High-growth firms: Not so vital after all?

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Abstract: High-growth firms have received considerable interest recently since they create most of the new jobs in the economy. The purpose of our paper is to investigate the characteristics of high-growth firms prior to their growth period, and whether these characteristics differ across industries. Using data on a large sample of limited liability firms in Sweden for the period 2007-2010, we find that high-growth firms do not have the characteristics that we typically associate with successful firms. On the contrary, our results indicate that high-growth firms have low profits and a weak financial position. This might explain why studies have found that high-growth firms are seldom capable of sustaining their high growth rates in subsequent periods, and thus question policies that are targeted towards these companies.

1. Introduction

Studies have shown that a small number of high-growth firms (HGFs) are very important for job creation (Henrekson and Johansson, 2010; Coad et al., 2014a). Nesta (2009), for example, found that the 6 percent fastest growing firms in the United Kingdom created almost 50 percent of all jobs during 2002-2008. These firms were given the name "the vital 6 percent" to highlight their remarkable importance for job creation.[1]

HGFs' ability to create job opportunities has attracted increasing attention from policymakers (Daunfeldt et al., 2015). Support for high-growth SMEs is, for example, stated as a political objective in the Europe 2020 strategy of the European Commission (European Commission, 2010). Some researchers also support the idea of targeting potential HGFs (e.g., Shane, 2009; Mason and Brown, 2013), arguing that policy should be redirected towards firms with growth aspirations instead of start-up firms with low survival rates.

The share of fast-growing innovative firms is emphasized by the European Commission (2010) as an important indicator to measure whether policies targeted towards potential HGFs are successful. However, the assumption that HGFs are overrepresented in high-tech industries seems to have little empirical support (Henrekson and Johansson, 2010). On the contrary, Daunfeldt et al. (2015) found that HGFs in Sweden were less common in R&D-intensive industries and overrepresented in knowledge-intensive service sectors. This points towards a "knowledge problem" embedded in the political initiative to promote the growth of HGFs, suggesting that we need more research on what actually characterizes the rapidly growing firms in the economy.

Previous studies have indicated that young (Reichstein et al., 2010; Barba Navaretti et al., 2014) and small firms (Birch, 1979; Almus, 2010; Goedhuys and Sleuwaegen, 2010) are more likely to be characterized by fast growth than older and larger firms. However, recent studies have argued that no systematic relationship exists between firm growth and firm size once age is controlled for (Haltiwanger et al., 2013; Lawless, 2014). The importance of firm age for explaining high-growth events is also highlighted by Daunfeldt et al. (2014), who identified HGFs in nine different ways and found that the common denominator regardless of definition was their relatively young age. There is also some evidence indicating that HGFs do not grow through acquisitions, but are more likely to enter into alliances with other firms (Mohr et al., 2014). HGFs also seem more likely to engage in export behavior than non-HGFs (Hölzl and Friesenbichler, 2007).

However, most previous studies on HGFs have not controlled for the profitability and the financial strength of the firms before they entered their period of fast growth. This is troublesome, considering that Penrose (1959) had long ago emphasized the importance of profits for achieving long-term growth. As stated by Brännback et al. (2009, p. 71):

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[1] Similar results have been shown by other researchers as well. Storey (1994), for example, found that the 4 percent fastest growing firms in the UK contributed to 50 percent of all jobs, and Daunfeldt et al. (2013) indicated that the 6 percent fastest growing firms generated 42 percent of all jobs in Sweden during 2005-2008.

"Being profitable clearly seems to be a far more productive, and in the long run, better approach to being a star firm." Davidson et al. (2009) also found that the ability to grow in subsequent periods is positively associated with the firm's profitability. It was found that, if initial growth coincides with high profitability, firms are more likely to display growth in future periods also.

Previous studies on the characteristics of HGFs have in most cases also been based on economy-wide data or data from selective industries, such as the manufacturing industry (Coad, 2009). This is unfortunate since we know that there are large differences across industries that might influence the likelihood of observing high-growth events (Audretsch et al., 2004). The manufacturing industry, for example, is capital intensive and characterized by high sunk costs, which is often interpreted as a sign that small and young manufacturing firms might be forced to grow fast in order to survive. On the other hand, such scale economies are less likely to be important for firms in low-tech service industries, such as the accommodation and food services industry.

We contribute to the HGF literature by investigating whether the characteristics of HGFs differ across industries after controlling for both profits and financial strength. Our analysis is based on a comprehensive dataset, covering all limited liability firms in Sweden during 2007-2010. We find that HGFs are characterized by low profits and low solidity prior to their growth episodes. This finding is perplexing since these character-features are atypical compared to the ones we associate with firms that achieve long-term growth. Viewed in light of recent studies (Hölzl, 2014; Daunfeldt and Halvarsson, 2015), however, it might help to explain why HGFs are unlikely to repeat their initial high growth rates in coming periods.

Policies to promote HGFs are often targeted towards R&D-intensive industries (Daunfeldt et al., 2015), but we find no evidence of substantial industry differences regarding the characteristics of HGFs prior to their growth period. As a consequence, we find no support for the view that HGFs within certain industries are more suitable to target than firms in other industries when designing industry policy.

In the next section, we present a brief theoretical background on why HGFs are seen as important job creators. Data and descriptive statistics are presented in Section 3, and our empirical method is described in Section 4. Results for the full sample and for five selected industries are then presented in Section 5. The final section concludes the paper with a summary and discussion of our key findings.

2.   Theoretical background

Which firms are important for the creation of new jobs and economic growth? This question has interested researchers and policymakers for a long time. The answer, however, has shifted markedly over the past 100 years.

As far back as 1911, Schumpeter (1934/1911) emphasized the importance of entrepreneurs and new firms for creating economic growth and prosperity. According to the young Schumpeter, the entrepreneur was considered the individual force that

introduced new ideas in the economy, often by establishing new firms. In his view, these young firms, most of which were also small, were crucial for economic development and growth because they challenged the incumbents with new technology. Incumbents that could not keep up with the progress of these small, innovative firms were eventually replaced – a process that Schumpeter popularly called "creative destruction." The image is clear yet powerful, portraying young companies as the destroyers of old, inefficient technology.

The older Schumpeter (1942), on the other hand, emphasized the importance of scale economies for both production and research and development. In the first decades after World War II, it was considered self-evident that it was the large and, naturally, the older companies that created jobs and growth. At this time, economic policy was attuned to the economic theories of return-to-scale production as was research and development. New and small businesses were viewed as inefficient. Occasionally, they were even considered a waste of resources (Galbraith, 1956, 1967). As a result, economic policies were designed to target large industrial companies.

In a very influential report, however, David Birch (1979) came to question this view. In accordance with the prevailing view at that time, he found that large firms accounted for the majority of all new jobs. However, when observing these firms over time, he found that large firms lost jobs and were replaced by firms that had once been small but had grown big. Small firms thus created the majority of all jobs over time, while larger businesses reduced their number of employees. The important insight and contribution was that the perception that large enterprises were important for job creation was based on a static approach, while the importance of small firms takes precedence in a dynamic analysis.

