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SLEEPING GAZELLES: HIGH PROFITS BUT NO GROWTH

Anders Bornhäll
HUI Research, Sweden

Sven-Olov Daunfeldt
HUI Research, Sweden, sven-olov.daunfeldt@hui.se

Niklas Rudholm
HUI Research, Sweden

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Anders Bornhäll, HUI Research, Sweden
Sven-Olov Daunfeldt, HUI Research, Sweden
Niklas Rudholm, HUI Research, Sweden

Abstract

Among 104,231 limited liability firms in Sweden with at least two employees during 1997-2010, almost 10% did not hire new employees in any given 3-year period despite having high profits. Nearly half of these firms continued to have high or medium profits in the next three-year period, but still no growth. Regression analysis indicates that these firms were not randomly distributed; rather they were small and young, did not belong to an enterprise group, and operated in local markets with high profit-opportunities. We conclude that it might be more beneficial to focus policy towards these firms instead of towards a few high-growth firms that, having just grown exponentially, may not be best positioned to grow further.

Introduction

Most firms do not grow, or only grow slowly (Hodges and Østbye 2010), while a few, so-called high-growth firms (HGFs) are crucial for job creation (Birch and Medoff 1994; Brüderl and Preisendörfer 2000; Davidsson and Henrekson 2002; Delmar et al. 2003; Littunnen and Tohmo 2003; Halabisky et al. 2006; Acs and Mueller 2008; Acs et al. 2008). HGFs have therefore received increasing attention in recent years. Shane (2009) argues that the importance of a small number of HGFs suggests that policy should be re-directed from promoting start-ups towards encouraging them, and Mason and Brown (2013) present several public policies that can be used to support HGFs. The Europe 2020 strategy also mentions more HGFs as a political objective (European Commission 2010).

Many studies have focused on explaining what characterizes HGFs, i.e., whether they are small (Delmar 1997; Delmar and Davidsson 1998; Weinzimmer et al. 1998; Delmar et al. 2003; Shepherd and Wiklund 2009); young (Delmar et al. 2003; Haltiwanger et al. 2013); belong to an enterprise group (Delmar et al. 2003); family-owned (Bjuggren et al. 2013); belong to a certain industry (Delmar et al. 2003; Davidsson and Delmar 2003, 2006; Halabisky 2006; Acs et al. 2008); region (Stam 2005; Acs and Mueller 2008); or country (Schreyer 2000; Biosca 2010), and so on. The implicit assumption behind most studies is that we might learn something from investigating HGFs that could be used to increase the number of fast-growing firms in the economy.

However, the recent focus on HGFs could be problematic, for at least two reasons. First, HGFs could experience high growth despite growth-barriers, removal of which might have no influence on the growth of HGFs, but could promote growth of other firms. Factors hindering firm-growth might thus not be discovered by studying HGFs, and results might be of little value in increasing job opportunities. Second, HGFs are likely to be "one-hit wonders", unlikely to repeat their high growth (Daunfeldt and Halvarsson 2012; Hölz 2014). This raises serious questions whether policymakers can target high-growth firms in order to design policies to promote future firm growth. The characteristics and strategies of HGFs might thus not be useful for determining what

needs to be improved in order to create a business environment more favorable for job creation. In fact, the focus on HGFs might be distracting. Davidson et al. (2009) noted that profitable firms are more likely to attain high profits and high growth in the future. It might thus be more productive to focus on getting more firms that are profitable but not growing to start employing additional personnel. This paper focuses on analyzing firms with high profits but no employment growth, which we henceforth refer to as "sleeping gazelles".

The purpose of this paper is twofold. First, by calculating transition-probability matrices, we investigate whether sleeping gazelles in one 3-year period continue to have high profitability but no employment growth in the next period. Second, we estimate the determinants of being a sleeping gazelle using a linear-probability regression model. We are interested in answering questions such as: How many profitable firms with no employment growth chose not to hire more employees in the next 3-year period? Which are the determinants of being a firm with high profits but no growth, and can we from this conclude possible policies to increase employment?

