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**GROWING PROFITABLE OR GROWING FROM PROFITS:
PUTTING THE HORSE IN FRONT OF THE CART?**

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ABSTRACT

Firm growth is almost universally portrayed as a good thing, and is commonly used as a measure of success. Applying resource-based reasoning, we argue that growth is often not a sign of sound development. Specifically, we hypothesize that firms which grow without first securing high levels of profitability tend to be less successful compared to firms that first secure high profitability at low growth. Empirical tests using two large, longitudinal data sets confirm that the profitable low growth firms are both more likely to reach the desirable state of high growth *and* high profitability and have a decreased risk of ending up performing poorly on both performance dimensions. The results suggest that academics, managers, investors and policy-makers may benefit by adopting a more nuanced view of firm growth that explicitly incorporates its intricate relationship with profitability.

INTRODUCTION

Few things could be easier than expanding a business if that were your only objective. All one would have to do would be to buy or produce the business's products or services at going market rates and sell them for significantly less. With the exception of a few, special cases, demand would soar and the firm would experience tremendous growth in sales volume. However, the growth would obviously not reflect effective value creation and appropriation by the firm, and it would hence be neither profitable nor sustainable.

Despite this obvious fact, researchers, practitioners and policy-makers alike have tended to place a great deal of emphasis on firm growth *per se* as an indication of business success. While it is clear that in some circumstances growth is a valid indication of success, in this paper we question just how often this is really the case for small and medium firms. Of course, the notion that growth can be harmful is clearly old news (Ramezani Soenen, & Jung, 2002:65; Markman & Gartner, 2002). However, adverse growth is treated as a relatively rare exception, not a common concern of firms. In business media around the world, top lists and praise of the economy's fastest growing firms are ubiquitous (Nicholls-Nixon, 2005), as are policy programs designed to stimulate and assist the growth of individual firms, presumably in the hope that this will result in increasing employment and tax revenue on the societal level (Storey, 1994, 2000). Teaching cases and textbooks devote much space to the problem of how to achieve expansion for the firm (e.g., Hisrich, Peters, & Shepherd, 2005; Wickham, 2004; Winn, 2004). Further, academics frequently use firm growth uncritically as an operationalization of business success; a practice that is particularly pronounced in entrepreneurship research (see Appendix 1). Some researchers go so far as to make growth "the very essence of entrepreneurship" (Sexton &

Smilor, 1997:97) or include growth more or less as part of the definition of entrepreneurship (Stevenson & Jarillo, 1990:21, 25).

Davidsson, Delmar and Wiklund (2002) argue that venture growth is an important topic for entrepreneurship research regardless of whether one employs Gartner's (1988) organization creation perspective or Shane and Venkataraman's (2000) view that entrepreneurship consists of the discovery, evaluation and exploitation of opportunities. We agree. However, we also agree with Alvarez & Barney (2004) that value creation (they use the term "rent generation") and appropriation are the central tasks of entrepreneurial firms. Importantly, as we emphasized with our opening recipe for high growth, growth is not direct evidence of effective value creation and appropriation. Rather, profitability provides the best evidence of value appropriation. It is therefore an important task for entrepreneurship research to investigate the relationship between growth, on the one hand, and the creation and appropriation of value on the other.

Through the theoretical lens of the Resource-Based View (RBV) (Barney, 1991; Wernerfelt, 1984) we argue in this article that *sound* growth *usually* starts with achieving sufficient levels of profitability, i.e., that profitability (and the underlying competitive advantage it reflects) is the "horse" that should pull the growth "cart" rather than the other way round. Consequently, we also argue that firms that embark on a growth trajectory starting from low levels of profitability *usually* do not achieve high profitability as a result of their growth. Instead, as their growth is unlikely to be sustainable (Ramezani, et al., 2002) we argue they are likely to become low performers on both dimensions. We test these hypotheses using two longitudinal data sets of small and medium enterprises (SMEs) from Sweden and Australia.

Numerous studies have empirically explored the correlation between growth and profitability as well as the serial correlations of each of these measures over time (Capon, Farley,

& Hoenig, 1990; Coad, 2006). What we contribute is a theory-driven *configuration* view of the interrelationship between profitability and growth. Based on RBV reasoning, we argue the appropriateness of growth is contingent on the current level of profitability (and the underlying reason for that profitability). What we also contribute is the empirically tested suggestion that detrimental effects of growth are the rule rather than the exception when growth starts from a situation of below average profitability. Importantly, while we use RBV logic to develop our hypotheses and interpret our results regarding profit-growth configurations over time this study does not include direct measures of the firms' resources. Consequently, we do not regard our study a test of or contribution to resource-based theory (Arend, 2006).

In the following section we will briefly examine the traditional theoretical arguments outlining why firms should become more profitable as a result of their growth, but then review the relevant empirical literature to demonstrate there is a lack of support for the notion that it is common for firm growth to lead to profitability. We then develop our RBV-based case for focusing on profitability before going for growth, which leads to two hypotheses that we test empirically. Analyzing growth-profit configurations over time is technically challenging. In the Method section we describe our novel yet straightforward approach to that problem, as well as presenting our samples and measures. After presenting our results we discuss their implications for business and policy practice. We also address the limitations of our study and some ideas for future research.

DOES GROWTH MAKE FIRMS PROFITABLE?

The assumption that volume growth is positively associated with profitability – and hence with growth in the value of the firm – is supported by theoretical arguments about *scale*

economies (Besanko, Dranove, & Shanley, 2004; Gupta, 1981;), *experience effects* (Amit, 1986; Stern & Stalk, 1998), *first mover advantages* (Lieberman & Montgomery, 1988) and *network externalities*, the latter denoting the special case when the value of a product or service to a consumer increases in proportion to the number of users (Katz & Shapiro, 1985). That is, these theories suggest growth will drive profitability either through the lowering of costs or by establishing a strong market position. However, although growth no doubt might increase survivability (Geroski, 1995; Phillips & Kirchoff, 1989) by reducing the liabilities of smallness and newness (Aldrich & Auster, 1986) of the *very* youngest and smallest actors in the market, there is actually little support for a strong and general growth-profit relationship beyond that. For example, research in industrial economics have shown that scale economies are not much of a barrier to entry; that surviving new entrants operate for long times at sizes far smaller than the industry average; that *minimum efficient scale* is typically reached at a rather small size; that very limited cost advantages are typically gained beyond that minimum, and even that it is possible to operate significantly below it without severe cost disadvantage (Geroski, 1995; Hill, 1988; Siegfried & Evans, 1994).

Furthermore, a number of studies have reported correlations between growth and profit measures, either as focal research question or a side issue. Their results range from somewhat substantive positive correlations (Cox, Camp & Ensley, 2002; Chandler & Jansen, 1992; Mendelson, 2000) to those that are weakly positive yet statistically significant (Baum & Wally, 2003; Cho & Pucic, 2005; Kim, Hoskisson, & Wan, 2004; Peng, 2004); to those finding no statistically or practically significant relationship (Roper, 1999; Sexton, Pricer, & Nenide, 2000; both based on very sizable samples) and those with a significant negative relationship (Markman & Gartner, 2002; Reid, 1995).

