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THE ‘SHADOW OF SUCCESSION’ IN FAMILY FIRMS

Sandra Diwisch**, Peter Voithofer** and Christoph R. Weiss*

Abstract:
The paper analyses the relationship between succession and firm performance. Using a unique panel data set on a sample of roughly 4,000 Austrian family firms we examine empirically the impact of past succession as well as future succession plans on employment growth and investment behaviour. Analysing succession plans, we do not find a ‘shadow of succession’ effect. No significant difference in employment growth and investment behaviour is found between firms that plan to transfer the firm in the next ten years and those who do not. In contrast, past succession exerts a significant and positive employment growth effect which becomes stronger over time. The impact of past succession on investments is also positive but not significantly different from zero. Thus, our findings provide support for the existence of a positive employment shadow after a transfer, whereas the shadow of succession hypothesis has to be rejected prior to transition.

Keywords: succession, family firms, employment growth, investment behaviour, econometric analysis, Austria

JEL classification: C23, D92, J23, L25

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I. Introduction

Most firms in the world are family firms.\(^1\) In recent years, family firms have received growing attention in different fields of economics: literature on entrepreneurship focuses on the decision to enter into family businesses, labour market economists investigate the entrepreneurs’ decisions to retire and, from the perspective of the corporate governance literature, family firms allow economists to study the patterns of separation of ownership and control. The focus of our investigation is on one particular aspect of family firms: the issue of family succession. The circumstances of family succession are of great importance not only for the family members directly involved but also (per definition) for the long-run survival and success of family firms. In an extensive review of the existing research Handler (1994) finds: ‘researchers in the field of family business agree that succession is the most important issue that most family firms face’ (p. 133).\(^2\)

Previous research in this area suggests two possible explanations for the prevalence of succession within the family. The first stresses the importance of capital market imperfections. Pesquin et al. (1999) point out that intra-family succession enables the family to realise benefits from intergenerational risk-sharing when annuity markets are incomplete. It provides an often implicit contractual insurance arrangement since the generations overlap and share income. The authors mention additional advantages of intra-family succession such as ‘smooth’ transition, reduction in transfer cost, and lower transfer taxes. To the extent that capital market imperfections are important, successful entrepreneurs may be better able to transfer financial wealth to their offspring, thereby relaxing capital market restraints.

The second explanation argues that parents transmit to their offsprings valuable work experience, reputation and other managerial human capital. In the context of agricultural production in low-income countries, Rosenzweig and Wolpin (1985) argue that the existence of returns to firm-specific experience creates incentives for children to work in the family firm when young. In addition, maintaining family control often is of symbolic importance and thus, the transfer of the firm to the next generation is regarded an important objective of entrepreneurs (Gasson and Errington 1993; Blanc 1993).

\(^1\) Gersick et al. (1997) report that family firms account for 65-80% of all worldwide business, and for about 40% of the Fortune 500 companies. Although many family firms are small, in aggregate they represent about half of the U.S. gross domestic product (Aronoff et al. 1997) and employ more than 80% of the work force (Neuberg and Lank, 1998).

\(^2\) Succession is so central that Ward (1987) chooses to define family firms in terms of the potential for succession: ‘we define a family business as one that will be passed on for the family’s next generation to manage and control’ (p. 252).
Empirical studies indicate that the importance of family firms and family succession differs between economies as well as between different sectors within an economy. By studying occupations of different family members (grandfathers, fathers and sons), Laband and Lentz (1983) find that occupational inheritance is particularly strong among farmers and to a lesser extent among other groups such as lawyers and self-employed proprietors. A large share of the existing empirical literature focuses on succession in the farm sector, little empirical work has been devoted to succession in the non-farm sector.

