legal form and location* are all systematically related to growth. As regards size all studies found a significant effect but the sign varies, probably as a consequence of the specific growth measure employed (cf. above). Note that some factors here attributed to the firm coincide with what has above been discussed as environment, and that Storey's (1997) compilation largely confirms what was stated there. Especially the discussion of age and size as determinants of firm growth has a long tradition, following the formulation of Gibrat's law in 1931. Gibrat's law states that the rate of growth of a firm is independent from 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).

As regards strategy variables the evidence is much less conclusive than for the firm variables. For variables that were included in five or more 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.

Expanding the strategy issue beyond Storey's (1994) review we find that in a comprehensive, longitudinal study, and combining strategy and human capital arguments, Raffa et al. (1996) 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. In contrast, firms initially based on strong entrepreneurial market knowledge faced more difficulties in supplementing their know-how with technical skills. We have also noted above that Entrepreneurial Orientation (i.e., innovativeness, pro-activeness and risk-taking) positively affects 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 also able to demonstrate that the effect of EO—in this case on an index combining growth and financial performance—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, both Bamford, Dean and McDougall (1997) and McDougall et al. (1994) found that broad strategies were more successful with respect to small firm growth, thus questioning the otherwise common niche argument.

The existence of contingencies and interaction effects also points at where research on 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 this field of 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 relation 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.

### **Growth barriers**

Some factors influence growth mainly as facilitators while other act mainly as growth deterrents (Davidsson, 1989b). Some researchers mainly emphasize the negative influence of certain factors (Barber, Metcalfe & Porteous, 1989). Institutional factors are often discussed from this perspective. For example, Davidsson and Henrekson (2002) hold that the consistency of the theoretical arguments and empirical data makes a strong case for the notion that 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 labour market legislation. Carlsson (2002) employs a broader perspective on institutions in his comparison of technology clusters in Sweden and Ohio. The factors he investigates include 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.

Carlsson's (2002) study included also capital availability, and the author points out this as one of the institutional factors particularly likely to explain differential growth patterns for firms in Sweden and Ohio. This may well be the case with respect to the type of firms his study included. There are also other studies that have pointed at provision of external debt and equity capital as a very important factor in promoting small firm growth (e.g., Becchetti & Trovato, 2002; Riding & Haynes, 1998). However, it is 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; Davidsson et al., 2005; Sapienza, Korsgaard & Forbes, 2003; Wiklund, Davidsson & Delmar, 2003). For these reasons also 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.

## **Different Routes to Growth**

### **Organic growth vs. acquisitions**

When considering the question how small firms achieve growth, it is important, again, to remember that most of them don't grow. Among those who do, Davidsson and Delmar (1998), who investigated the entire population of Swedish firms that had 20 or more

employees in 1996 and backtracked their development for up to ten years, demonstrated that small (and young) firms had a much stronger tendency to grow organically than large firms had. As these specific results have not previously been published in a widely accessible outlet it makes sense to repeat them in full here, as is done in Table 1. The table includes data only for firms that have first been classified as being among the top ten percent growers in absolute, average annual growth in employment. For members of this growth elite the table breaks down their expansion according to what proportion is organic and achieved through acquisition, respectively.

The difference in growth mode by size class is quite dramatic. 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 firms that are classified as 'high growth firms' based on total employment growth actually shrink quite dramatically in organic terms. The same clear pattern is repeated if the breakdown is made by beginning year size class, or by age. 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.

**Table 1. Organic growth for high growth firms of different size (Davidsson & Delmar, 1998)**

End year size class	No. of cases (n)	Cumulative total employment growth	Cumulative organic employment growth	Organic as percent of total
20-49	342	8124	7963	98.0
50-249	532	44 320	34 208	77.2
250-499	127	22 340	12 497	55.9
500-2499	127	57 752	15 682	27.2
2500+	25	52 728	-10 310	(-19.6)
<i>Total</i>	<i>1153</i>	<i>185 264</i>	<i>60 040</i>	<i>32.4</i>

Not many other studies have explored this relationship. 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 (cf. Penrose, 1959; Wiklund & Davidsson, 1999). 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 (1998) although size and age differences are less 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 explores 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. This resonates with Killing (1978) as well as 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. It is possible, however, that their focus on geographical expansion led to a high estimate.

### **Internationalization as a route to growth**

Internationalization is another route to growth, and it is oftentimes based on alliances and networks. 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). A network perspective has also been applied in different studies of firm internationalization. For example, Chetty and Campbell-Hunt (2003) investigate the relationships between rapid international growth and business networks. In their study, business networks were the only vehicle for internationalization out of a small domestic market in a sudden internationalization process, when large increases in capabilities were involved, and when it involved specialization. The link between networking and internationalization is built on establishing and maintaining the required relationships with business partners, customers, suppliers, and governments (Welch & Welch, 1996).