Our results show that sleeping gazelles constituted 7.88-9.42% of all firms in our sample (depending on the time period chosen). This is a much larger share of the firm population than HGFs, suggesting that unemployment would decline substantially, ceteris paribus, if these firms, on average, chose to hire just one more employee each. However, the probability that firms with no employment growth (though continuing to have high profitability) will have no growth in the next period is as high as 0.25, indicating their reluctance to grow. Nearly half of the sleeping gazelles also continued to have high or medium profits in the next three-year period, but still no growth. Policymakers should thus focus more on removing growth-barriers for these firms, since this might generate more jobs than targeting a small number of HGFs that may not be best positioned to grow further. In general, sleeping gazelles were found to be small and young; not belonging to an enterprise group; and operating in businesses with high profits and minimum efficient scale. Regional demographic factors did not seem to influence the likelihood of being a sleeping gazelle.

Understanding Firm Growth

Many variables have been suggested as important for firm growth (Coad 2009), but we focus on those measurable using secondary data, which we can include as control variables in an empirical model. Thus we exclude direct measures such as growth ambitions, market orientation, business models, firm-level human assets, firm culture, governance modes and innovative orientation, whose impacts are instead assumed to be captured in regional-, industry-, and time-specific fixed effects.

A much-studied relationship is whether firm growth is contingent on firm size, usually starting from Gibrat's law which predicts that firm growth is purely random, independent of firm size (Gibrat 1931). However, already Schumpeter (1912, 1934) emphasized the importance of new and small ventures for introducing novel ideas into the economic system, thereby promoting firm growth. The later Schumpeter (1943), was of another opinion, arguing that innovation was a routinized process best performed by large firms that could use economics of scale to their advantage with respect to growth. Small sized firms were often considered as inefficient and, at times, a waste of resources (Galbraith 1956, 1967). Birch et al. (1979) questioned this view, showing that large companies account for the largest employment share in the United States at any given time. But companies that are large in one period may then shrink and be replaced by

new firms that used to be small. Thus, with this dynamic perspective, small firms may be the job creators, while large firms lose employment, though this view has been heavily criticized (Davis et al. 1996; Kirchhoff and Greene 1998). Nevertheless, the key findings of Birch's analysis have been confirmed in more recent studies (Van Praag and Versloot 2007), with one important addition: The majority of small firms do not grow. Instead, firm growth seems concentrated in a minority of firms (Birch and Medoff 1994). Davidsson et al. (2005), for example, noted that "Most firms start small, live small and die small". This suggests that small firms may be overrepresented among profitable firms that do not grow.

Younger firms should grow faster since they are more entrepreneurial, acting more quickly on new business opportunities (Coad 2009), while older firms are more likely to have achieved their optimal size. In fact, Haltiwanger et al. (2013) argues that after controlling for firm age, there is no systematic relationship between size and growth. This implies that older firms may be more likely to have high profits but no growth. Ownership structure may also be relevant to growth. Multi-plant firms have been found to have higher growth than others among U.S. small businesses (Variyam and Kraybill 1992; Audretsch and Mahmood 1994); among large European corporations (Geroski and Gugler 2004); and among Italian manufacturing firms (Fagiolo and Luzzi 2006). Multi-plant firms presumably have greater financial backing than others, and should thus make them more able to add employees when experiencing high profits. The financial strength of the firm might also determine whether profitable firms choose to grow or not. Cressy (2006) developed a theoretical model of firm growth, showing that firms often die young because financial resources are impoverished. Santarelli and Vivarelli (2007) also claim that credit constraints and lack of financial capital in general should limit firm growth. But credit-rationing may have been overemphasized, with difficulties in getting financing not the cause of problems but their symptom. This argument is supported by De Meza (2002), who argues that asymmetric information and entrepreneurial over-optimism can cause over-lending to low-quality firms.