Birch's (1979) results were controversial and criticized in several studies (e.g., Davis et al., 1996; Haltiwanger and Krizan, 1999). Later studies, however, confirmed most of his initial results (Van Praag and Versloot, 2008), but with one important addition: most small firms were not growing. The new jobs were instead being created by a small number of HGFs (Birch and Medoff, 1994; Henrekson and Johansson, 2010). Storey (1994) found, for example, that 50 percent of the new jobs in the UK were created by the 4 percent fastest growing companies. In a recent study, entitled *The Vital 6 per cent*, Nesta (2009) showed that it was rather the 6 percent fastest growing companies in the UK that accounted for half of all new jobs in the economy.

The job creation ability of HGFs has led to suggestions that policymakers should devote more resources to supporting these companies, rather than investing in start-ups that normally have no ambitions to grow or cannot survive market competition (Shane, 2009; Mason and Brown, 2013). The European Commission, for example, states in its strategy documents that more efforts should be directed towards supporting the fast-growing small and medium-sized firms (European Commission, 2010).

The idea of supporting potential HGFs has, however, been criticized recently since the growth of HGFs does not seem to be sustained over time (Hölzl, 2014; Daunfeldt and Halvarsson, 2015) and because it seems to be difficult to predict which firms will be

characterized by high growth in the future (Storey, 1994; Hölzl, 2009). Another problem with the orientation towards HGFs is that it leads to policies that are focused on R&D-intensive industries (Daunfeldt et al., 2015). However, there is little evidence that rapidly growing firms are more common in R&D-intensive industries (Hölzl, 2009; Henrekson and Johansson, 2010). Daunfeldt et al. (2015), for example, present results indicating that HGFs are less common in R&D-intensive industries and rather overrepresented in the knowledge-intensive service industries.

3.   Data and descriptive statistics

All limited liability firms in Sweden are required by law to submit annual reports to the Swedish Patent and Registration Office (PRV). We use data from PAR, a Swedish consulting firm, which gathered this information from PRV. The data include information on all figures in the annual reports, such as profits, number of employees, industry classification, and sales.

In the dataset, firms are classified into industries according to the European Union's NACE standard. We use these industry classification codes to select data on surviving firms in eight different industries during 2007-2010 (Table 1). We have selected these industries to induce possible variation in the likelihood of receiving policy interventions and the degree of technological knowledge. While some industries, such as manufacturing, are frequently studied (Coad, 2009) and are of considerable interest among politicians, industries such as hospitality and retail have received less attention. Compared to manufacturing with relatively high R&D expenditures, hospitality and retail are often considered to be low-tech industries that provide jobs for low-qualified workers and are rarely the focus of policy interventions. A similar observation can be made about policies that are targeted towards potential HGFs, which are dominated by R&D-intensive sectors. The relative lack of interest in retail and hospitality can also be observed in previous literature, with very few studies that specifically investigate the characteristics of fast-growing firms within these industries.[2] Our final dataset consists of 78,937 firms active during 2007-2010.

[Table 1 about here]

One inescapable obstacle when investigating the characteristics of HGFs is that there is no consensus definition or way of identifying these firms (Coad et al., 2014). It is therefore necessary to make decisions regarding the growth indicator, firm growth measure, length of growth period, and growth process (Delmar and Davidsson, 1998).

Two of the most common growth indicators in the literature are sales and number of employees (Delmar et al., 2003; Daunfeldt et al., 2014), which are known to be modestly correlated (Shepherd and Wiklund, 2009). The indicators represent different aspects of the production process even if results seem little influenced when choosing one or the other (Daunfeldt et al., 2014). While the number of employees is an input factor (often

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[2] A notable exception is Daunfeldt et al. (2013), who investigated firm growth within the Swedish retail and wholesale trade industries during 2000-2004 using a quantile regression model.

considered to be quasi-fixed), sales represents a firm's gross output. Thus, in using employment growth, "firm growth" captures the rate of change of internal resources, whereas using sales growth reflects the product's or service's acceptance in the market (Delmar et al., 2003). We therefore choose to apply both of these growth indicators in the paper. More specifically, employment growth and sales growth are calculated by:

$$\Delta \ln R_{it} = \ln R_{i2010} - \ln R_{i2007},$$

$$\Delta \ln E_{it} = \ln E_{i2010} - \ln E_{i2007}, \tag{1}$$

where $\Delta \ln R_{it}$ is the logarithmic change in sales from 2007 to 2010, and $\Delta \ln E_{it}$ the logarithmic change in the number of employees during the same period.[3] It is worth noting here that the logarithmic difference is one of the most frequently used measures in the firm growth literature (Coad, 2009), with the convenient property of being symmetric for positive and negative growth rates (Tornqvist et al., 1985). This means that real changes in either indicator give the same percentage change, whether it is positive or negative.

As stated in equation (1), we follow the previous literature on HGFs and consider changes over the course of 3 years, more specifically between 2007 and 2010 (Coad et al., 2014). By avoiding annual growth rates we can avoid a lot of idiosyncrasy that exists for more narrowly defined growth rates. However, as Bjuggren et al. (2013) remark, results do not seem particularly sensitive to which period is chosen.

Finally, it is well known that growth can be divided into organic growth or acquired growth. Most studies do not have access to data on mergers and acquisitions and must therefore rely on measures of total growth, that is, the sum of organic and acquired growth. This is a drawback since what is interesting to investigate are the characteristics of and mechanisms by which firms achieve high levels of growth by increasing output and enhancing sales (organic growth), and not by mergers and acquisitions – growth that is generated outside the firm. Fortunately, the PAR database includes information on mergers and acquisitions and we use this information to exclude firms that have been subject to a merger or acquisition. In contrast to most previous studies, we can thus focus on organic growth and also control whether the firm was subject to a merger or acquisition before the study period.

Previous studies have indicated that HGFs tend to be young and small, and we therefore control for both firm age (A_{i2014}) and firm size (R_{i2006}, E_{i2006}) in our regressions. Firm age is measured using information on the registered start year, and defined as the observation year minus the registered start year. Access to registered start year is rare (Coad et al., 2015), and in contrast to previous studies we therefore do not need to work with truncated or censored age data. Firm size is measured using either sales or number of employees in 2006, depending on which growth indicator we use.

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[3] Note that relative growth measures, such as the one we apply, tend to favor smaller firms, whereas absolute growth measures are biased towards larger firms (Delmar et al., 2003).

Returns on total assets (ROA_{i2006}) and solidity (S_{i2006}) are included as independent variables in order to investigate the profitability and financial strength of HGFs prior to their growth period. We use returns on total assets as our profit measure since it is not affected by the type of financing (Libby et al., 2011), and although multiple profitability measures have been used in the literature (Richard et al., 2009), ROA is the one that seems most commonly used (Davidsson et al., 2009; Steffens et al., 2009). Financial strength of the firms is measured by their solidity, that is, the percentage share of equity out of total capital in 2006. This shows the relative proportion of equity that is used to finance a firm's assets and indicates the firm's solvency in the long term. The higher the proportion of equity that finances the company, the higher and better the solidity and the lower the financial risk.