Networks or not, there is a growing body of literature which aims at understanding firm growth through *internationalization*. Due to today's low-cost, rapid world-wide communication and transportation, the domain in which firms operate and expand is becoming truly international (McDougall & Oviatt, 1997). This appears especially true for small countries (Julien & Ramangalahy, 2003). Thus, the globalization of markets and the consequent need for crossing national borders does not only concern large and established firm (Bloodgood, Sapienza & Almeida, 1996). "Internationalization is no longer regarded as an alternative but rather as an essential prerequisite for growth, also for small businesses" (Hurmerinta-Peltomäki, 1994: 24).

The international expansion of small and medium sized firms is regarded as an entrepreneurial act since it entails the opening up of product markets (Thorelli, 1989; Ibeh, 2003). The same is true for any geographic expansion. Interestingly, however, geographic expansion is almost exclusively discussed in the context of internationalization. Notable exceptions are the studies by Barringer and Greening (1998) as well as Greening, Barringer and Macy (1996). The former argue (1998: 490) that opening a new geographic site is similar to a start-up process in that a 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 resonates well with Davidsson's (2003; 2004) argument that geographical expansion is a form of entrepreneurship although he, like Thorelli (1989) and Ibeh (2003), rather emphasizes the similarity with the start-up situation from the perspective of the market effects.

Researchers interested in international entrepreneurship have focused mainly on what has been labelled 'international new ventures' (INVs) (McDougall, Shane & Oviatt, 1994), 'high growth new ventures' (Bloodgood et al., 1996), or 'born globals' (Madsen & Servais, 1997). These are 'new entrepreneurial ventures with high aspiration and potential for growth' (Bloodgood et al., 1996) and "business organization that 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). Autio, Sapienza and Almeida (2000) found that the earlier in their development firms venture into international competition and the greater their knowledge intensity, the more rapidly these firms expanded internationally.

Much of this research has been presented as an alternative to the view provided by studies which explain internationalization as a gradual, sequential process, occurring through a sequence of stages (Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975). The latter approach has been criticized of being too deterministic and stressing only the early stages of internationalization (Melin, 1992). Yet, unlike most research on firm growth, the literature acknowledges that the process is not always uni-directional. 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).

While highlighting an important form of expansion, the research on international growth of new and small firms has so far not yielded many strong generalizations. In part this may be due to the even greater complexity involved in such research, when the development of firms serving home markets of vastly different size is compared. In part it may also be due to this stream of research not yet having achieved the same level of theoretical and methodological sophistication as the best exemplars of ‘determinants of growth’ research.

## **Growth stages and transitions**

### **Overview of the literature**

The body of literature mostly concerned with growth processes is often presented in the form of life cycle or stage 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 whereas *stage models* frequently focus on the generic problems organizations encounter during growth. Firms are assumed to grow in distinct stages, each stage concluded by a set of typical problems and organizational responses. 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). 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 rapidly.

### **One example: Greiner’s model**

The phases depicted in stage models are often similar. One model that is frequently referred to is the one suggested by Greiner (1972), who claims that during growth organizations would move through five distinct and distinguishable phases of development. Each of these phases contains a relatively calm period of growth that ends with a managerial crisis. Each phase is characterized by a dominant managerial style employed to achieve growth, and each crisis is characterized by a dominant managerial problem that must be solved before growth can continue. Thus, each phase is not only the outcome of the previous stage, but also the cause of the next phase.

The model begins with the foundation of an organization, in which it searches for a product-market combination. This entrepreneurial phase is based on informal and frequent communication between the CEO and employees, and the control of activities derives from immediate marketplace feedback. As the organization grows and thus the scale of production increases, greater knowledge about manufacturing (efficiency) is required, and the increased number of employees can no longer be managed informally. Greiner argues that at this point a crisis of leadership would occur, in which new managers might have to come in who are acceptable to the founder(s) and who can pull the organization together. Those companies that survived this first phase by taking on board capable managers will embark on periods of

sustained growth. Greiner suggests that at this stage a functional organizational structure would be introduced and job assignments would become more specialized. Communication becomes more formal and less personal, and a hierarchy of positions and titles develops. Though these steps are meant to channel energies into growth, they eventually become inappropriate for a larger and more complex organization. Especially lower level employees find themselves restricted by the centralization, leading to a crisis due to demands of greater autonomy.