Local industry-specific variables might also affect the likelihood of having no growth despite high profitability. Higher profit opportunities are often thought to stimulate firm growth, though this has been difficult to prove empirically (Geroski 1995). Firms in industries with high uncertainty regarding future profits might choose not to add employees. Kan and Tsai (2006), for example, find that risk-aversion has a negative impact on the decision to become self-employed. Modern Austrian economists have a different perspective on uncertainty and the entry of new firms: "What drives the market process is entrepreneurial boldness and imagination" (Kirzner 1997: 73). Industry minimum efficient scale (MES) might also affect growth, since the scale disadvantage of a small firm is greater in industries with a larger MES. Small firms are thus forced to grow quickly in industries with high MES (Strotman 2007: 89), implying fewer firms with high profits but no growth. On the other hand, the MES may be too high, forcing small non-profitable firms to leave the industry (Sutton, 1991). Market concentration within industries has also been suggested as an important determinant of firm growth (Geroski 1995). There might be substantial barriers to entry and growth in industries with a high concentration -- where large incumbents might engage in strategic behavior to prevent growth of smaller firms -- implying more sleeping gazelles.

Innovation activity might also be an industry-specific determinant of firm growth (Mansfield 1962; Scherer 1965; Mowery 1983; Geroski and Machin 1992; Geroski and Toker 1996; Roper 1997; Freel 2000; Bottazzi et al. 2001). Audretsch (1995) finds that while the likelihood of survival was lower for new entrants in innovative industries, those that survived exhibited higher growth

than in other industries. Acs and Audretsch (1990) also find that the degree of industry turbulence is inhibited by the overall amount of innovative activity, but promoted by the extent to which small firms innovate. Arrighetti and Vivarelli (1999) investigated the start-up decision of 147 entrepreneurs in Italy, finding that innovative motivation and experience in innovative activities were positively related to superior post-entry performance. According to Cefis and Marsili (2006), the ability to innovate increases the survival probability of manufacturing firms in the Netherlands across most industries, with the innovative premium being highest for small and young firms, thus implying fewer sleeping gazelles in innovative industries.

Region-specific determinants of firm growth have been very seldom analyzed, even though they might be important (Audretsch and Dohse 2007). Since entrepreneurial activity varies across regions, effects of entrepreneurship and new firm start-ups ought to be particularly obvious at that level (Santarelli and Vivarelli 2007). Endogenous growth theory (Romer 1991) and the "new economic geography" (Krugman 1995; Fujita et al. 1999) suggest that large common markets drive economic growth, with industrial networking promoting firm growth and firm survival, especially for small firms. Because of externalities, clustering might have a positive effect on human capital formation. Thus, firm growth should be higher in more densely populated regions, with more firms with high profits but no growth in smaller local markets. Since it facilitates knowledge spillovers, regional education level might also affect whether a firms choose to expand (Acs et al. 2004; Audretsh et al. 2006). If firm growth primarily is determined by access to an educated workforce then firms should expand more in these regions compared to regions with lower educational attainment. Higher education might also encourage individuals to become entrepreneurs (Daunfeldt et al. 2006; Brixy and Grotz 2007), and the presence of a university might increase business opportunities, including university spin-offs (Goldstein and Renault 2004).

Entrepreneurial activity can also depend on its political and institutional setting (Baumol 1990), with (for example) left-of-center governments generally perceived as less favorable to entrepreneurship (Ayittey 2008: 146). Firms also value stable rules of the game, being more likely to add employees if there is political stability evidenced by a high concentration of political power in the local parliament. But a high concentration of political power might also be detrimental if it means less perceived need (by complacent politicians) to improve local business conditions. Finally, of course, firm growth is probably lower during recessions, thus dependent on the study-period.