Contrary to previous studies, we are also able to control whether the firm has been subject to a merger and acquisition before the study period (C_{i2006}). As we want to control whether the initial conditions of the firms influence their subsequent growth rates, all of our control variables (except firm age, which is a monotonic transformation) are measured in 2006. Finally, we also include municipality-specific fixed effects (γ_{ms} and γ_{me}) and industry-specific fixed effects[4] (α_{js} and α_{je}) to control for regional and industry time-invariant heterogeneity that might affect firm growth rates.

Descriptive statistics of the variables that we include in our empirical analysis are presented in Table 2.

[Table 2 about here]

The descriptive statistics indicate that the average firm in the sample is around 18 years old, has eight employees, 5.4 percent in returns on total assets, and a solidity of 34.7. Sales are on average 16,509,000 SEK (corresponds in 31 August 2015 to 1,737,000 EUR), while the median firm's sales are 2,585,000 SEK (272,000 EUR). Note also that more observations are missing when we investigate employment growth. The reason is that some firms with positive sales do not have any employees, which means that they will be excluded when we take the log difference to calculate firm growth rates.

4.   Empirical method

It is well known that firm growth tends to follow the "tent-shaped" Laplace distribution (Stanley et al., 1996; Bottazzi and Secchi, 2006; Bottazzi et al., 2011), with most firms not growing and a few firms growing very fast. The familiar tent-shaped distribution is also evident in our dataset for both employment growth and sales growth (Figure 1). This violates the standard least-squares assumption of normally distributed error terms, and means that OLS estimation becomes less attractive. It is of little interest to estimate the average effect when the average firm is characterized by very marginal

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[4] Industry-specific fixed effects are used only for estimations conducted on the aggregated dataset including all eight industries considered for analysis.

growth rates. Neither do we want to consider HGFs as outliers, as OLS would, since our focus is on investigating what determines the growth rates of these fast-growing firms.

[Figure 1 about here]

Median regression, which assumes the error terms to be Laplace distributed, becomes more suitable in our case. Following Fotopoulos and Louri (2004), Coad and Rao (2008), and Reichstein et al. (2010), we therefore estimate a quantile regression model to investigate what characterizes firms across the entire growth rate distribution, including the fastest growing firms.

The estimated equations can be written:

$$\Delta R_i = \alpha_s + \beta_{1s} * A_{i2014} + \beta_{2s} * E_{i2006} + \beta_{3s} * ROA_{i2006} + \beta_{4s} * S_{i2006}$$
$$+ \beta_{5s} * C_{i2006} + \alpha_{js} + \gamma_{ms} + \varepsilon_{is}$$

$$\Delta E_i = \alpha_e + \beta_{1e} * A_{i2014} + \beta_{2e} * R_{i2006} + \beta_{3e} * ROA_{i2006} + \beta_{4e} * S_{i2006}$$
$$+ \beta_{5e} * C_{i2006} + \alpha_{je} + \gamma_{me} + \varepsilon_{ie} \qquad (2)$$

where A_{i2014} is the age of firm i; E_{i2006} is number of employees in 2006; R_{i2006} is firm sales in 2006; ROA_{i2006} is returns on total assets in 2006; S_{i2006} is the solidity of firm i in 2006; and C_{i2006} is an indicator variable that equals one if the company has been subject to a merger or acquisition in 2006. We also include industry-specific fixed effects[5], α_{js} and α_{je}, to account for time-invariant differences across industries that might influence firm growth rates, and municipality-specific fixed effects, γ_{ms} and γ_{me}, to account for time-invariant heterogeneity across municipalities in Sweden;[6] α_s and α_e are constants, and β_{1s}- β_{5s} and β_{1e}- β_{5e} are parameters to be estimated. Finally, ε_{is} and ε_{ie} are random error terms.

5.   What characterizes high-growth firms?

5.1 Results, all firms

The results when equation (2) is estimated for all firms are presented in Table 3 (sales growth) and Table 4 (employment growth). In order to evaluate the appropriateness of using OLS, we present results both from an OLS model and from a quantile regression model.

The OLS results indicate that older firms are characterized by faster sales growth than younger firms (Table 3). However, the quantile regression results reveal that this result is driven by firms with marginal growth rates and that sales growth is not significantly related to firm age for the fastest growing firms. This shows the importance of not relying on OLS when investigating determinants of firm growth rates. No statistically significant

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[5] Idem.
[6] We have also estimated a model without municipality- and/or industry-specific (in the case of all firms) fixed effects, and most results remain qualitatively similar. The results are available in Appendices B and C.

relationship is observed between firm size and firm growth in the OLS results, whereas firm growth seems to be negatively related to firm size for firms in the 0.80 quantile.

Profitability and solidity are two firm-specific variables that have seldom been controlled for in previous firm growth studies, although some researchers have argued that they might be important determinants for firm growth rates (Davidsson et al., 2009; Steffens et al., 2009). The OLS results in Table 3 indicate that sales growth is positively related to initial profits for the average firm. However, sales HGFs are less likely to be profitable, suggesting that they tend to grow before achieving profits. Solidity is also negatively related to rapid growth, implying that sales HGFs start their growth period from a weak financial position. Finally, sales HGFs are less likely to have participated in a merger and acquisition prior to their growth period.

In Table 4, the corresponding results for growth in number of employees are presented. Firm age is now positively related to firm growth for the majority of the firms in growth rate distribution, but not for the fastest growing firms. According to the results, employment HGFs are younger than firms that are growing more slowly. Firm size, on the other hand, does not seem to influence employment growth for the fastest growing firms. Neither is it statistically significant when estimating an OLS model. This implies that firm age is a more important determinant of employment growth than firm size, supporting Haltiwanger et al.'s (2003) findings.

The results also indicate that employment HGFs are more likely to be characterized by low profitability and a low degree of solidity. Firms that are growing fast in terms of number of employees thus seem to have lower initial profits and less financial strength than firms that are growing more slowly.

Note finally that the results for the 0.5 quantile are difficult to interpret since in most of the firms in this quantile the number of employees does not change, which means that the variation in the dependent variable is very low.

[Table 3 about here]

[Table 4 about here]

5.2 Industry differences among high-growth firms

The analysis has so far been focused on the characteristics of HGFs for all eight industries presented in Table 1. In order to test whether the characteristics of HGFs differ across industries, we have also estimated equation (2) separately for the following five industries: (i) Manufacturing (NACE-code 25); (ii) Construction (NACE-codes 42 and 43); (iii) Retail (NACE-code 47); (iv) Hospitality (NACE-codes 55 and 56); and (v) Computer programming (NACE-codes 62 and 63). The results for the fastest growing firms are presented in Table 5 (sales growth) and Table 6 (employment growth), while the results for the other growth quantiles are presented in Appendix A.

[Table 5 about here]

[Table 6 about here]

The results in Tables 5 and 6 indicate that HGFs in most cases share the same characteristics across industries. Only small differences across the industries under study can be observed, and in most cases they confirm the aggregated results presented in Tables 3 and 4. Thus, despite considerable industry differences regarding scale economies, capital intensity, and human capital, HGFs are characterized by low initial profits and have a weak financial position prior to the growth period. The only differences that we can observe are that firms in the computer industry, that is, more knowledge-intensive services, seem to be older and have taken part in a merger before the study period.