The purpose of this paper is to analyse succession in small and medium sized Austrian manufacturing companies of which about 90% are family businesses. More specifically, we focus on the relationship between succession and firm performance. First, we investigate empirically whether there is a significant difference in firm behaviour and performance (employment and investment) between two groups of firms: firms where succession has taken place during the last few years and otherwise identical firms that did not experience succession. Secondly, we investigate whether future succession plans cast their shadows on firm performance even before the transfer actually takes place. This ‘shadow of succession’ effect was suggested by Kimhi et al. (1995) who argue that the occurrence of succession within the family in the near future might motivate entrepreneurs to invest and raise current firm size. This link between succession considerations and firm performance might become stronger the closer the event of succession comes. The present study thus aims at answering the following questions:

- Is there a significant difference in employment growth and investment behaviour between family businesses that plan succession in the near future (or that have been transferred recently) and family businesses without any such succession event?
- If so, how long is the ‘shadow of succession’, i.e., how many years before and after the transfer of the firm can we observe a significant difference?

The paper is organised as follows. The next section presents related literature on the link between succession and corporate performance in family firms. The data are described in section III, section IV presents the methodology and the empirical results and section V discusses the implications of the findings.

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3 Empirical studies on succession in the farm sector typically examine the probability and the timing of family takeover (Stiglbauer and Weiss 2000; Glauben et. al. 2002; Kimhi 1994; Kimhi and Lopez 1997, 1999).
II. Literature Review

Previous research on succession plans has not demonstrated a clear link between succession considerations and firm performance. Kimhi et al. (1995) did not find empirical evidence for the ‘shadow of succession’ effect where firms start expanding in expectation of future succession. Using panel data on farm households in Israel the authors find that the occurrence of succession in a future time period does not have any significant effect on farm size. Stiglbauer and Weiss (2000) find that the relationship between previous firm growth and the probability of firm succession is negative. They explain this by referring to the possible aversion of firm operators to make important long-term decisions immediately before transferring the firm to a successor. Potter and Lobley (1992) show that the investment behaviour of entrepreneurs without successors is radically different from those with a successor already identified, indicating a relationship between succession planning and investment decisions. The Austrian Institute for Small Business Research\(^4\) (2002) investigates the performance of Austrian small and medium sized manufacturing companies and observes that firms reporting succession plans for the next ten years generally invest less and show stagnating sales compared to average small and medium sized companies and recently transferred enterprises.

The impact of intergenerational successions on firm performance after the succession event has taken place has been widely investigated, albeit empirical evidence has yielded quite inconsistent results. Analysing the farm sector, Perrier-Cornet et al. (1991) find that in France, the Netherlands and Belgium farm modernisation is associated with inter-generational succession whereas they do not find such a relationship for farms located in the United Kingdom, Italy and Greece. Using panel data of Austrian full-time farms, Weiss (1999) reports a strongly significant effect of succession on subsequent farm growth and survival. Kimhi et al. (1995) find that during the 1970s, intergenerational succession contributed tremendously to farm expansion, both in terms of size and in terms of intensity of production. However, expansion was not observed in farms experiencing intergenerational succession in the 1980s. The authors argue that this may be due to the widespread farm financial crisis in the 1980s, forcing many successors to seek off-farm employment.

Empirical work on the post-succession performance in the non-farm sector typically compares the corporate performance of firms that were handed down to a family member to firms that were transferred to a family outsider. Analysing actual successions within Canadian

\(^4\) now: Institute for SME Research.
family firms, Smith and Amoako-Adu (1999) report a significant decrease in the operating performance of firms appointing family successors. For the sample of firms appointing non-family successors the operating performance is found to significantly improve after the transfer. They explain their findings by the general underperformance of non-family successor firms in the pre-succession period. Similar results are reported by Perez-Gonzalez (2002) for a sample of U.S. publicly traded firms. Firms that appoint a family CEO are observed to exhibit large declines in return on assets and market-to-book ratios within three years of transition relative to firms that appoint unrelated CEOs. In contrast to Smith and Amoako-Adu (1999), the author finds that family and non-family successor firms exhibit a very similar performance level *ex ante*.