We still hypothesize, first, that small firms, old firms, firms that do not belong to a business group, and firms with less financial strength are more likely to be sleeping gazelles. We also hypothesize that firms with high profits but no growth are more common in industries with low profit opportunities, a high industry-uncertainty, low MES, high market-concentration, and less innovations. Finally we hypothesize more sleeping gazelles in regions that are less densely populated, with no universities, with a less-educated workforce, that are governed by left-wing parties, and have highly fragmented local parliaments. Sleeping gazelles are also expected to be more common during recession years.

Data And Identification Of Sleeping Gazelles

All limited liability firms in Sweden are required to submit an annual report to PRV (the Swedish patent and registration office). We use data from PAR, a Swedish consulting firm that gathers economic information from PRV. The data comprises all limited liability firms (503,985 in total) active at some point during 1997-2010. The data includes all variables found in the annual reports, e.g., profits, number of employees, salaries, fixed costs, and liquidity.

Our two-period analysis requires that the firms existed during at least two consecutive three-year periods. New entrants and those that exited during these periods are therefore excluded. Only active firms are included meaning that we exclude those with an annual sales turnover less than 100,000 SEK (about $15,200). We also exclude a few (less than 1%) extreme observations, those with a return (or loss) on total assets more than 500%. These extreme observations make up for less than one percent of the observations in the original data-set. Finally, we exclude firms with less than two employees. The reason is that a large part of all limited liability firms have no employees in addition to the owner. These businesses owners can choose to report their total income as labor income or firm profits since Sweden as a dual income taxation, with capital income taxed at a much lower rate than labor income. This means that they might report high profits event though employment expansion never is an option for them. The results are qualitatively similar if we choose to include these firms in the analysis and are available upon request, but not presented due to reasons of space. Our final sample then consists of 104,231 firms yielding 381,706 time-period observations.

Employment and sales are the most commonly used indicators of firm growth (Delmar 1997; Daunfeldt et al. 2014). We define firm growth, G_{it}, in period t for firm i as the change in number of employees during a three-year period. As this fluctuates over time, the period for which growth is measured can affect the results. We focus on three-year periods since most previous studies on HGFs have measured growth over three- or four-year periods (Henrekson and Johansson 2010). We choose employment as growth indicator since our focus is on the potential job contribution of firms that do not grow despite high profitability.

To study the dynamics of sleeping gazelles - following Davidsson et al. (2009) - we use a two-dimensional growth-profits performance-space with both growth and profits divided into three categories, giving us a three-by-three matrix (Table 1). For each period, employment growth is simply classified as positive, negative or zero. Returns on total assets (ROA) are used as our profit measure, classified as low, medium or high. Above-median ROA during all three years of one period is classified as high. ROA consistently below the median is classified as low, and the rest as medium. Sleeping gazelles are thus category 6, whereas HGFs in general are defined as a subsample of 7-9.

Despite the recessions in 2001 and 2008, and the change in national government from social democratic to liberal-conservative government in 2007, the share of sleeping gazelles varied only between 7.88-9.42% during 1998-2010. Many companies were thus profitable, but chose not to expand their business (Table 2).

Firm size, firm age, ownership structure, and financial strength are included as firm-specific variables in the empirical analysis; whereas profit opportunities, profit uncertainty, industry minimum efficient scale (MES), and market concentration are included as industry-specific variables. The degree of innovation activities in the industry is controlled for using industry-specific fixed effects. Region-specific factors might also affect the likelihood of not observing any high growth rates, and we therefore control for population size, the presence of a university or a university college; the educational level of the population; political preferences; and political strength as explanatory variables in the estimated model. Region-specific characteristics are provided by Statistics Sweden and measured at municipality level. We also include industry-specific and region-specific fixed effects to control for time-invariant heterogeneity across industries (e.g., innovation activity) and regions. Finally, time-variant heterogeneity in growth rates is controlled for using time-specific fixed effects. Descriptive statistics of all variables included in the empirical analysis are presented in Table 3. All variables are defined and discussed more thoroughly in Section 4.