The most comprehensive, albeit somewhat dated, assessment of the issue is a meta-analysis by Capon et al. (1990:1148). At first glance their results seem to support a positive growth-profit relationship. However, a closer examination discloses that a significant positive association between growth and financial performance is found in across-industry studies only. In within-industry studies, the effect is minuscule in magnitude and statistically non-significant (Capon et al., 1990:1154; Table 5). Thus, the results do not establish that firms that grow more than their direct competitors consequently become more profitable. Rather, the findings suggest that firms in growing industries benefit from the higher growth- *and* profit rates of their industries; a theme well-known also from Product Life Cycle theory (Day, 1981).

In summary, the empirical evidence on the relationship between firm growth and profitability is inconclusive. That is, despite the various theoretical arguments there is little evidence of a substantial, universal 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 as suggested by theories mentioned above, there are frequent other instances when the growth-profit relationship is neutral or negative.

THE RESOURCE-BASED VIEW AND PROFITABLE GROWTH

Although growth is not usually an explicitly highlighted topic in contemporary RBV studies (Barney, Wright, & Ketchen, 2001) the perspective is in its historical origin very closely connected to the core topic of our study, *profitable growth*. Penrose (1959) obviously focused her entire study on growth. An important assumption underlying her analysis was that managers aimed exclusively for profitable growth prospects (Penrose, 1995:ix). Based on this rationalistic assumption, she could conveniently treat profit and growth as equivalent investment goals

(Penrose, 1959:30). Similarly, Wernerfelt's (1984) seminal paper explicitly addresses the profitability of different routes to growth. Hence, it is with considerable justification that Kor and Mahoney (2004:190) claim that profitable growth is one of the "cornerstones of a resource-based view of strategic management."

According to RBV, superior firm performance – e.g., above average profitability – is based on competitive advantage, which Barney (1991:102) defines as "implementing a value creating strategy not simultaneously being implemented by any current or potential competitors." If these other firms are unable to duplicate the benefits of the said strategy the advantage is also *sustained* (or a *sustainable* competitive advantage – SCA – which seems to be the preferred terms in more recent works). In this original formulation, Barney (1991) presents the familiar argument that the sustainability of the advantage is contingent on the extent to which the firm's resources or resource bundles are *valuable*, *rare*, *hard-to-copy* and *non-substitutable* (VRHN). In a later, equally well-known reformulation the sought for resource qualities are specified as *valuable*, *rare*, *inimitable*, and *organized* (VRIO) (Barney, 1997). The "O" in the latter formulation can be regarded an increased emphasis on having an effective *business model* in place – including an effective *revenue model* – thus ascertaining both value creation and value appropriation by the focal firm (Alvarez & Barney, 2004; Amit & Zott, 2001).

By the logic of RBV, firms should pursue growth opportunities that match their resource advantages; if they go for other opportunities growth may destroy rather than create value (Kogut & Zander, 1992). If they refrain from growth opportunities that match their resources they may enjoy high levels of profitability based on a sub-optimally small volume of business, thus failing to maximize value creation and -appropriation. Hence, from the perspective of RBV firms should strive to maximize *profitable growth*.

When firms have resource advantages concerning their current product offerings this is likely to be reflected in above average profitability. Unless the market potential for the current products is already exhausted such firms are likely to be able to grow through market penetration while retaining their high level of profitability. In addition, the available resources may also offer an advantage concerning other products, leaving potential for profitable growth via the launch of new products or services. Apart from their current profitability here being assumed to reflect current resource advantages, the profitability of these firms creates an advantage in itself with respect to profitable growth compared with firms that are not able to base their expansion on retained earnings to the same extent (Marris, 1967; Scott & Pascoe, 1986). That is, firms that have achieved above average profitability are likely to be able to reach the desirable state of *profitable growth*.

Let us now consider the notion of firms attempting to “grow profitable”. The RBV does not deny the possible existence of cost advantages based on scale. However, if scale does provide a competitive advantage, a firm commencing from a position without those scale advantages would be at a competitive disadvantage and in a competitive setting unable to develop such advantages through growth *per se*. Moreover, if based on scale *per se* a cost advantage is unlikely to be sustainable by Barney’s (1991; 1997) criteria. Neither does RBV deny the possibility of first-mover advantages based on entry or mobility barriers. However, it is emphasized that such barriers “only become sources of sustained competitive advantage when firm resources are not homogeneously distributed across competing firms and when these resources are not perfectly mobile” (Barney, 1991:105; cf. Wernerfelt, 1984:173).

For firms exhibiting growth at low levels of profitability, RBV logic is more consistent with the notion of “misguided growth” rather than firms trying to “grow to become profitable”.

Realistically, in a random sample of SMEs only a minority will have significant, resource-based competitive advantages. Most firms are imitative businesses without much inherent growth potential (Aldrich, 1999). Consequently, most firms never embark on a significant growth trajectory, and rightfully so (Davidsson, Achtenhagen & Naldi, 2006). Moreover, SME managers may well be intendedly rational and, as owners, not subject to agency problems that may gear employed managers towards sub-optimal expansion projects. Nonetheless, for reasons of incompetence, over-optimism, or perhaps the misconception that growth will automatically generate cost advantages (cf. above), some of them are likely to pursue growth opportunities for which their firms have no particular competitive advantage.

From the perspective of RBV the occurrence of growth at low levels of profitability would indicate such instances. The inadequate level of profitability indicates that the firm has not yet established a resource advantage that can be the basis for profitable expansion of sales of current products. Hence, growth would require price cuts or costly marketing efforts to win over customers facing several equally appealing offerings. Alternatively, the firm has a value-creating advantage but fails to back it up with a revenue model that appropriates enough of the value it creates. A third possibility is that the low profitability that accompanies the growth indicates that the firm expands into new areas that do not match its resources. Finally, as we have noted above, the volume growth *per se* is unlikely to make the firm significantly more profitable. For these reasons, we argue that firms that embark on growth starting from low levels of profitability are unlikely to reach the desirable state of *profitable growth*.

Based on these RBV arguments, we hold that in most situations it is advantageous to let profitability (and the competitive advantage it reflects) be the horse that pulls the growth cart, rather than the other way around. To re-iterate, we propose that the combination of high

profitability and high growth – the state arguably most indicative of realizing value maximization (Cho & Pucic, 2005) – is more likely to be reached by firms that first achieve sufficient levels of profitability and then strive for growth, compared with firms that embark on a growth trajectory without first showing high profitability. The latter firms, we argue, have not yet achieved a resource-based advantage and therefore not shown an ability to produce a market offering that customers deem has value considerably above its cost of production. Further, there is no guarantee that aggressive volume expansion would solve that problem. This suggests the following hypothesis:

H1: Firms that show high profitability at low growth are more likely to reach a state of high growth and high profitability in subsequent periods than are firms that first show high growth at low profitability.