6. Conclusions

The purpose of this paper has been to analyze the characteristics of HGFs in Sweden during 2007-2010, and to investigate whether they differ for firms active in different industries. This question is of importance since policymakers have started to design policies that are targeted towards potential HGFs in R&D-intensive industries (Daunfeldt et al., 2015).

HGFs were found to be characterized by low profits prior to their growth period, which is troublesome since profits seem important in predicting future growth (Davidsson et al., 2009; Steffens et al., 2009). The lack of profits would be less of a problem if HGFs were financially strong, but we found that HGFs had also grown from a weak financial position. This implies that HGFs do not have the characteristics that we typically associate with firms that are able to become successful in the long run. We believe that our results might help to explain why recent studies (e.g., Hölzl, 2014; Daunfeldt and Halvarsson, 2015) have found that HGFs are "one-hit wonders," unlikely to sustain their high growth rates in subsequent periods. Our study thus adds reason for concern regarding the efficacy of policies that are targeted towards HGFs.

Policies that are targeted towards potential HGFs have in general been focused on R&D-intensive industries. However, we did not find any large differences among HGFs belonging to five industries that are very different in terms of, for example, capital intensity, minimum efficient scale, and share of educated workers. Thus, our results do not seem to be driven by industry-specific differences.

Our results question the current fascination with HGFs, and suggest that policies targeted towards these firms are unlikely to be successful. Maybe policymakers should instead focus on improving the general conditions for firm growth. As noted by Bornhäll et al. (2015), many profitable firms might choose to grow if the conditions for firm growth become more favorable. This implies that politicians should try to remove growth barriers for all firms instead of trying to pick winners or design policies targeted towards those firms that have high historical growth rates. We believe, therefore, that there is a need for more research on the conditions for firm growth, and on the kinds of policies that can promote firm growth that is sustainable in the long run.

Acknowledgments

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Table 1. Industries and number of firms included in the analysis

NACE	Industry	Frequency	Percent
43	Specialized construction activities	24,961	31.62
47	Retail trade, except motor vehicles and Motorcycles	24,767	31.38
62	Computer programming	11,472	14.53
56	Food and beverage serving activities	8,654	10.96
25	Manufacture of fabricated metal products, except machinery and equipment	6,373	8.07
55	Accommodation	1,157	1.47
42	Civil engineering	826	1.05
63	Information service activities	727	0.92
Total		**78,937**	**100**

Table 2. Descriptive statistics

Variable	Obs.	Mean	Median	Std. Dev.	Min	Max
ΔR_i	50,729	0.0689	-0.0244	1.0881	-10.350	11.397
ΔE_i	45,169	-0.0171	0	0.468	-4.736	5.193
A_{i2014}	78,937	18.293	15	13.073	4	116
R_{i2006}	60,292	16,509	2,585	250,401	0	33,700,000
E_{i2006}	59,387	8.274	3	79.233	0	10,856
ROA_{i2006}	58,596	5.417	6.2	44.999	-999	999
S_{i2006}	58,591	34.674	37	59.877	-999	622
C_{i2006}	78,937	0.212	0	0.409	0	1

Table 3. Estimation results, sales growth (ΔR_{it}), 2007-2010, municipality and industry fixed effects. All firms. OLS and quantile regressions. Standard errors in parentheses.

Variable	OLS	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0035***	0.0060***	0.0043***	0.0024***	0.0005	-0.0008
	(0.0004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
E_{i2006}	-0.0001	0.00005	0.0000***	-0.0001**	-0.0001***	-0.0002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
ROA_{i2006}	0.00005***	0.0002***	0.0001***	0.000001	-0.0001**	-0.0002**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0003***	0.0001	0.0000	-0.0001	-0.0006***	-0.0011***
	(0.0001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0306***	-0.0273*	-0.0205***	-0.0196***	-0.0387***	-0.0842***
	(0.0114)	(0.014)	(0.007)	(0.005)	(0.012)	(0.029)
constant	0.0754	-0.7426***	-0.3712***	0.0634*	0.5650***	1.1260***
	(0.0877)	(0.090)	(0.081)	(0.036)	(0.053)	(0.091)
Observations	45,507	46,507	46,507	46,507	46,507	46,507
R-squared	0.0103	0.0025	0.0035	0.0052	0.0013	0.0011
Pseudo R-squared	0.0039 [a]	0.0448	0.0268	0.0106	0.0156	0.0247

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table 4. Estimation results, employment growth (ΔE_{it}), 2007-2010, municipality and industry fixed effects. All firms. OLS and quantile regressions. Standard errors in parentheses.

Variable	OLS	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.00267***	0.0062***	0.0039***	0.0000	0.0009***	-0.0008*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R_{i2006}	0.0000	0.0000	0.0000	-0.0000	0.0000***	-0.0000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00003***	0.000006	-0.00007***	-0.0000	-0.0001***	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0002***	0.0002	0.0006***	0.0000	-0.0012***	-0.0014***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0089*	-0.0274***	-0.0441***	-0.0000	0.0474***	-0.0002
	(0.005)	(0.010)	(0.009)	(0.001)	(0.009)	(0.020)
constant	-0.0244	-0.6316***	-0.3166***	-0.0000	0.2415***	0.5381***
	(0.039)	(0.032)	(0.059)	(0.004)	(0.028)	(0.049)
Observations	42,133	42,133	42,133	42,133	42,133	42,133
R-squared	0.0176	0.0105	0.0098	0.00009	0.0067	0.0021
Pseudo R-squared	0.0105 [a]	0.0521	0.0335	0.0000	0.0246	0.0262

Standard errors in parentheses.
*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table 5. Estimation results sales-HGFs (0.90 percentile), per industry, 2007-2010. Standard errors in parentheses.

	Industry				
Variable	Manufacturing	Construction	Retail	Hospitality	Computer
A_{i2014}	-0.0005	0.00006	-0.0024**	-0.0012	0.0077*
	(0.001)	(0.001)	(0.001)	(0.003)	(0.004)
E_{i2006}	-0.0004	-0.0003***	-0.00002***	-0.0003***	-0.0005***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.0003*	-0.0002	-0.0001	-0.0002**	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0001	-0.0004	-0.0015***	-0.0008***	0.00013
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
C_{i2006}	-0.0710	-0.0723**	0.0047	0.0924	-0.0831
	(0.052)	(0.035)	(0.050)	(0.077)	(0.086)
constant	1.0965***	0.6443***	1.0441***	1.9468***	0.8408***
	(0.191)	(0.152)	(0.109)	(0.107)	(0.285)
Observations	4,728	16,744	14,528	4,619	5,888
R-squared	0.0273	0.0056	0.0102	0.0309	0.0176
Pseudo R-squared	0.1190	0.0319	0.0543	0.1340	0.0786

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

Table 6. Estimation results employment-HGFs (0.90 percentile), per industry, 2007-2010. Standard errors in parentheses.