The result of the crisis is a higher level of delegation, although lower-level managers might not be used to making decisions for themselves and top-level managers might not be willing to give up responsibility. The next growth phase evolves from the successful employment of decentralized organizing principles. In this stage, top management is freed of operational involvement and can make acquisitions, which can be operated alongside other decentralized units. In terms of growth, this stage is driven by increased employee motivation as well as acquisitions, but top management might eventually sense that they are losing control over the diversified company. Thus, the following crisis occurs when management attempts to regain control by coordinating the activities more tightly. The fourth phase is then characterized by the use of formal systems for achieving better coordination, and formal planning systems are being established. Typically, planning would be centralized in headquarters, while at the same time daily operating decisions would remain decentralized. The driving force for growth in this phase is the more efficient allocation of resources. However, gradually a lack of trust might emerge between staff and line, and between headquarters and the decentralized units. This leads to a crisis, which according to Greiner (1972) would lead to more collaboration.

### **Critique and further developments**

Even though stage or life-cycle models are intuitively appealing as they accurately point at the gradual nature of firm evolution, they have been heavily criticized. For example, life-cycle models only conform to 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 time consistent pattern as they grow and decline (Hofer & Charan, 1994). A further point of criticism is that the models mainly focus on the evolving 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). Thus, the models oversimplify the nature of 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 these models. The models also imply that managerial action should be narrowly prescribed if growth is to occur (Tang, Jones & Forrester, 1997).

In addition, 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 Utah in order to establish whether distinct development stages could be discerned empirically, and, if so, which they were. These authors found four clusters that correspond to development stages of increasing complexity and first increasing and then decreasing dynamism, respectively. 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 another two 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 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. This is unfortunate as research-based knowledge on growth processes and transitions would have high practical relevance alongside with 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. One of few recent efforts in this research stream is Garnsey's (1998) attempt to extend Penrose's work to early growth (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.

## **Growth and Profitability**

Firm growth is frequently equated with success (cf. Baum, Locke & Smith, 2001; referring to Covin & Slevin, 1997, and Low & MacMillan, 1988). 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). 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). 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 been mentioned above many owner-managers also 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.

A particularly relevant outcome on the firm level is the effect of growth on profitability. Davidsson's (1989b) research showed 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. While fairly strong theoretical arguments can be put forward both for growth enhancing profits and for profits enhancing growth, the fact is that the research evidence on the association between growth and profitability is surprisingly weak and mixed. Based on a meta-analysis of 320 studies published in 1921-1987, Capon, Farley and Hoenig (1990: 1148) concluded that “Growth, analyzed in 88 studies, is consistently related to higher financial performance. Growth in assets and sales individually show positive relationships to performance at both industry and firm/business levels of analysis”. However, a close examination of their analysis (Table 5; p. 1154) discloses that a significant positive effect of growth on financial performance is found in across-industry studies only. In within-industry studies the effect is miniscule in magnitude and statistically non-significant. This is actually evidence *against* the hypothesis that firms that grow more than their close competitors become more profitable as a result.

It is surprisingly difficult to find more recent studies that explicitly examine the growth-profit relationship. Chandler and Jansen (1992), Mendelson (2000) and Wiklund (1998) all found a positive association in passing; their main research questions concerned other relationships. A few recent studies have addressed the growth-profitability as their main research question. Cox, Camp and Ensley (2002) surveyed 672 members of the Entrepreneur of the Year Institute and found a positive relationship between sales growth rate and profitability growth. Cowling (2004) investigated UK firms across industries and concluded from a series of regression analyses that profit and growth tended to move together. However, Roper (1999), who studied a large sample of Irish firms found turnover growth and return on assets to be very weakly related ( $r$  below 0.10 and not statistically significant). Likewise, Sexton, Pricer and Nenide (2000), who analyzed over 75 000 firms in the Kauffman Longitudinal Financial Statement Database, found a very weak over all correlation between sales growth and profitability. Markman and Gartner (2002) used longitudinal data on Inc. 500 firms and found that change in sales and change in employment both had a weak *negative* correlation with *change* in profit.

Hence, the empirical evidence on the relationship between growth and performance is inconclusive. In addition, to the extent a relationship exists it has not been determined whether this is primarily because growth leads to profits or, conversely, because profitability drives growth. This triggered Davidsson et al. (2005) to recently examine precisely that question. Their results show 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. Albeit somewhat less pronounced in some analyses this pattern of results recurred consistently across alterations in operationalizations and assumed time lags. This is strong reason to caution against a universal and uncritical growth ideology and for small firm owner managers—whenever possible—to secure profitability before they go for growth. The idea of growing in order to become profitable seems a much more questionable prospect.

## Conclusions

We noted in the opening of this paper that growth has two different fundamental meanings. One is the *change in amount* when a firm grows from smaller to larger size. The second meaning refers to growth as a *process* of organizational changes, which lead to this change in

amount—and a range of other changes as well. Even if restricted to one of these perspectives, growth is a heterogeneous phenomenon and therefore a demanding one to research. Firms can grow at different pace and with different regularity. Depending on the amount of growth and the initial size of the firm, a given amount of growth may look impressive in relative or absolute terms; both, or neither. There is also a variety of different types or modes of growth. It can be achieved not only through increasing the volume of current activities but take the forms of vertical integration and/or related or unrelated diversification; involve organic growth and/or acquisitions or strategic alliances, and it may or may not be associated with geographic expansion, including internationalization.