Although support for H1 would support our contention that the strategy to try to “grow profitable” is often a dubious practice, it would not provide conclusive evidence that such is the case. For example, a firm may first grow at low profitability and then remain stable but highly profitable at this larger size. This would arguably be a sign of better over all performance (more value creation) compared with a firm continuing to show high profitability year after year without ever expanding. Therefore, if H1 is supported additional evidence is needed concerning what happens to the firms that do not achieve simultaneous high growth and high profitability. A result showing that attempts to go for growth starting from low profitability often backfires and instead puts the firm among those that show below average performance on both outcome dimensions would provide stronger evidence of the possible harmfulness of going for growth

without first ensuring sufficient profitability. Our resource-based lens suggests growth at low levels of profitability reflects lack of resource-based advantage. Hence, such growth would not be sustainable, and not solve the firm's profitability problem. There is no corresponding reason to suspect that current high profitability would somehow hamper future profitability or growth. Consequently:

H2: Firms that show high growth at low profitability are more likely to reach a state of low growth and low profitability in subsequent periods than are firms that first show high profitability at low growth.

METHOD

Data Sources

We use two separate data sources to examine our research questions. The data were originally collected by government statistical agencies in Australia and Sweden, over different four year periods. Both data sets contain a random sample of SMEs across many industries, though they stratify the population differently resulting in substantially different size distributions. In particular, the Australian sample contains a much larger number of firms in the smallest size class.

The Australian data is sourced from the Business Longitudinal Survey (BLS) conducted by the Australian Bureau of Statistics (ABS) over the period 1995 to 1998¹. The sampling frame was all businesses on the ABS business register employing fewer than 200 employees, excluding primary industries other than mining, government enterprises, utilities and public services

¹ Refers to financial years ending in July of nominated year.

(education, health, libraries, museums, parks etc.). The survey was designed to provide information on the growth and performance of Australian employing businesses and to identify selected economic and structural characteristics of these firms. A panel of 5,031 businesses was established in the 1994-95 financial year. Each subsequent year, the panel consists of those businesses remaining alive, supplemented by a sample of new businesses added to the ABS business register in that year. Completed responses were collected from between 84% and 90% of the panel for the surveys in 1995-96 to 1997-98. We use all cases that have complete data in any two subsequent years, or have complete data in the first year and cease business during the second. As a result, our analysis is based on a total of 5,031 businesses with between 3,488 and 3,717 businesses being included in any one analysis.

The Swedish data originates from a longitudinal survey study undertaken in the years 1997-2000. The sample was drawn from Statistics Sweden's complete records of legal business enterprises in Sweden. The sampling frame was all private limited liability companies with 10-250 employees, excluding agriculture, forestry and fishing as well as government enterprises, utilities and public services. The sampling frame was stratified as follows: two size groups of 10-49 and 50-250 employees; four industry sectors of manufacturing, retail/wholesale, professional services and other services; and the three corporate governance categories independent firms; member of company group of less than 250 employees, and member of company group larger than 250 employees. From each of the 24 stratifications 110 firms were randomly selected, except where the sub-population was less than that number, resulting in a sample of 2,455 firms.

Rather than representing items from the survey, the growth and profitability data we use are likewise data from Statistics Sweden's records. These data were originally collected as part of the statutory reporting required of businesses in Sweden, and were appended to the survey

data set. Growth and profitability data was requested from Statistics Sweden only for firms that participated in at least the first survey round and for whom phone contact information could be obtained in 2000. This reduces the sample to 1917 cases. Missing data on growth and/or profitability in Statistics Sweden's files in addition to eliminating firms that merged or reorganized as part of a parent company further reduced the analyzable sample for this study to 1,482 firms. As a result, our analysis of Swedish firms uses information from a total of 1,482 businesses with a minimum of 1,470 businesses being included in any one analysis.

Measures

Sales growth was preferred over employment growth based on emerging consensus in the literature that for most purposes sales is the more relevant growth indicator (Davidsson & Wiklund, 2000; Delmar, 1997; Hoy, McDougall, & Dsouza, 1992; Weinzimmer, Nystrom, & Freeman, 1998). The specific formula used was the change in sales from the previous year as a percentage of the sales in the previous year. For the Australian data, sales data for two years prior to the first survey year were reported. Hence sales growth could be calculated in the first year (1995). For the Swedish data only current year sales are reported. Hence, growth can only be calculated from the second year (1998).

We used accounting measures of rates of return as our measure of profitability. Slightly different measures were used due to data availability. For the Australian data, we used the Internal Rate of Return (IRR), calculated as the net profit (operating profit or loss before tax and extraordinary items) as a percentage of total assets in each year. For the Swedish data, we used the closest available alternative, which is the after tax Return on Assets (ROA). For the testing of our hypotheses, both the before tax (IRR) or after tax (ROA) measure of profitability are suitable.

Analysis

Our research is concerned with the dual growth-profit performance of firms over time. While the analysis problem entails aspects reminiscent of lagged- and interaction effects in regression analysis (e.g., Cowling, 2004), this approach is not appropriate for our problem of predicting a multivariate outcome. Instead, we adopt a simple, intuitively appealing schema that allows us to follow a firm's trajectory in a two-dimensional growth-profit performance space. We classify firms into five performance groups in any time period as shown in Figure 1. Firms are first separated into a 4x4 classification based on the two performance dimensions; sales growth and profitability. Specifically, firms are classified into quartiles for both sales growth and profitability relative to other firms in their industry. They were then divided into the following five performance groups²:

- *Poor*: low performance on both dimensions (final state for hypothesis H2)
- *Middle*: mid performance on both dimensions (included to reduce the risk that miniscule movements have a large effect on results).
- *Growth*: high growth performance, but low profit performance (initial state presumed to lead to poorer outcomes for H1 and H2)
- *Profit*: high profit performance, but low growth performance (initial state presumed to lead to better outcomes in hypotheses H1 and H2)
- *Star*: high performance on both dimensions (final state for hypothesis H1)

Insert FIGURE 1 about here

² In preliminary work, we also used several other methods of categorising firms to ensure our results were not an artefact of the categorisation schema. For example, we categorised firms into four groups (no middle category), each group representing a quarter of Figure 1. We also repeated the analysis for quartiles defined over the entire population, rather than relative to industry. For each categorisation schema, the substantive results presented in the paper were supported. These additional analyses are available from the first author on request.

Our hypotheses are concerned with how firms move in this growth-profit performance space over time. In particular, we are interested in comparing Growth to Star transitions with transitions from Profit to Star (H1). We are also interested in comparing Growth to Poor with Profit to Poor (H2). Similar to Markov chain analysis used in population dynamics we use state transition matrices as the starting point of our analysis. That is, for each performance group in one year, we calculate the proportion that moved to each group (or ceased business). Our interest is testing the differences between specific transition proportions (specified above), which we do using standard z-tests. In the analyses we will also include transitions to “Exit” as a separate category. This is an ambiguous category including not only financial failures but also voluntary closures and lucrative outright sales of firms to new owners (Gimeno, Folta, Cooper, & Woo, 1997; Headd, 2003). Consequently Exit should not be merged with the Poor category or be interpreted as a pure failure category. Also, this category is not directly comparable for Australia and Sweden as many of the Swedish exiting firms are not included in the available sample³. In addition to the separate analyses of the Australian and Swedish samples we will also examine the robustness of our findings by sub-categories based on industry, firm size, and firm age within each country. Further, apart from the direct tests of our hypotheses we will also comment on other results where they have some bearing on our overall argument about the effects of performance configurations over time.