	Industry				
Variable	Manufacturing	Construction	Retail	Hospitality	Computer
A_{i2014}	-0.0011*	-0.0005	-0.00001	0.0005	0.0013
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
R_{i2006}	-0.000**	0.000***	-0.000	-0.000*	-0.0000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.0002**	-0.0002***	-0.0002***	-0.0001***	-0.0001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0003	-0.0007*	-0.0013***	-0.0011**	-0.0012***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0265	-0.0296	-0.0095	0.0686	0.1672**
	(0.023)	(0.026)	(0.018)	(0.048)	(0.066)
constant	0.1860***	0.3414***	0.4085***	0.4410***	0.7504***
	(0.062)	(0.081)	(0.056)	(0.047)	(0.121)
Observations	4,412	15,403	13,187	4,125	5,006
R-squared	0.0328	0.0070	0.0053	0.0324	0.0108
Pseudo R-squared	0.1480	0.0457	0.0487	0.1210	0.1010

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

Figure 1. Frequency distributions, change in total sales and number of employees, 2007-2010.

Logarithmic change in total sales
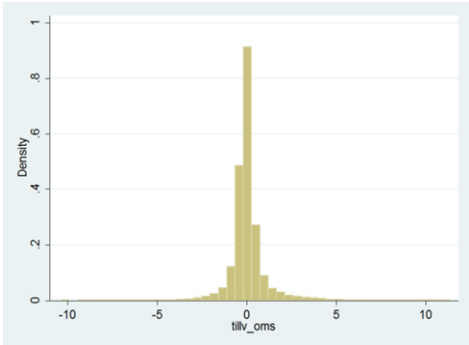
Logarithmic change in number of employees
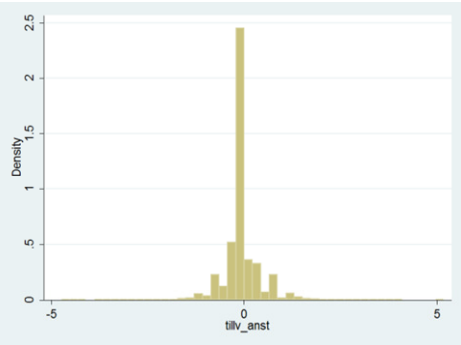
APPENDIX A. Estimation results, per industry, with municipality fixed effects

Table A1. Estimation results, sales growth (ΔR_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-code 25, Manufacturing. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0019*	0.0036**	0.0028***	0.0014**	-0.0001	-0.0005
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
E_{i2006}	-0.0002	-0.00002	-0.0001	0.00007	-0.0002	-0.0004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.000008	0.0003**	0.0001	-0.00001	-0.0001	-0.0003*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	0.0007**	0.0005	0.0001	0.00029	0.0003	-0.0001
	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
C_{i2006}	0.0025	0.04057	0.02947	0.0149	-0.0393	-0.07097
	(0.028)	(0.035)	(0.023)	(0.018)	(0.031)	(0.052)
constant	0.2131	-0.5512**	-0.1948**	0.0891	0.5379***	1.0965***
	(0.2167)	(0.222)	(0.095)	(0.065)	(0.137)	(0.191)
Observations	4,728	4,728	4,728	4,728	4,728	4,728
R-squared	0.0565	0.0111	0.01402	0.0209	0.0258	0.0273
Pseudo R-squared	-0.0059 [a]	0.0934	0.0523	0.0398	0.0593	0.119

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table A2. Estimation results, employment growth (ΔE_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression, NACE-code 25, Manufacturing. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0013***	0.0027***	0.0013***	0.000002	-0.0004	-0.0011*
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
R_{i2006}	0.0000	0.0000	0.0000	0.0000**	-0.0000	-0.0000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.0000	-0.00002	-0.00003	-0.0000	-0.0001	-0.0002**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0003	0.0004	0.0004	-0.0000	-0.0009**	-0.0003
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.0031	-0.0022	-0.0165	0.0257***	0.0040	-0.0265
	(0.0137)	(0.020)	(0.013)	(0.007)	(0.019)	(0.023)
constant	-0.0054	-0.2708**	-0.1474	-0.0001	0.1346***	0.1860***
	(0.1082)	(0.137)	(0.129)	(0.022)	(0.040)	(0.062)
Observations	4,412	4,412	4,412	4,412	4,412	4,412
R-squared	0.0716	0.0159	0.0230	0.0323	0.0370	0.0328
Pseudo R-squared	0.0058 [a]	0.122	0.0805	0.0226	0.0922	0.148

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table A3. Estimation results, sales growth (ΔR_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-codes 42 and 43, Construction. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	**0.20**	**0.50**	**0.80**	**0.90**
A_{i2014}	0.0050***	0.0085***	0.0067***	0.0033***	0.0016**	0.00006
	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
E_{i2006}	-0.0001	0.0001	0.00004	-0.00005	-0.0002***	-0.0003***
	(0.0001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.0001***	0.0002**	0.00009***	-0.000006	-0.00005	-0.0002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0006***	-0.0003	-0.0002	-0.0002	-0.0005*	-0.0004
	(0.0002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.0623***	-0.0434*	-0.0217	-0.0290***	-0.0518**	-0.0723**
	(0.0186)	(0.023)	(0.013)	(0.009)	(0.022)	(0.035)
constant	-0.0126	-0.7000***	-0.4522***	-0.0713	0.3307***	0.6443***
	(0.1106)	(0.075)	(0.125)	(0.091)	(0.065)	(0.152)
Observations	16,744	16,744	16,744	16,744	16,744	16,744
R-squared	0.0200	0.0075	0.0082	0.0089	0.0078	0.0056
Pseudo R-squared	0.0025 [a]	0.0416	0.0279	0.0124	0.0171	0.0319

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table A4. Estimation results, employment growth (ΔE_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-codes 42 and 43, Construction. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	**0.20**	**0.50**	**0.80**	**0.90**
A_{i2014}	0.0031***	0.0078***	0.0048***	-0.0000	0.0008**	-0.0005
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)
R_{i2006}	0.0000	0.0000	0.0000*	0.0000	0.0000***	0.0000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.0001***	-0.0000	-0.0002***	0.0000	-0.00004**	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0001	0.0002	0.0011***	-0.0000	-0.0006**	-0.0007*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0151	-0.01509	-0.0250*	0.0000	0.0341*	-0.0296
	(0.009)	(0.018)	(0.013)	(0.002)	(0.020)	(0.026)
constant	-0.1455***	-0.7753***	-0.4992***	-0.0000	0.0387	0.3414***
	(0.0534)	(0.033)	(0.104)	(0.007)	(0.025)	(0.081)
Observations	15,403	15,403	15,403	15,403	15,403	15,403
R-squared	0.0252	0.0126	0.0120	0.0010	0.0092	0.0070
Pseudo R-squared	0.0063 [a]	0.0660	0.0452	0.0007	0.0337	0.0457