Dynamics Of Sleeping Gazelles

Following Capasso et al. (2009), Daunfeldt and Halvarsson (2012), and Hölzl (2014), we first estimate transition probabilities that a company in a given category in period *t* (vertical-axis in Table 4) will be in that or another category in the next period (horizontal-axis in Table 4). Of course, with four three-year periods a company might change category more than once. Sleeping gazelles (category 6 in Table 4) are very likely (Pr=0.24) to have high profits but no growth also in the next period, almost equally likely (Pr=0.25) to have medium profits and no growth (category 5), but very unlikely to (Pr=0.05) to have low profits (category 4).

The results presented in Table 4 thus show that almost half of the sleeping gazelles did not add employees in the next period, despite again having high or medium profits. These firms are also less likely than other categories to lose employees in the next period: Only 15% ended up in categories 1-3. Companies with medium profits but no growth (category 5) are also very likely (Pr=0.34) to be in that category again in the next period. Companies with high growth but low profits (category 7), are very unlikely (Pr = 0.04) to have high growth and high profits in the next period (category 9). The most likely outcome is in fact that they will end up with falling employment and medium or low profits. On the other hand, companies with high growth and high profitability (category 9), are most likely to grow again in the next period. More than a quarter of the firms with high employment growth and high profits will, for example, remain in this category during the next period. This support Davidsson et al.'s (2009) finding that companies with high profits are more likely to also have high growth than those that are growing before achieving high profits.

It might be the case that the high degree of persistence found for firms with high profits but no growth is temporary, and that these firms eventually will increase their workforce. We therefore also estimate the probability that sleeping gazelles in period *t* will continue to have no growth despite high profits in the second 3-year period (i.e., 4-6 years after they initially were observed to have high profits but no growth). Our results are presented in Table 5. The probability that sleeping gazelles continue to have no employment growth also after 4-6 years is 0.20, and their probability to have no growth despite medium-high profits is 0.25. Firms with high profits but no growth in period *t* are thus very likely to remain in category 6 (high profits, no growth) or move to category 5 (medium profits, no growth) also after 4-6 years. This indicates that many firms, despite high profits, do not change their number of employees over longer periods.

What Characterizes A Sleeping Gazelle?

In any period some firms may choose not hire more employees despite having high profits. To analyze what characterizes these firms, we estimate the linear probability model

$$D_{it} = \alpha_0 + \gamma'_k X_{i,t-1} + \beta'_s Z_{j,m,t-1} + \delta'_v Y_{m,t-1} + \eta'_w I_j + \lambda'_l R_m + \theta'_h T_t + \epsilon_t \qquad (1)$$

where the dependent variable D_{it} takes the value one if firm *i* can be characterized as a firm with high profits but no growth (category 6) during the three-year period t, and zero otherwise. Firm-specific characteristics are captured by the vector $\mathbf{X}_{it}$; $\mathbf{Z}_{it-1}$ is a vector of industry-specific characteristics assumed to influence the probability of being a firm with high profits but no growth; $\mathbf{Y}_{it-1}$ is a vector of regional (municipal) characteristics; $\mathbf{I}_j$, $\mathbf{R}_m$, $\mathbf{T}_t$ are industry, municipality, and time-specific fixed effects; and γ_k (k=1,...,4), β_s (s=1,...,6), δ_v (v=1,...,6), η_w (w=1,...,318), λ_l (l=1,...24), and θ_h (h=1,2,3) are the corresponding parameter vectors. All explanatory variables are lagged one period to avoid reversed causality problem since previous-period values are, by definition, pre-determined.

Among firm characteristics, firm size is measured as the average number of employees in the previous period, while firm age is defined as the observation-year minus the registered start-year (available from 1897). Ownership structure is a dummy taking value one if part of an enterprise group. Financial strength measured by equity as a share of total liabilities during the previous period.