Length of Time Period

In line with convention, we perform our growth and profit calculations based on annual data. The theory on which our hypotheses are based does not suggest the ideal time period for

³ Differences are due to several factors. The Swedish sample does not include firms with less than ten employees (the size category most likely to exit). Further, the richer survey data allowed firms who continued trading but changed registration number (and would otherwise have been considered to have exited) to be included and those who have not exited but trading abnormally (in process of liquidation, merger or reorganization) to be excluded.

which the transitions should be tested. Hence, we test our hypotheses over both a short time horizon (1-year transitions) and longest time horizon permitted by our data (three-year two-year transitions for Australia and Sweden respectively). For the 1-year transitions, we aggregate data for all the 1-year transitions provided by the data (three 1-year transitions for Australia and two for Sweden). Admittedly, there is a risk that this is too short a period if there is a strong tendency for “investments in growth” to lower concurrent profitability while paying off in the long run. However, the survey-based part of the Swedish study contains some data that can address the same issues over longer time periods, both as regards the time period over which the initial and end states are assessed, and the spacing between them. We will comment further on how these data compare with our main analysis in the Limitations part of the Discussion section.

RESULTS

Analysis of Entire Samples

The full, aggregated 1-year transition matrices as well as a complete transition matrix over the longest available period in each country, are reported in Tables A1a to A1d in Appendix II. These tables show that although a tendency to remain in one’s category of origin is a major source of deviation from randomness, there are also many other deviations from statistical expectation in the tables that are of a large absolute magnitude. In what category a particular firm is found in a particular year is clearly not random. On the contrary, the results indicate strong path dependence. As should be expected, this dependence is stronger for shorter-term transitions.

The transitions relating to our hypotheses are summarized in Table 1. The left half of this table provides very strong support for the hypothesis that *Profit* is more likely than *Growth* to transition to *Star* (H1). In the 1-year transitions the *Profit* firms are two to three times more likely to end up in the *Star* category. Although the tendency is even stronger in the 2-year

transition based on Swedish data, the size of the category differences diminishes for the longer transitions in the Australian results. However, the difference is still substantial – an “over representation” by 62% (16.5/10.2) – and statistically significant in the three-year Australian analysis.

Insert table 1 about here!

Strong support is also provided, in the right hand side of the table, that firms in the *Profit* category are less likely than those originally being *Growth* firms to transition to *Poor* (H2). This result comes through relatively stronger in the Australian case, where *Growth* firms are two to three times more likely to end up among the firms that perform below average on both dimensions. Although not as strong, the difference is substantial and statistically significant also in the Swedish data, with a minimum “over representation” of 37% (26.1/19.0) for *Growth* firms making this transition, relative to firms originating in the *Profit* category. Thus, both hypotheses get strong support in the full sample analysis for both countries.

Analysis of Sub Samples

Tables 2a and 2b report the subgroup analyses that we perform in order to explore the robustness of our findings with variation in industry, firm size and firm age. When interpreting these tables, we note that these tests involve smaller sample sizes, and consequently lower power of the statistical tests. The average cell sizes for the aggregated 1-year transitions are 84 and 24 for the Australian and Swedish samples respectively, and only 30 and 12 respectively for the

multi-year transitions⁴. Hence, differences of the same magnitude as reported for the full samples will not be associated with the same levels of statistical significance.

Insert tables 2a and 2b about here!

Table 2a demonstrates that H1 is supported across all sub-categories tested. Out of the 52 contrasts that could be made, 51 are in the expected direction and 41 are statistically significant (at $p = 0.05$ or better). The support is somewhat weak for the Retail industry, where the only reverse difference is found (for Australia in the three-year analysis) and where the Swedish results include Wholesale businesses as well. Similarly, Table 2b indicates that H2 holds up across sub-samples. Out of 52 contrasts, 51 are again in the expected direction and 30 reach statistical significance (at $p = 0.05$ or better). While the Retail industry also here achieves only one statistically significant result out of four the reason seems to be lacking power; the estimated magnitude of the percentage difference is substantial in all four analyses. The one result that runs in the opposite direction concerns 1-year transitions for the 2-5 year old firms in the Swedish data and appears to be an idiosyncratic occurrence. There is no obvious, general pattern across firm age groups.

We conclude that, within the boundaries of our empirical investigations, the effects hypothesized in both H1 and H2 appear to be robust. Across a range of industries, firm sizes and firm ages, firms that first achieve above average profitability at low growth (*Profit*) are more likely to achieve the desirable state of high growth/high profitability (*Star*) than are firms that first go for above average growth at low levels of profitability (*Growth*). Conversely, the latter

⁴ Sample size of entire sample / 5 sub-groups / 25 cells (5x5 transition matrix). 1-year results aggregate multiple years to increase sample of transitions.

category of firm is more likely than the former to transition to the low growth/low profitability category (*Poor*).

Additional Observations

Beyond the strict testing of hypotheses the results in Table 1 can also be read as showing that *Growth* firms are two to three times more likely to transition to *Poor* than to *Star*. We note that if our results were entirely driven by costly “investments in growth” that will eventually pay off, we would expect to see this ratio to diminish for longer transitions. Our results do not show any tendency in this direction. A further inspection of tables A1a-d also reveals that no other category is as likely as the *Growth* firms to end up in the *Poor* group, apart from the firms that were already in the latter category. Conversely, no other group is as likely as the *Profit* firms to end up as *Stars*, except those that were *Stars* already in the first period. These tables also reveal that not only the *Profit* firms, but also those in the *Middle* category “outperform” the *Growth* firms in every analysis as judged by a higher frequency of transitions to *Star* and a lower frequency of transitions to *Poor*. Although not reported here, in most cases these results would also be statistically significant if tested as hypotheses.

All in all, these additional observations suggest a quite strong superiority for “profitability first” over “growth first” as a strategy to achieve high overall firm performance. This conclusion would be moderated if there were a strong tendency for *Growth* firms to transition to *Profit*. Such transitions would indicate that the firm now enjoys above average profits based on a larger volume of business, consistent with goals of maximizing value creation and -appropriation. However, tables A1a-d show that such transitions are unusual and about

equally likely for firms originating in the Poor or Middle categories. Hence, there is no support for the idea of “growing profitable” in these data.

DISCUSSION

Our results suggest that high profit, low growth firms are more likely to become high profit, high growth firms compared with firms that start from a position of high growth and low profits. Firms that grow at low levels of profits are not very likely to achieve high profitability as a result of their expansion. Instead, these firms are considerably more likely to transition to what we have called the “Poor” category, i.e., the sub-sample of firms that is below average on both growth and profitability (and in the lowest quartile for at least one of these). That is, our results suggest that for small and medium-sized firms, attempting to “grow profitable” is a dubious strategy that often backfires.