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table A5. Estimation results, sales growth (ΔR_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-code 47, Retail. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0025***	0.0043***	0.0030***	0.0019***	0.0004	-0.0024**
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
E_{i2006}	-0.00003	0.00007***	0.00002	-0.00008***	-0.00001*	-0.00002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.00006**	0.0002***	0.00008***	0.000007	-0.0001**	-0.0001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.00056***	0.0004	-0.00003	-0.0002	-0.0013***	-0.0015***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.02846	-0.0639***	-0.0434***	-0.0225***	-0.0306	0.0047
	(0.021)	(0.020)	(0.010)	(0.008)	(0.019)	(0.050)
constant	-0.0376	-1.1206***	-0.5492***	-0.1560**	0.3688**	1.0441***
	(0.186)	(0.160)	(0.161)	(0.076)	(0.178)	(0.109)
Observations	14,528	14,528	14,528	14,528	14,528	14,528
R-squared	0.0229	0.0032	0.0039	0.0055	0.0065	0.0102
Pseudo R-squared	0.0028 [a]	0.0498	0.0232	0.0094	0.0189	0.0543

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table A6. Estimation results, employment growth (ΔE_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-code 47, Retail. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0021***	0.0044***	0.0025***		0.0009**	-0.00002
	(0.000)	(0.001)	(0.000)		(0.000)	(0.001)
R_{i2006}	0.0000	0.0000***	0.0000*		0.0000***	-0.0000
	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)
ROA_{i2006}	-0.00003**	0.00002	-0.00007***		-0.0001***	-0.0002***
	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)
S_{i2006}	-0.000219**	0.0004	0.0005***		-0.0010***	-0.0013***
	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)
C_{i2006}	-0.0220**	-0.0468**	-0.0609***		0.0330**	-0.0095
	(0.009)	(0.018)	(0.013)		(0.013)	(0.018)
constant	-0.0385	-0.4621***	-0.2746***		0.2810***	0.4085***
	(0.076)	(0.058)	(0.055)		(0.038)	(0.056)
Observations	13,187	13,187	13,187		13,187	13,187
R-squared	0.0253	0.0103	0.0104		0.0074	0.0053
Pseudo R-squared	0.0031 [a]	0.0642	0.0433		0.0355	0.0487

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table A7. Estimation results, sales growth (ΔR_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-codes 55 and 56, Hospitality. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	**0.20**	**0.50**	**0.80**	**0.90**
A_{i2014}	0.0008	0.0034***	0.0037***	0.0008	-0.0011	-0.0012
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)
E_{i2006}	0.000002	0.0003***	0.0002	0.00004	-0.00005	-0.0003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00008*	0.00002	0.00001	-0.00002	-0.00008	-0.0002**
	(0.00005)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0006**	-0.0003	-0.0002	-0.0002	-0.0004	-0.0008***
	(0.0003)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	0.0833**	0.0274	0.0132	0.0205	0.0511	0.0924
	(0.0407)	(0.039)	(0.024)	(0.016)	(0.034)	(0.077)
constant	0.1461	-3.7921***	-0.1864**	-0.0325	1.5020***	1.9468***
	(0.4042)	(0.148)	(0.085)	(0.091)	(0.138)	(0.107)
Observations	4,619	4,619	4,619	4,619	4,619	4,619
R-squared	0.0633	0.0092	0.0142	0.0248	0.0316	0.0309
Pseudo R-squared	0.0033 [a]	0.107	0.0575	0.0273	0.0672	0.134

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table A8. Estimation results, employment growth (ΔE_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-codes 55 and 56, Hospitality. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	**0.20**	**0.50**	**0.80**	**0.90**
A_{i2014}	0.0043***	0.0077***	0.0059***	-0.0000	0.0017	0.0005
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
R_{i2006}	0.0000002	0.0000***	0.0000	0.0000	0.0000	-0.0000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00003	0.00001	-0.000007	-0.0000	-0.00009**	-0.0001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0008***	-0.0006	-0.0005***	-0.0000	-0.0010**	-0.0011**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	0.0324	0.0539	0.0141	0.0000	0.0092	0.0686
	(0.022)	(0.038)	(0.027)	(0.008)	(0.022)	(0.048)
constant	-0.3324	-0.7697***	-0.7422***	-0.1335	0.4183***	0.4410***
	(0.2797)	(0.068)	(0.054)	(0.116)	(0.047)	(0.047)
Observations	4,125	4,125	4,125	4,125	4,125	4,125
R-squared	0.0763	0.0266	0.0399	0.0317	0.0381	0.0324
Pseudo R-squared	0.0113 [a]	0.131	0.0939	0.0259	0.0858	0.121

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table A9. Estimation results, sales growth (ΔR_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-codes 62 and 63, Computer. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0069***	0.0087***	0.0071***	0.0065***	0.0065	0.0077*
	(0.002)	(0.003)	(0.002)	(0.001)	(0.004)	(0.004)
E_{i2006}	-0.0002	0.0002***	0.00007	-0.0001	-0.0003***	-0.0005***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.0001***	0.0003***	0.0002*	0.0001	-0.0001**	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	0.00007	-0.0004	0.0005	0.0006	0.0005	0.0001
	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
C_{i2006}	-0.0429	-0.0141	-0.0585	-0.0732***	-0.0684	-0.0831
	(0.038)	(0.053)	(0.041)	(0.023)	(0.052)	(0.086)
constant	-0.3995	-1.443229***	-0.8442**	-0.2435	0.1102	0.8408***
	(0.315)	(0.311)	(0.386)	(0.164)	(0.134)	(0.285)
Observations	5,888	5,888	5,888	5,888	5,888	5,888
R-squared	0.0472	0.0138	0.0200	0.0298	0.0241	0.0176
Pseudo R-squared	0.0032 [a]	0.0830	0.0505	0.0296	0.0520	0.0786

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table A10. Estimation results, employment growth (ΔE_{it}), 2007-2010, municipality fixed effects. OLS and quantile regression. NACE-codes 62 and 63, Computer. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0047***	0.0086***	0.0060***	0.0000*	0.000002	0.0013
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)
R_{i2006}	-0.0000	0.0000	-0.0000	-0.0000***	-0.0000***	-0.0000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00004**	0.00002	-0.00002	0.0000**	-0.0000	-0.0001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	0.0002	0.0004**	0.0010***	-0.0000	-0.000002	-0.0012***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0016	-0.0735***	-0.1717***	-0.000002	0.2140***	0.1672**
	(0.016)	(0.028)	(0.039)	(0.000)	(0.031)	(0.066)
constant	-0.0655	-0.8070***	-0.2297***	0.000004	0.0002	0.7504***
	(0.119)	(0.142)	(0.087)	(0.000)	(0.017)	(0.121)
Observations	5,006	5,006	5,006	5,006	5,006	5,006
R-squared	0.052	0.0246	0.0227	0.0189	0.0116	0.0108
Pseudo R-squared	0.0016 [a]	0.1120	0.1070	0.0139	0.0699	0.1010

Standard errors in parentheses.