Among industry characteristics, profit opportunities for potential entrants are measured by average ROA in the industry and municipality during the previous period. Profit uncertainty is proxied by the conditional variance of those ROAs during the same period. Audretsch (1995) adopted the standard Comanor & Wilson (1967) proxy for measuring the minimum efficient scale, the mean size of the largest plants, accounting for half of industry sales. Other commonly used proxies are industry-mean (Daunfeldt et al. 2013a; Håkansson et al. 2013) or median (Daunfeldt et al. 2013b) size, or the ratio of that plant's output to total industry output (Sutton 1991). Following Daunfeldt et al. (2013b), we use total sales of the median firm in the industry during the previous period. Market concentration, indicating the potential presence of dominant incumbent firms, is measured by a Herfindahl-index calculated as the sum of squares of firms' market-shares. If all firms had equal revenues the index would be *1/k*, where *k* is the number of firms in the municipality for each 5-digit industry. On the other hand, if the entire local market were supplied by one firm, it would be one. The number of firms in the industry and municipality in the previous period is included as a measure of local competition.

Region-specific factors include population and population density. The local availability of higher education is represented by a dummy variable with value one if a university is located in the municipality. Educational level is measured as the percentage of people aged 16-74 with at least 3 years of post-secondary education. Political preferences are represented by a dummy variable with value one if non-socialist parties had a local majority. Political strength is measured by a Herfindahl-index, the sum of squares of political parties' shares in the votes for local government.

To analyze whether the existence of sleeping gazelles is related to the innovative activity in the industry, we also measure fixed effects of high-tech industries and knowledge-intensive services compared to others.

Results

Equation (1) is first estimated for all firms (Model I), both surviving and those that entered or exited during the entire study period, 1997-2010 (Table 5, first column). However, smaller firms are more likely to have zero growth, and higher exit rates (Lotti et al. 2003). Thus Equation (1) is also estimated for only firms that survived throughout the study period (Table 5, second column).

As expected, sleeping gazelles are generally smaller and younger than other firms. Hiring one more employee in the previous period reduces the probability of being a profitable but non-growing firm with 0.003%, while being one year older reduces it with 0.02%. Also as expected, firms in an establishment group are 1.5% less likely to be characterized as sleeping gazelles.

Sleeping gazelles are more likely in local markets with high profit opportunities, 0.19% more likely if average returns on total assets for firms within the same industry and municipality in the previous period increases with 1%. They are also more likely in markets with greater profit uncertainty. Perhaps, despite being able to obtain high profits, they refrain from hiring due to volatile market conditions.

Degree of innovation is controlled for using industry-specific fixed effects. We find no evidence that sleeping gazelles are more or less common in high-tech or knowledge-intensive industries, suggesting that the existence of these firms is not related to the degree of industry innovation. None of the regional-specific characteristics are statistically significant at the conventional 5% level, suggesting that regional conditions may not be important for the emergence of firms with high profits but no growth.

Summary And Conclusions

Studies have shown that most jobs are created by a few high-growth firms (HGFs), and these firms have therefore received increasing amount of attention among academic scholars and policymakers. The assumption is that we might learn something from investigating HGFs that could be used to increase their number and thus increase employment. But HGFs are typically not persistent over time and when summarizing recent findings on HGFs, Coad et al. (2014, p. 99) concludes that this finding "questions the value of HGFs as vehicles for public policy".

While a few HGFs seem crucial for job creation, most firms do not grow. The latter firms are often treated as a homogenous group, when they in fact are highly heterogeneous. In this paper we investigated how common it was that these firms do not grow despite having high profits. We call these firms for sleeping gazelles since they have the potential to grow, but refrain for some reason. Davidsson et al. (2009), for example, showed that profitable firms are more likely to attain high profits and high growth in the future compared to firms that are growing before having high profits.