We argue that these results are consistent with an RBV-based interpretation. Before going for significant growth, firms need to develop some kind of competitive advantage based on an identification and exploitation of the uniqueness of their resource bundles. Alternatively, they need to build such a resource-based advantage in the first place. The fact that a firm achieves above average profits for its industry is a sign that an advantage of this kind has been identified, and that it is backed up by an effective revenue model that ascertains the firm appropriates a fair share of the value it creates. In addition, the high level profitability creates a direct resource advantage in terms of the cost of financing growth. How sustainable these advantages are will vary from case to case and is something we can say little about on the basis of this research. We can say, however, that those firms that pursue above average growth without first attaining

satisfactory levels of profitability are unlikely to much improve their profitability position merely as a result of their growth.

These results have important implications for business practitioners, policy makers, and academics. Before detailing these implications, we caution the reader about some of the limitations of our research.

Limitations

Like all research studies, this study has some limitations that should be mentioned. One important limitation is that the resource-based mechanism underlying the configurative profit-growth relationships that we have uncovered has largely been assumed rather than assessed in a more direct manner. Hence, our study does not constitute a strong test of resource-based theory (Arend, 2006). Although this limitation does not affect our hypothesis tests or their implications in terms of firm profitability and growth, it is relevant whenever we use RBV reasoning to interpret these findings as there may be other feasible theoretical explanations for our results. For example, the literatures on stages-of-development and growth transition (e.g., Arbaugh & Camp, 2000; Flamholtz & Randle, 1990; Hambrick & Crozier, 1985) points out a number of problems that growth creates, which could explain why many firms fail to maintain their above-average growth rate, or improve their profitability as a result of growth. However, other than the possibility that ‘Growth’ firms would run faster into financial difficulties these models do not provide much of an explanation for the marked differences that we observed between this category and ‘Profit’ firms in regards of attaining a state of profitable growth.

Consistent with Wernerfelt’s (1984) notion that products and resources are two sides of the same coin we have argued that the superior market offerings that render firms high profitability are resource-based. Others may argue this notion is tautological and prefer other – or

better falsifiable – theoretical explanations for above-average profitability (Priem & Butler, 2001). However, we would argue that regardless of the precise theoretical interpretation our results raise valid concerns against SMEs in general seeking growth when starting from a weak profitability position.

Arguably, the most important empirical limitation of our study is that the data do not allow us to test longer term effects. However, we could demonstrate that our main results were not restricted to year-by-year transitions. To provide further confidence in our results over longer time periods we conducted supplementary analyses not reported above. The Swedish data also contained self report measures of both net profitability and sales growth relative to other firms in their industry over the last three years, reported in both 1997 and 2000. These were reported on a five point scale: much worse, worse, equal, better and much better. These data allow us to perform similar analyses referring to an initial profit-growth configuration calculated over three years as related to a subsequent profit-growth configuration calculated over the following, non-overlapping three-year period. These analyses also support our hypotheses (H1 and H2). The result of this supplementary analysis provides us with confidence that our findings are upheld when performance over a longer time horizon is considered. Further, this additional analysis demonstrates that the most important aspects of our results hold up for both self-report and accounting based performance measures.

The scope of our empirical examination is restricted to small and medium sized firms and to two relatively small (in population), economically advanced countries in the late 1990s. Although we can see no obvious, theoretical reason why these relationships would be substantially different in other contexts, a couple of observations are worth noting. First, the frequency of venture capital backed growth is likely to be higher in, e.g., the US, and the size of

the home market is much larger there. Only empirical investigation can reveal whether this leads to different results concerning our hypotheses. Second, it may be speculated that in “transition economies” (Jackson, Klich, & Poznanska, 1999; Peng & Heath, 1996) the rapid development may provide stronger reasons to try to “grow profitable,” aiming at future harvest, than is the case in the economies we have studied. To the best of our knowledge, the time periods studied in the respective countries were not characterized by any extreme conditions in terms of business cycle or otherwise.

Although our sub-sample analyses did not suggest any systematic differences in the results by firm age, firm size, or industry it is, of course, conceivable that for more narrowly defined sub-groups it would be a sound, long term strategy to maximize growth (based on patient external funding) and solve the profitability problem at a later point in time. We will return to this issue below when we discuss implications for external investors.

Our lack of information concerning why firms exit, taken together with the uneven proportion of firms transitioning to the “Exit” category, is a further limitation. If a higher than average proportion of the exits from the *Growth* category in fact represents profitable transfer of ownership it would weaken the implications of our results. On the other hand, if – in line with our suspicion based on the category’s high frequency of transition to the *Poor* category – a higher than average proportion of their exits represent true failure, it would further strengthen the implications of our findings. The low occurrence of exits in the Swedish data suggests our main findings cannot be an artifact of the indeterminacy of this category.

Finally, we have different time periods, sample composition, and operationalisations for our Australian and Swedish data sets, respectively. Had the results been markedly different in the two empirical contexts, this would have posed a problem for interpreting these results. However,

given the consistency of our results, this robustness across variations in the research design strengthens the generalizability of our findings (cf. Reynolds, Storey & Westhead, 1994:103).

Implications

Implications for academics. The implications for academics span theorizing, research design and teaching. For *positive theory* the primary implication is that it is descriptively wrong to portray SME growth as “success”. The exceptions are too frequent to accept this proposition even as an approximation. *Normative theory*, in its turn, should be more precise in specifying how and under which conditions (what type of) firm growth contributes to more terminal outcomes like company value (or stakeholder utility), either directly or via increased profits. We have suggested a resource-based explanation for high profit firms becoming high profit and high growth firms, while low-profit, high growth firms neither sustain their growth nor attain high profitability as a result of it. Research designed to provide a more direct test of these underlying, resource-based mechanisms would be highly valuable. Further, growth and profitability are logically not symmetric components for building company value. Although high profitability at low growth may be sub-optimal it is difficult to see how high profitability could be value-destroying and hence detrimental to the true goals of the stakeholders of a business organization. Above-average growth, on the other hand, certainly can be value-destroying when it entails the expansion of loss-generating activities. In this way, our findings are consistent with the work of Cho & Pucic (2005) who found that while both profitability and growth contribute to company value, the direct effect of profitability on company value was four to five times stronger than the corresponding effect of growth. Furthermore, about half the total effect of growth on value was contingent on a positive effect of growth on profitability. That is, the “pure” effect of growth on company value was weak whereas the authors characterize the effect of profitability as

“extremely strong” (p. 569). Similarly, Ramezani et al. (2002:65) conclude that “Our empirical results indicate that maximizing growth does not maximize corporate profitability or shareholder value.” These logical and empirical arguments suggest that normative theory should not portray growth and profitability as equally important and mutually compensating aspects of firm performance.

For *research design* our results strongly imply caution with the use and interpretation of growth as a measure of firm performance. When available, indicators reflecting more directly the true goals of the relevant stakeholders should be used. When it is reasonable to assume that company value is a better representation of the true goal but no direct measures of it can be obtained, including both growth and profitability is sounder than using just one of them. However, our results caution against combining indicators of growth and profit in one index. Our results clearly suggest profit and growth are not compensatory, and that “high profitability/low growth” is, on average, clearly superior to “high growth/low profitability”. Examining growth and profitability as separate outcome dimensions (Baum & Wally, 2003) appears to be a sounder practice, allowing more detailed insights and flexibility in interpretation. When non-availability of data forces a heavy reliance on growth as performance indicator, increasing the time period over which it is assessed could be a step in the right direction, as unsound growth is less likely to be sustained. Finally, the implications of our results for academics in their role as *educators* are that they should show more respect for owner-managers’ reluctance to grow and accept external financing (cf. below) and be less eager to advocate a growth ideology without suitable qualifiers.