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

APPENDIX B. Estimation results, per industry, without municipality fixed effects

Table B1. Estimation results, sales growth (ΔR_{it}), 2007-2010, no fixed effects. OLS and quantile regressions. NACE-code 25, Manufacturing. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0022**	0.0040***	0.0025***	0.0018***	0.00002	0.0018
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
E_{i2006}	-0.0002	-0.00004	0.00002	0.00007	-0.0002*	-0.0006***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.000002	0.0004**	0.00009	-0.000009	-0.0002***	-0.0003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	0.0009***	0.0008	0.0004	0.0003	0.0003	0.0008
	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.0080	0.0370	0.0243	0.0196	-0.0214	-0.1330***
	(0.027)	(0.038)	(0.026)	(0.015)	(0.023)	(0.051)
constant	0.1258***	-0.6240***	-0.3048***	0.0721***	0.5331***	0.8814***
	(0.028)	(0.109)	(0.030)	(0.018)	(0.030)	(0.059)
Observations	4,728	4,728	4,728	4,728	4,728	4,728
R-squared	0.0035	0.0017	0.0022	0.0018	0.0000	0.0002
Pseudo R-squared	0.0024 [a]	0.0110	0.0048	0.0020	0.0021	0.0070

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table B2. Estimation results, employment growth (ΔE_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-code 25, Manufacturing. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0013***	0.0035***	0.0019***	0.000001	-0.0003	-0.0012
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.002)
R_{i2006}	0.00000	0.0000***	0.0000	0.0000	-0.0000***	-0.0000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.0000	0.0000	-0.0001**	-0.0000	-0.0001*	-0.0003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0002	0.0014**	0.0014***	-0.0000	-0.0005***	-0.0002
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.0080	0.01482	-0.0218	0.0508***	-0.0001	-0.1366**
	(0.013)	(0.025)	(0.018)	(0.014)	(0.017)	(0.056)
constant	0.0533***	-0.4667***	-0.2158***	-0.00003	0.3245***	0.6566***
	(0.014)	(0.028)	(0.025)	(0.006)	(0.018)	(0.049)
Observations	4,412	4,412	4,412	4,412	4,412	4,412
R-squared	0.0022	0.0003	0.0002	0.0000	0.0001	0.0000
Pseudo R-squared	0.0011 [a]	0.0142	0.0127	0.0026	0.0014	0.0128

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table B3. Estimation results, sales growth (ΔR_{it}), 2007-2010, no fixed effects. OLS and quantile regressions. NACE-codes 42 and 43, Construction. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0050***	0.0090***	0.0067***	0.0033***	0.0014**	-0.0001
	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
E_{i2006}	-0.0001	0.000*	0.000003	-0.00005**	-0.0001***	-0.0002***
	(0.0001356)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.0001**	0.0002***	0.00009***	-0.000004	-0.00006*	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0006***	-0.0003	-0.0001	-0.0003***	-0.0005**	-0.0005
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0644***	-0.0522**	-0.0296**	-0.0217***	-0.0658***	-0.0795**
	(0.0183)	(0.021)	(0.013)	(0.008)	(0.018)	(0.036)
constant	-0.0281*	-0.8063***	-0.5127***	-0.0936***	0.37182***	0.8027***
	(0.0167)	(0.024)	(0.014)	(0.009)	(0.019)	(0.037)
Observations	16,744	16,744	16,744	16,744	16,744	16,744
R-squared	0.0049	0.0041	0.0041	0.0043	0.0016	0.00002
Pseudo R-squared	0.0046 [a]	0.0188	0.0140	0.0038	0.0015	0.0019

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table B4. Estimation results, employment growth (ΔE_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-codes 42 and 43, Construction. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0031***	0.0087***	0.0055***	0.0000	0.0015***	-0.0009
	(0.0003)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)
R_{i2006}	0.0000	0.0000	-0.0000	0.0000	0.0000***	0.0000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00007***	-0.0001*	-0.0002***	0.0000	-0.0001**	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0001	0.0002	0.0012***	0.0000	-0.0019***	-0.0007*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0160*	-0.0227	-0.0307**	0.0000	0.0402***	-0.0477**
	(0.0090)	(0.036)	(0.012)	(0.002)	(0.013)	(0.022)
constant	-0.0800***	-0.6875***	-0.4034***	0.00000	0.1569***	0.4990***
	(0.008)	(0.050)	(0.020)	(0.003)	(0.023)	(0.037)
Observations	15,403	15,403	15,403	15,403	15,403	15,403
R-squared	0.0083	0.0078	0.0057		0.0011	0.0002
Pseudo R-squared	0.0080 [a]	0.0295	0.0219	0	0.0075	0.0023

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.
[a] Adjusted R-squared.

Table B5. Estimation results, sales growth (ΔR_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-code 47, Retail. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0025***	0.0053***	0.0032***	0.001945***	-0.0003	-0.0040**
	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.002)
E_{i2006}	-0.000	0.000***	-0.00002	-0.000088***	-0.00001	-0.00004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.0001**	0.0002***	0.0001	0.000006	-0.00007***	-0.0002**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0005***	0.0002	0.00007	-0.000193	-0.0013***	-0.0018***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.0359*	-0.0970***	-0.0451***	-0.022175***	-0.0335*	-0.0460
	(0.020)	(0.025)	(0.009)	(0.007)	(0.020)	(0.069)
constant	0.1077***	-0.5630***	-0.3108***	-0.045791***	0.3819***	0.9921***
	(0.018)	(0.019)	(0.012)	(0.008)	(0.020)	(0.052)
Observations	14,528	14,528	14,528	14,528	14,528	14,528
R-squared	0.0018	0.0012	0.0011	0.0014	0.0000	0.0001
Pseudo R-squared	0.0015 [a]	0.0175	0.0087	0.00277	0.0028	0.0058

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table B6. Estimation results, employment growth (ΔE_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-code 47, Retail. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0027***	0.0052***	0.0032***	0.0000	0.0009*	-0.0005
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
R_{i2006}	0.0000	0.0000***	0.0000	0.0000	0.0000***	0.0000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.0000**	0.00002	-0.00008***	0.0000	-0.0001***	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0002**	0.0004	0.0006***	0.0000	-0.0017***	-0.0015***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0249***	-0.0760***	-0.0706***	0.0000	0.0395***	0.0059
	(0.009)	(0.015)	(0.012)	(0.001)	(0.013)	(0.020)
constant	-0.0278***	-0.5064***	-0.2495***	0.0000	0.1882***	0.4910***
	(0.008)	(0.024)	(0.014)	(0.002)	(0.018)	(0.021)
Observations	13,187	13,187	13,187	13,187	13,187	13,187
R-squared	0.0063	0.0042	0.0038		0.000772	0.0003
Pseudo R-squared	0.0059 [a]	0.0190	0.0161	0	0.00955	0.0054