We found that sleeping gazelles were very common in Sweden, regardless of recessions and change in national government. Almost 10% of all firms did not grow despite having high profit, suggesting that many new jobs could be created if they grew. Transition-probability analysis also revealed that these firms were very reluctant to grow in coming periods. Almost one-fourth of firms with high profits but no growth remained in that category in the next three-year period, and almost half of these firms continued to have no growth despite medium or high profits. Thus, lack of growth ambitions or barriers to growth seems to keep them from growing. Regression analysis showed that sleeping gazelles were not randomly distributed. They were rather more likely to be small and young, not in an enterprise group, and located in markets with high profit opportunities and high profit uncertainty.

Frederic Bastiat once argued in his famous essay "That which is seen, and that which is not seen" that a good analyst not only should focus on what is seen, but also what is not seen (Bastiat, 1878). High-growth events are what we see, but what we do not see is all those jobs that could have been created if growth-barriers for sleeping gazelles were removed. The focus on HGFs might thus be troublesome if we want to understand what kinds of policies are important in order to create more job opportunities in the economy. More research is instead needed on solving the puzzle why so many firms have no growth despite high profits, and why they choose not to grow. How much can be explained by growth barriers such as high entry-level wages, employment protection legislation, credit constraints, lack of qualified job candidates, or regulatory burden, and how much simply by lack of growth ambition? Our identification strategy could be used to conduct surveys and interviews with profitable firms that do not grow, which might provide insight into these questions. Another possibility is to use identify reforms that can be used as natural experiments, and investigate whether they influence growth of sleeping gazelles.

Our study focused on observable factors that might influence growth, but unobserved firm-specific factors, such as business models (Cavalcante et al. 2011), firm-level human assets (Schiavone 2011), firm culture (Barney 1986), governance modes (Cantarello et al. 2011), and innovative orientation (Rowley et al. 2011), might also explain differences. For example, firms with high profitability might choose not to grow because of a lack of entrepreneurial skills. These factors also merit further research.

CONTACT: Sven-Olov Daunfeldt; sven-olov.daunfeldt@hui.se; (T): +468 7627284; HUI Research, Regeringsgatan 60, SE-10329 Stockholm, Sweden.

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Table 1: Classification of Sleeping Gazelles

Employment change	Return on total assets		
	Low	Medium	High
Negative	1	2	3
Zero	4	5	6
Positive	7	8	9

Table 2: Number and Share of Sleeping Gazelles per 3-Year Period

Period	No firms	SGs	SGs/No firms
1998-2001	99,235	7,815	7.88%
2001-2004	103,395	8,830	8.54%
2004-2007	94,333	8,425	8.93%
2007-2010	84,743	7,984	9.42%

Table 3: Summary Statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Size	16.23	164.33	0	20335.33	381706
Age	28.66	13.72	14	116	381706
Enterprise group	0.46	0.50	0	1	381706
Return on total assets	6.67	26.93	-500	500	379865
Financial strength	5.82	510.23	-47942.8	223405.3	380790
Number of firms	42.53	123.10	0	969	381706
Profit opportunities	6.67	11.39	-498.462	496.2185	381640
Profit uncertainty	707.44	1601.85	0	128504.6	377548
MES	7.15	112.43	0	35622	381706
Market concentration	0.09	0.14	0	1	381706
Population	219736.70	281774.40	2521.388	811598.8	356847
Population density	960.82	1508.64	0	4315.637	374049
University	0.49	0.50	0	1	381706
Educational level	0.20	0.08	0.0631	0.4319	373870
Political preference	0.29	0.45	0	1	381706
Political strength	0.22	0.04	0.091669	0.49068	373847