Implications for entrepreneurs and SME managers. Empirical studies have identified that the majority of entrepreneurs or small firm owner-managers are reluctant to grow their businesses, especially if growth requires external equity funding (Sapienza et al., 2003;

Wiklund, Davidsson & Delmar, 2003). Our results suggest they may be well advised to focus on profit first, and not blindly embrace growth as ideology. This said, it is important to realize we are not suggesting that SME (owner-)managers in general should become even more cautious about growth or about benefiting from the financial and other resources external investors can provide. We have already noted that empirical evidence implies that, as a collective, they already refrain from pursuing many growth opportunities likely to be consistent with their own goals. Instead, what we do suggest is that rather than being very eager to expand, SME (owner-)managers should be eager to build and identify the uniqueness of their resource endowments and translate them into product/market offerings that enable them to generate sufficient profits. When they have proven an above-average ability to create and appropriate value in the small scale they have the basis for attaining sound, profitable growth that will be easier to manage and less of a threat to the long term well-being of the firm and its owners.

We acknowledge that for some firms the situation may be that growth is necessary in order to become profitable. As noted earlier, there is reason to think this is more often true for the very smallest and youngest firms and for particular industry niches. However, we strongly caution entrepreneurs not to simply assume this is true. Moreover, we believe it is sounder practice for those managers who believe growth is necessary to become profitable, to develop precise ideas concerning how growth can enhance profitability of their particular firm, rather than relying on a belief that growth more or less automatically improves profitability.

Implications for external investors. We must start here with the caveat that although a large share of the firms in our sample are likely to rely to some extent on external loan capital, samples representative of the entire population of SMEs – such as those used in this study – are

not representative of the category of firm venture capitalists typically deal with. The portfolio firms of VCs are a much more select category.

This said, for any type of external investor our results imply that high growth, when starting from a low profitability situation, is a warning signal rather than an unambiguous sign of positive development. External investors' provision of resources may, consistent with resource-based reasoning, help the firm develop a resource-based advantage on which profitable growth can be based. This appears to be a sound logic for investment. However, an alternative logic of external investors is to push for growth *per se* to generate large revenues and maximize the early return on their investment. However, if the firm is not particularly profitable to start with it does not generally seem to be the case that this changes just because the firm gets bigger. There is even the risk that the low profitability state is reinforced by the external funding, as the funded entrepreneur(s) learn to expect the money they need to develop their ideas from the capital market and not from surplus from customers. That is, an unsound business culture may be established in the firm. Agency problems and costs of growth may further contribute to eroding profitability. Finally, a range of psychological processes such as groupthink (Choi & Kim, 1999) and reliance on social proof (Cialdini, 1988) may also have detrimental effects on profitability as more parties get involved in the management of the growing firm.

Premature pushing for growth by external investors as (a partial) explanation for our results is admittedly speculative, as we have not analyzed any data on external funding and other external pressures towards growth of the analyzed firms. However, when investing in firms that are not yet particularly profitable it would seem the investor has to take on the much more difficult task of contributing to the fundamentals of a future, resource-based advantage. The financial and general management resources that investors habitually provide are neither rare nor

hard to copy, so they do not in themselves constitute the type of resources on which — according to RBV — sustained, profitable growth can be built.

Having said this for SMEs in general, we cannot assume our results necessarily apply to the select group of high-potential firms that VCs invest in. First-mover-advantage (FMA) reasoning suggests radical innovators who create entirely new markets play under different rules to the average SMEs. However, the lack of proof that size leads to eventual profitability is something that has concerned the very researchers who coined the FMA concept: “We see little to be gained from more studies demonstrating first-mover advantages based on market share. Empirical tests should increasingly be related to profit performance” (Lieberman & Montgomery, 1998:1122). Similarly, in the specific context of disruptive innovation, Christensen and Raynor (2003) have argued forcefully for *patience for growth but impatience for profit*, a notion directly in line with our “profits first” arguments and findings for SMEs more generally. Their argument is that the market is initially small for disruptive technologies and strongly pursuing early volume growth into the main market, for which the firm has not yet developed an attractive enough offer, is likely to be counter productive. In combination with our results, this provides sound reason for external investors to put more emphasis on establishing profitability as well as a profit-seeking (rather than funding-seeking) culture within their portfolio of firms, and having more patience for the growth that can eventually realize the full value of opportunities developed and pursued by these firms.

Implications for policy-makers. Our results also have important implications for policy-makers. In the hope to increase employment and tax revenue it has been relatively popular to launch policy incentives, e.g. subsidized training programs, grant schemes and finance, intended to encourage small firms to grow. There are at least two problems with such an approach. First,

growth as such is rarely a goal for the owner-manager and the incentives may not be enough for them to overcome their reluctance to accept the perceived adverse effects of growth (Sapienza et al., 2003; Wiklund et al., 2003). Second, there is not much use in expanding unprofitable business operations. If the firms pursue growth as a result of the incentives, the growth may not be profitable and consequently the increase in size may be non-sustainable.

Although growth may be perceived as a dilemma by the entrepreneur, likely to lead to positive as well as negative consequences, there are few business owner-managers who see much problem in the firm becoming more profitable. Therefore, rather than urging firms to grow in order to solve the policy makers' problem, policies should arguably be geared toward helping firms achieving their own goals of being profitable. By the RBV logic we have employed, this is not achieved directly by growth but by identifying, building and exploiting resource-based competitive advantages. Our results demonstrate that firms that show above-average profits often become growing firms that still enjoy above-average profits. Therefore, if policies can help more firms become highly profitable – an objective aligned with the small firm owner-managers' own goals – the problem of growth will take care of itself.

CONCLUSION

Growth is often portrayed as evidence of business success. Our findings are a strong reason for practitioners and researchers alike to question a universal and uncritical growth ideology. Our results show that firms in the desirable state of high growth/high profitability are much more likely to originate from profitable firms with low growth than from growing firms with low profitability. Firms in the latter category are instead likely to retreat to a low growth/low profitability state. Hence, seeing profit as the horse that pulls the growth cart seems in most cases to be a sounder worldview than the opposite. Obviously, not all will be prepared to

accept this conclusion based on the theoretical rationales and empirical evidence we have provided. We see our results as an invitation and hopefully an inspiration for other researchers to verify or challenge them, and to provide additional input into how they should be interpreted.

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APPENDIX 1

PERFORMANCE ASSESSMENT IN ENTREPRENEURSHIP RESEARCH: IS THERE A PRO-GROWTH BIAS?