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table B7. Estimation results, sales growth (ΔR_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-codes 55 and 56, Hospitality. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	**0.20**	**0.50**	**0.80**	**0.90**
A_{i2014}	0.0014	0.0037***	0.0033***	0.0006	-0.0014	0.0041
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)
E_{i2006}	-0.00008	0.0004***	0.0001**	0.00003	-0.000054**	-0.0004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00010**	-0.00003	0.000007	-0.00001	-0.00014	-0.0003
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0005*	-0.0002	-0.00005	-0.0001	-0.00064	-0.0015
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.003)
C_{i2006}	0.0759*	-0.0285	0.0242	0.0119	0.03664	0.1220
	(0.0394)	(0.053)	(0.020)	(0.013)	(0.034)	(0.159)
constant	.0062	-0.6927***	-0.4317***	-0.0961***	0.2893***	0.7844***
	(0.0355)	(0.037)	(0.018)	(0.013)	(0.034)	(0.100)
Observations	4,619	4,619	4,619	4,619	4,619	4,619
R-squared	0.0030	0.0005	0.0004	0.0026	0.00214	0.0029
Pseudo R-squared	0.0020 [a]	0.0022	0.0035	0.0005	0.0019	0.0049

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table B8. Estimation results, employment growth (ΔE_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-codes 55 and 56, Hospitality. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	**0.20**	**0.50**	**0.80**	**0.90**
A_{i2014}	0.0046***	0.0082***	0.0063***	0.0000	0.0028*	0.0024
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)
R_{i2006}	0.0000002	0.0000***	0.0000***	0.0000	0.0000	-0.0000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00005*	0.000001	-0.000007	0.0000	-0.00008	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0008***	-0.0005***	-0.0004***	0.0000	-0.0016*	-0.0018
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.002)
C_{i2006}	0.0365*	0.0801**	0.034295	0.0000	0.0284	0.0828
	(0.021)	(0.034)	(0.024)	(0.007)	(0.033)	(0.106)
constant	-0.1036***	-0.7542***	-0.4593***	0.0000	0.1726***	0.5412***
	(0.01863)	(0.022)	(0.021)	(0.014)	(0.039)	(0.080)
Observations	4,125	4,125	4,125	4,125	4,125	4,125
R-squared	0.0139	0.0110	0.0115		0.0098	0.0089
Pseudo R-squared	0.0127 [a]	0.0225	0.0154	0.0000	0.0091	0.0074

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table B9. Estimation results, sales growth (ΔR_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-codes 62 and 63, Computer. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0073***	0.0096***	0.0087***	0.0068***	0.0082*	0.0061
	(0.002)	(0.003)	(0.001)	(0.001)	(0.004)	(0.005)
E_{i2006}	-0.0002	0.0001**	0.0001**	-0.00008**	-0.0003***	-0.0005***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.00009***	0.0002***	0.0002***	0.00005	-0.00008***	-0.0001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	0.0001	0.0002	0.0008	0.0005	0.0006***	0.0009
	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
C_{i2006}	-0.0692*	-0.0084	-0.0684**	-0.0897***	-0.0886*	-0.1674**
	(0.037)	(0.071)	(0.030)	(0.020)	(0.053)	(0.085)
constant	-0.0209	-1.2092***	-0.7138***	-0.1443***	0.5184***	1.2829***
	(0.041)	(0.066)	(0.032)	(0.035)	(0.081)	(0.098)
Observations	5,888	5,888	5,888	5,888	5,888	5,888
R-squared	0.0044	0.0034	0.0037	0.0037	0.0010	0.0004
Pseudo R-squared	0.0036 [a]	0.0123	0.0103	0.0047	0.0034	0.0037

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table B10. Estimation results, employment growth (ΔE_{it}), 2007-2010, no fixed effects. OLS and quantile regression. NACE-codes 62 and 63, Computer. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0050***	0.01076***	0.0063***	0.0000	0.000004	0.0024
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.004)
R_{i2006}	-0.0000	-0.0000***	-0.0000*	-0.0000***	-0.0000***	-0.0000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.00004**	0.000009	-0.00005*	0.0000***	-0.0000	-0.0001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	0.0002	0.0005**	0.0020***	-0.0000	-0.000003	-0.0015*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.0049	-0.0646***	-0.2034***	-0.000001	0.2512***	0.2066***
	(0.015)	(0.023)	(0.031)	(0.000)	(0.022)	(0.054)
constant	-0.1231***	-0.8100***	-0.3685***	0.000008***	0.0003	0.4880***
	(0.017)	(0.014)	(0.047)	(0.000)	(0.003)	(0.059)
Observations	5,006	5,006	5,006	5,006	5,006	5,006
R-squared	0.0099	0.0073	0.0018	0.0001	0.00003	0.0007
Pseudo R-squared	0.0089 [a]	0.0225	0.0421	0.0002	0.0299	0.0190

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

APPENDIX C. Estimation results, all firms, without municipality or industry fixed effects

Table C1. Estimation results, sales growth (ΔR_{it}), 2007-2010, no fixed effects. All firms. OLS and quantile regressions. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0038***	0.0083***	0.0056***	0.0027***	0.0003	-0.0033***
	(0.0004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
E_{i2006}	-0.00008	0.00004***	0.000004	-0.00007	-0.0001***	-0.0002**
	(0.0001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	0.00005***	0.0002***	0.0001***	-0.000001	-0.00008***	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0003***	-0.0001	-0.0001	-0.00004	-0.0002	-0.0007
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
C_{i2006}	-0.0270**	-0.068***	-0.0301***	-0.0144***	-0.0182	-0.0461
	(0.011)	(0.016)	(0.007)	(0.005)	(0.012)	(0.030)
constant	0.0348***	-0.770***	-0.4486***	-0.0732***	0.4046***	0.9955***
	(0.010)	(0.018)	(0.012)	(0.006)	(0.015)	(0.040)
Observations	46,507	46,507	46,507	46,507	46,507	46,507
R-squared	0.0024	0.0021	0.0021	0.0021	0.0000	0.0006
Pseudo R-squared	0.0023[a]	0.0174	0.0113	0.0028	0.0007	0.0024

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.

Table C2. Estimation results, employment growth (ΔE_{it}), 2007-2010, no fixed effects. All firms. OLS and quantile regressions. Standard errors in parentheses.

Variable	OLS regression	Quantile regression				
		0.10	0.20	0.50	0.80	0.90
A_{i2014}	0.0029***	0.0071***	0.0046***	0.0000	0.0017***	-0.0012***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R_{i2006}	0.0000	0.0000***	0.0000	0.0000	0.0000***	0.0000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA_{i2006}	-0.0000***	-0.000008	-0.00007***	0.00000	-0.0001***	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
S_{i2006}	-0.0002***	0.0004*	0.0009***	0.0000	-0.0019***	-0.0013***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C_{i2006}	-0.0072	-0.0466***	-0.0519***	0.0000	0.0613***	0.0044
	(0.005)	(0.011)	(0.007)	(0.001)	(0.009)	(0.012)
constant	-0.0570***	-0.6138***	-0.3423***	0.0000	0.1775***	0.5391***
	(0.005)	(0.021)	(0.010)	(0.002)	(0.015)	(0.014)
Observations	42,133	42,133	42,133	42,133	42,133	42,133
R-squared	0.0076	0.0057	0.0038	-	0.0016	0.0001
Pseudo R-squared	0.0074[a]	0.0260	0.0177	0.0000	0.0099	0.0068

Standard errors in parentheses.

*** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

[a] Adjusted R-squared.