Table 4: Transition Matrix for Periods t and t+1

		To category period t+1								
		1	2	3	4	5	6	7	8	9
From category period t	1	0.16	0.18	0.02	0.18	0.20	0.03	0.08	0.12	0.03
	2	0.09	0.18	0.04	0.12	0.24	0.07	0.05	0.15	0.06
	3	0.05	0.16	0.11	0.04	0.17	0.15	0.02	0.13	0.17
	4	0.11	0.16	0.02	0.24	0.28	0.04	0.05	0.08	0.02
	5	0.07	0.16	0.03	0.11	0.34	0.10	0.03	0.11	0.05
	6	0.03	0.12	0.07	0.04	0.25	0.24	0.01	0.10	0.12
	7	0.19	0.24	0.03	0.07	0.12	0.02	0.12	0.16	0.04
	8	0.10	0.24	0.06	0.04	0.14	0.06	0.05	0.20	0.11
	9	0.04	0.17	0.12	0.01	0.10	0.11	0.02	0.16	0.27

Note: 1=negative growth, low profits; 2=negative growth, medium profits, 3=negative growth, high profits; 4=no growth, low profits; 5=no growth, medium profits; 6=no growth, high profits (sleeping gazelles); 7=high growth, low profits; 8=high growth, medium profits; 9=high growth, high profits.

Table 5: Transition Matrix for Periods t and t+2

		To category period t+2								
		1	2	3	4	5	6	7	8	9
From category period t	1	0.12	0.16	0.03	0.17	0.22	0.05	0.06	0.12	0.05
	2	0.09	0.17	0.04	0.13	0.25	0.08	0.04	0.13	0.07
	3	0.06	0.16	0.11	0.08	0.19	0.13	0.03	0.11	0.13
	4	0.09	0.16	0.03	0.18	0.29	0.07	0.04	0.1	0.03
	5	0.07	0.16	0.04	0.12	0.32	0.11	0.03	0.11	0.06
	6	0.05	0.14	0.07	0.08	0.25	0.2	0.02	0.1	0.1
	7	0.15	0.2	0.04	0.09	0.14	0.03	0.11	0.17	0.07
	8	0.09	0.21	0.06	0.06	0.16	0.06	0.05	0.19	0.12
	9	0.06	0.18	0.11	0.03	0.11	0.1	0.03	0.15	0.23

Note: 1=negative growth, low profits; 2=negative growth, medium profits, 3=negative growth, high profits; 4=no growth, low profits; 5=no growth, medium profits; 6=no growth, high profits (sleeping gazelles); 7=high growth, low profits; 8=high growth, medium profits; 9=high growth, high profits.

Table 6: Linear Probability Model of Sleeping Gazelles in Sweden, 1997-2010

VARIABLES	All firms	Continuing firms
Size (L)	-2.85e-05***	-2.77e-05***
	(3.56e-06)	(3.51e-06)
Age	-0.000198***	-0.000226***
	(4.02e-05)	(4.43e-05)
Enterprise group	-0.0153***	-0.0169***
	(0.00121)	(0.00134)
Financial strength (L)	-1.40e-06*	-1.28e-06*
	(7.41e-07)	(6.98e-07)
Number of firms (L)	-2.28e-05***	-2.14e-05***
	(5.71e-06)	(6.49e-06)
Profit opportunities (L)	0.00196***	0.00212***
	(7.07e-05)	(8.11e-05)
Profit uncertainty (L)	2.37e-06***	2.75e-06***
	(5.27e-07)	(6.19e-07)
Minimum efficient scale	4.61e-06***	4.56e-06***
	(1.73e-06)	(1.70e-06)
Market concentration	0.0104*	0.00579
	(0.00608)	(0.00671)
Population	1.54e-09	3.94e-09
	(7.98e-09)	(8.84e-09)
Population density	-2.25e-06	-2.88e-06*
	(1.50e-06)	(1.66e-06)
University	-0.000739	-0.000244
	(0.00210)	(0.00233)
Educational level	-0.000554	0.00481
	(0.0138)	(0.0152)
Political preference	0.00131	0.000536
	(0.00161)	(0.00176)
Political strength	0.0146	0.0234
	(0.0180)	(0.0196)
Constant	0.0728***	0.0649***
	(0.0105)	(0.0113)
Observations	249,770	213,406
R-squared	0.015	0.016
Time FE	YES	YES
Regional FE	YES	YES
Industry FE	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1