In order to assess the use of growth as performance indicator in entrepreneurship and management research we have examined data from the following sources. First, we performed a *scholar.google.com* based analysis of title words such as *performance growth*, *expansion*, *profit*, *profit(ability)*, *value* and *success* in articles published in the last ten years in outlets identified by Fried (2003) as “appropriate outlets for entrepreneurship research”, focusing on the top ranked broader management journals in his analysis (AMR; AMJ; SMJ; ASQ; OSC; MSC; all “level 1”) and the top five niche journals (JBV; ETP; SBE; ERD; JSBM; levels 1-3). Second, we investigated more closely what performance indicators were used in articles published in the last three years in Fried’s top niche journal (JBV) and his top two empirical mainstream journals (AMJ and SMJ). Third, we searched the ICE part of the Julia database, which is a special collection covering all kinds of publications in entrepreneurship and small business, at *www.hj.se/ice*. These investigations of performance criteria do not aspire to be complete but we hold that they suffice for giving an accurate account of the main tendencies we discuss below.

There is little doubt that entrepreneurship researchers show much more interest in growth than in profitability, and often interpret the former as “success”. Our searches of the ICE part of the Julia database shows that in entrepreneurship research, “growth” as title word is about ten times as common as “profit”, “profitable” and “profitability” combined. The combination “success” and “growth” is about six times more common than “success” combined with either

“profit” or “profitability”, whether title word or free text (abstract) is used. Although value creation or similar terms are frequently included in definitions or delineations of entrepreneurship (e.g., Gartner, 1990; Morris, Lewis, & Sexton, 1994) they are almost never included as an explicit, operationalized variable, the exception being research on initial public offerings (cf. Daily, Certo, Dalton, & Roengpitya 2003); presumably for data availability reasons. Sometimes growth and profitability are used jointly in entrepreneurship research (e.g., Wiklund, 1999), showing at least implicit understanding that it is profitable growth that creates value.

This greater interest in growth in entrepreneurship and small business research is not totally without justification. Young and small firms may have a greater need for growth in order to achieve legitimacy and survival (Aldrich & Auster, 1986; Davidsson, 1991; Storey, 1994). Further, reliable data on their financial performance can be impossible to collect from small firms and may be irrelevant for very young ones (Brush & Vanderwerf, 1992; Chandler & Hanks, 1993; Van de Ven, Hudson, & Schroeder, 1984).

However, there is obviously more to the strong interest in growth in entrepreneurship research than data availability. Gartner (1990) showed that growth was one out of eight themes that professional users commonly associate with the entrepreneurship concept. Stevenson and Jarillo (1990:21, 25) argued that “Entrepreneurship is the function through which [firm] growth is achieved” and described entrepreneurial behavior as “the quest for [firm] growth through innovation.” Sexton & Smilor (1997:97) explicitly stated that “Growth is the very essence of entrepreneurship”. Arguably, such assertions build on an assumption that growth reflects value creation.

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 journal 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. The mainstream strategy and management literatures usually refer to the conceptual dependent variable as “performance”, which is usually assessed through indicators of profitability only (see e.g., Goerzen & Beamish, 2005 for a review as well as an example). When included, growth is usually investigated alongside profitability measures, either separately (e.g., Baum & Wally, 2003; Cho & Pucic, 2005; DeSarbo, Benedetto, Song, & Sinha, 2005; Florin, Lubatkin, & Schulze, 2003; Kim et al., 2004; Peng, 2004) or combined in an index (e.g., Garg, Walters, & Priem, 2003; Wiklund & Shepherd, 2003).

In summary, growth is often used as sole or main indicator of “success” in entrepreneurship research; more so than in management research in general. Given the weak and inconsistent relationship between growth and profitability (see main text) this suggests an overly uncritical view on growth prevails in entrepreneurship and SME research.

APPENDIX 2

TABLE A1a

Combined 1 Year Transition Percentages – Australia

		Initial (Year X) Performance Group					
		Poor ^a (n=2057)	Middle ^{a, b} (n=2964)	Growth ^a (n=1588)	Profit ^a (n=1499)	Star ^a (n=2379)	TOTAL (n=10469)
Final (Year X+1) Performance Group	Exit	9.1	4.2	6.4	7.8	4.6	5.1
	Poor	30.8	17.9	30.3	11.0	12.9	19.7
	Middle	21.4	45.9	22.8	19.7	19.8	29.1
	Growth	21.2	9.5	22.6	5.6	6.2	12.9
	Profit	6.0	8.8	6.2	26.3	25.4	14.5
	Star	11.5	13.6	11.6	29.6	31.1	18.7
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

^a Table report percentage of specified (initial state) performance group that transitions to specified (final state) performance group.

The three one-year transitions (1995-1996, 1996-1997 and 1997-1998) are aggregated. Percentage signs are removed for readability.

Transitions related to the hypotheses are in **bold** font.

TABLE A1b
Combined 1-Year Transition Percentages – Sweden

		Initial (Year X) Performance Group					
		Poor ^a (n=590)	Middle ^{a, b} (n=846)	Growth ^a (n=434)	Profit ^{a, b} (n=407)	Star ^a (n=675)	TOTAL (n=2952)
Final (Year X+1) Performance Group	Exit	2.4	0.1	0.5	2.2	0.4	2.0
	Poor	35.4	16.0	28.3	17.7	11.0	21.5
	Middle	23.2	45.5	18.7	19.7	22.4	28.1
	Growth	21.9	9.8	30.9	3.7	6.4	13.2
	Profit	6.3	11.2	6.2	27.0	18.5	12.3
	Star	10.8	17.4	15.4	29.7	41.3	22.9
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

^a Table report percentage of specified (initial state) performance group that transitions to specified (final state) performance group.

The two one-year transitions (1998-1999 and 1999-2000) are aggregated. Percentage signs are removed for readability. Transitions related to the hypotheses are in **bold** font.

TABLE A1c**1995 to 1998 Transition Percentages: Australia**

		Initial (1995) Performance Group					
		Poor ^a (n=619)	Middle ^{a, b} (n=930)	Growth ^a (n=605)	Profit ^a (n=486)	Star ^a (n=848)	TOTAL (n=3488)
Final (1998) Performance Group	Exit	31.5	17.2	26.3	28.4	20.5	23.7
	Poor	21.6	14.8	23.1	12.1	12.7	16.6
	Middle	20.4	37.4	18.8	15.6	19.0	23.7
	Growth	11.5	8.9	15.0	3.9	9.0	9.7
	Profit	5.8	10.6	6.4	23.5	15.7	12.1
	Star	9.2	11.0	10.2	16.5	23.1	14.2
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

^a Table report percentage of specified 1995 (initial state) performance group that transitions to specified 1998 (final state) performance group. Percentage signs are removed for readability. Transitions related to the hypotheses are in **bold** font.

TABLE A1d
1998 to 2000 Transition Percentages: Sweden

		Initial (1998) Performance Group					
		Poor ^a (n=295)	Middle ^{a, b} (n=429)	Growth ^a (n=226)	Profit ^a (n=195)	Star ^a (n=337)	TOTAL (n=1482)
Final (2000) Performance Group	Exit	3.7	0.7	1.8	3.6	1.2	2.0
	Poor	33.6	20.0	26.1	19.0	11.0	21.5
	Middle	22.7	42.2	24.3	19.5	22.6	28.1
	Growth	21.0	7.5	24.8	7.2	9.5	13.2
	Profit	8.1	10.5	11.5	17.9	15.4	12.3
	Star	10.8	19.1	11.5	32.8	40.4	22.9
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

^a Table report percentage of specified 1998 (initial state) performance group that transitions to specified 2000 (final state) performance group. Percentage signs are removed for readability. Transitions related to the hypotheses are in **bold** font.