As different forms of growth may need different theoretical explanations and be associated with likewise different managerial implications, research on growth is well advised to assess growth with several different indicators that are analyzed separately. If but one indicator be used there is general agreement that growth in sales is the most universally applicable one. However, studies using one particular indicator of growth should strive for good matching between theoretical conceptualization of growth and its operationalization, and this does not always translate into using change in sales as the preferred measure. Further, growth occurs over time and hence studies of growth should have a longitudinal design regardless of whether growth is studied as change in amount or as process, although the need for repeated assessment of a range of variables is greater for the latter type of study.

A long list of internal and external factors have been hypothesized and shown to influence firm growth. It is probably the case that every theoretically reasonable suggestion for a growth determinant has been shown to have the predicted impact in some context. The problem is to develop better knowledge about the relative and combined effects of the many predictors under different circumstances. In order to deal with this complexity researchers have developed a set of useful strategies. One is to increase the level of abstraction and regard the many particularities as aspects of more over-riding factors, some of which influence growth directly while others only have an indirect impact, as exemplified by Davidsson (1991) and Wiklund (1998). Another is to give up ambitions of approaching full explanation but instead enhance our understanding of the interplay between different influences (e.g., Wiklund & Shepherd, 2003; 2005). A third is to limit the study to a more homogenous empirical context and study the effects of a narrow set of theory-driven and carefully operationalized predictors. The study by Baum and Locke (2004) is a good representative in this category.

As regards specific growth determinants it deserves repeating that the owner-manager's willingness to grow has been shown to be important. Related to this, there is strong indication that human capital factors like education and experience lead to growth only when the wish to expand is also there. A factor that is sometimes crucially important but not a universal growth recipe is the availability of external capital. In the frequent cases when the owner-manager does not see growth as a goal, or the market potential for the firm's products is limited, increased provision of external capital is not going to change much. While there is probably an over-representation of male-run firms among the top growers, gender is largely unrelated to growth for the large majority of the firm population. Firms run by teams grow more on average than do firms run by solo entrepreneurs.

With increased sophistication the research on growth determinants can achieve more precise results on effects and contingencies, and therefore become more directly relevant for managers. However, research on internal processes, such as stages of development, organizational life-cycles and growth transitions arguably has more direct managerial appeal. It is therefore unfortunate that the (justified) criticism for over-determinism and questionable empirical support seems to have made this research stream more or less peter out. Good, research-based knowledge on growth processes as well as its managerial consequences and

solutions is needed and should be encouraged. A separate type of research has confirmed that young and small firms grow organically, while as firms become larger and more established an ever larger share of their growth is achieved through acquisitions, as suggested in several stages models. The managerial challenges involved in creating these different forms of growth in small and medium-sized firms, and dealing with their internal consequences, are still poorly understood.

Research on stages and transitions address the consequences of growth. Surprisingly few studies, however, have investigated the crucial relationship between growth and profitability. Recent findings indicate that firms that grow successfully do so by first securing profitability, and then go for growth. This is strong reason to caution against a universal and uncritical growth ideology. Firms that grow at low profitability apparently often end up in the undesirable state of low growth and low profits instead.

Broadly, the different studies on growth can be clustered into the following categories:

1. Assessing determinants that foster or hinder organizational growth; these could be external or internal factors.
2. Management *for* growth; managing the determinants that foster or hinder organizational growth to further firm growth. This category again includes external and internal factors—for example, managing resources or which policy measures facilitate the growth of companies.
3. Assessing the *effects* of growth, i.e. quantitatively in terms of increasing numbers of employees or sales or impact on profitability, and qualitatively for example in terms of delegation crises. The studies measuring the effects of growth are most often those assessing the effect of different determinants. Interestingly, these studies tend to ignore the intermediate process of managing the determinants.
4. Managing the *effects of* growth; for example restructuring the organization, implementing new practices; leading to displayed patterns of growth, mainly in form of stages or transition models.

The first two categories deal with factors leading to growth, generally assuming that growth is something positive. The latter two categories refer to the outcomes of growth. The gap left between these categories is the process of growth itself—what actually happens with(in) the organization as it grows. We have elected here to emphasize, on a positive note, the generalizations one can relatively safely make on the basis of the extant research. One could easily emphasize the problems instead: lack of 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; focus on uni-directionality of growth; lack of focus on people issues; lack of combining different levels of analysis (individual, team, organization, environment); rather low level of link between empirical findings and theory-building, etc. However, the luxury of seeing all these deficits 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. The remaining validity of some of the criticism only means that there are interesting research opportunities for followers to do better.

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