TABLE 1**Hypothesis Tests for Whole Sample**

	Final Performance Group	Star			Poor		
	Initial Performance Group	Growth ^a	(H1)	Profit ^{a,b}	Growth ^a	(H2)	Profit ^{a,b}
Australia	1 Year Transitions ^c	11.6	***	29.6	30.3	***	11.0
	3 Year Transition ^d	10.2	**	16.5	23.1	***	12.1
Sweden	1 Year Transitions ^e	15.4	***	29.7	28.3	***	17.7
	2 Year Transition ^f	11.5	***	32.8	26.1	*	19.0

^a Tables reports percentage of specified initial performance group that transition to specified final performance group. Percentage signs are removed for readability.

^b Significance levels: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

^c Aggregate of three one-year transitions. ^d Aggregate of two one-year transitions. ^e 1995-1998 transition. ^f 1998-2000 transition.

TABLE 2a

Sub Group Tests of Transitions to Star (H1)

	Australia						Sweden					
	1 Year Transitions			Three Year Transition			1 Year Transitions			Two Year Transition		
Sub Group	Initial Year Performance Group			Initial Year Performance Group			Initial Year Performance Group			Initial Year Performance Group		
	Growth ^a		Profit ^{a,b}	Growth ^a		Profit ^{a,b}	Growth ^a		Profit ^{a,b}	Growth ^a		Profit ^{a,b}
Manufacturing	9.8	***	25.2	10.7	n.s.	13.4	15.0	***	41.1	8.3	***	44.6
Prop./Bus. Serv	10.6	***	28.0	8.7	**	22.6	13.7	**	26.0	15.5	n.s.	25.8
Retail ^c	11.7	**	23.1	13.3	n.s.	9.8	13.5	n.s.	21.1	8.3	n.s.	23.3
Wholesale	12.0	***	23.8	8.0	*	17.2		N/A			N/A	
Other	11.7	***	28.9	10.7	*	19.6	19.1	n.s.	28.0	11.9	**	34.0
Size 1 ^d	14.6	***	31.4	9.4	**	19.6	13.0	*	26.0	5.7	**	27.1
Size 2 ^d	14.0	***	29.4	13.6	n.s.	11.9	18.4	*	30.0	16.7	**	35.4
Size 3 ^d	11.3	***	30.2	8.3	*	18.5	16.8	**	30.3	13.7	**	33.3
Size 4 ^d	8.9	***	27.5	9.9	*	16.2	10.6	***	34.6	4.3	***	35.7
< 2 years ^e	13.3	*	24.0	6.5	*	21.7		N/A			N/A	
2-5 years	9.2	***	36.4	9.1	*	18.1	20.4	n.s.	26.8	14.8	n.s.	19.0
5-10 years	13.8	***	28.8	14.5	n.s.	17.1	16.7	**	30.2	9.8	***	35.7
10-20 years	13.9	***	28.7	6.8	**	16.6	16.0	*	27.6	18.0	*	33.3
> 20 Years	7.7	***	30.1	11.5	n.s.	13.2	13.3	***	31.6	8.1	***	35.1

^a The tables reports percentage of specified initial performance group that transition to Star. Percentage signs are removed for readability. ^b Significance levels: * p < 0.05; ** p < 0.01; *** p < 0.001. ^c Retail and Wholesale combined for Swedish sample. ^d Size classes for Australian sample based on revenue in Australian dollars: Size 1 <\$300K; Size 2 \$300K-\$1M; Size 3 \$1M-\$3M; Size 4 >\$3M. Size classes for Swedish sample based on revenue in Kronor: Size 1 <15M; Size 2 15M-\$50M; Size 3 \$50M-\$150M; Size 4 >\$150M. ^e The Swedish results are not reported as the sample included only 12 firms less than 2 years old.

TABLE 2b
Sub Group Tests of Transitions to Poor (H2)

	Australia						Sweden					
	1 Year Transitions			Three Year Transition			1 Year Transitions			Two Year Transition		
Sub Sample	Initial Year Performance Group			Initial Year Performance Group			Initial Year Performance Group			Initial Year Performance Group		
	Growth ^a		Profit ^{a,b}	Growth ^a		Profit ^{a,b}	Growth ^a		Profit ^{a,b}	Growth ^a		Profit ^{a,b}
Manufacturing	26.8	***	12.5	18.1	n.s.	12.4	35.3	***	15.2	30.6	n.s.	21.4
Prop./Bus. Serv	34.2	***	10.4	32.0	**	11.8	25.9	n.s.	20.6	25.4	n.s.	22.6
Retail ^c	22.8	***	7.1	20.0	n.s.	9.8	28.8	n.s.	16.9	20.8	n.s.	10.0
Wholesale	24.0	***	10.2	26.4	*	14.1		N/A			N/A	
Other	29.7	***	12.1	25.0	**	12.0	22.7	n.s.	17.2	23.7	n.s.	17.0
Size 1 ^d	27.9	***	10.0	21.1	**	10.1	31.2	n.s.	29.2	28.6	n.s.	25.0
Size 2 ^d	32.6	***	11.1	28.8	***	7.9	26.2	**	12.9	25.0	n.s.	21.5
Size 3 ^d	29.8	***	16.0	20.5	n.s.	15.2	28.2	*	17.6	24.7	*	11.1
Size 4 ^d	30.6	***	8.8	22.5	n.s.	16.2	29.4	**	9.6	28.3	n.s.	17.9
< 2 years ^e	26.0	**	11.5	21.7	n.s.	13.0		N/A			N/A	
2-5 years	28.6	***	9.1	24.5	**	11.1	14.3	n.s.	19.5	29.6	*	9.5
5-10 years	25.8	***	12.3	18.6	n.s.	15.0	27.5	n.s.	23.6	23.0	n.s.	21.4
10-20 years	33.9	***	11.1	27.7	***	11.0	37.2	**	17.1	28.0	n.s.	20.5
> 20 Years	32.7	***	11.6	22.9	**	10.4	27.1	***	14.1	25.6	n.s.	19.5

^a The Table reports percentage of specified initial performance group that transition to Poor. Percentage signs are removed for readability. ^b Significance levels: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. ^c Retail and Wholesale combined for Swedish sample. ^d Size classes for Australian sample based on revenue in Australian dollars: Size 1 <\$300K; Size 2 \$300K-\$1M; Size 3 \$1M-\$3M; Size 4 >\$3M. Size classes for Swedish sample based on revenue in Kronor: Size 1 <15M; Size 2 15M-\$50M; Size 3 \$50M-\$150M; Size 4 >\$150M. ^e The Swedish results are not reported as the sample included only 12 firms less than 2 years old.

FIGURE 1

Categorization Schema of Firms by Growth and Profitability