Related to these studies is a series of empirical papers that investigate the performance of family firms based on different CEO status, i.e. founder controlled, descendant controlled and family outsider controlled. This provides some indirect evidence on the performance of firms that were handed down to a family member. Using cross sectional data on U.S. firms, Anderson and Reeb (2003) find a positive performance effect when family members serve as CEOs relative to unrelated CEOs. However, descendant CEOs are observed to perform worse than founder CEOs, indicating that succession lowers corporate performance. Similar results are reported by Morck et al. (1998). Using a sample of Canadian firms, they find that firms controlled by heirs of the founder show lower profitability than founder and family outsider controlled firms in the same industry. Evidence provided by Villalonga and Amit (2005) supports this negative relationship, albeit the negative effect of descendant-CEOs on firm value is observed to be entirely attributable to second generation family firms. The marginal contribution to firm value of third-generation descendant-CEOs is not significant whereas that of fourth-generation descendant-CEOs is significantly positive. In contrast, evidence provided by McConaughy et al. (1998) does not support a negative relationship between family successions and corporate performance. Using data on U.S. founding family controlled firms, they document that descendant-controlled firms are more efficient than founder-controlled firms. They generate significantly higher sales growth rates, sales per employee and cash flow per employee than the founder-controlled firms, indicating that successors were able to enhance firm performance. In explaining their results the authors argue that ‘descendants are in a position to consolidate the advantages passed on to them by the founders’ (p. 15). Evidence on the corporate performance of family firms in Europe is provided by Sraer and Thesmar (2004). Analysing a sample of 750 corporations listed on the French stock market, they do not find a significant difference in firm
performance of founder controlled firms and descendant controlled firms. Both, founder CEOs and descendant CEOs are associated with better corporate performance than unrelated CEOs.

Referring to the above mentioned literature, Adams et al. (2003) point out that one should be cautious in drawing conclusions from the reported correlation between inherited control and performance on the management abilities of heirs. They show that performance is negatively related to the likelihood that founders retain the CEO title. Founder CEOs are observed to step down after periods of good performance. Thus, the authors conclude that ‘if performance is mean reverting and founders leave at its peak, one should observe a decline in performance when founders transfer control to their heirs even when inherited control is not bad for performance’ (p. 17).

Taking the above set of studies together, this literature gives some support to rather a negative than a positive link between succession and preceding corporate performance. Expecting succession in the future, firm owners deter long term decisions and tend to invest less. Concerning post-succession performance, the evidence is inconclusive. However, most of the above-described studies only provide indirect evidence on post-succession performance as they are cross-sectional studies comparing the relative performance of family successors to other CEOs and not analysing the effects of successions per se. The present study pursues a different approach. Using a ten-year panel and analysing performance changes over time, direct evidence on the consequences of succession is derived.

Apart from the work of Sraer and Thesmar (2004) all studies mentioned are conducted on large publicly traded Canadian and U.S. family firms. Little is known on the implications of succession on performance in European family firms. The present study shifts the focus to continental Europe where arrangements, legal rules and social customs differ considerably. It provides the micro-level evidence on effects of successions in Austrian family businesses. Contrary to previous studies, we do not focus on financial performance but analyse employment growth and investment behaviour.

III. Data

Our analysis is based on a ten-year panel (1995-2004) of more than 4,000 Austrian small and medium-sized manufacturing companies, of which about 90% are family firms. The data is provided by the Austrian Institute for SME Research which is the largest research institute in Austria focusing on small and medium-sized enterprises (SMEs). The institute annually collects
extensive information on the performance of roughly 4,500 manufacturing companies. The dataset contains the total number of employees, three alternative measures for investment (investment in buildings, investment in machinery and equipment, total investments) as well as some firm characteristics such as firm age, the firm owner’s age and the number of ownership changes since the foundation of the firm.

In 1999, 2002 and 2005 the survey includes information on the firm owner’s succession plans. In particular, business owners were asked to report on two aspects of succession. First, they indicate whether they plan to transfer the firm within the following 10 years, and second, they report whether the firm has been handed over to them during the last 3 years. Succession plans of roughly 4,000 entrepreneurs are available from each survey. In 1999 about 39% of the respondents indicate that they plan to transfer the firm within the next 10 years. In the same year, about 12% of the respondents report that their firm has been handed over to them within the last three years.

In the following, succession data from the 1999 survey are used to analyse the relationship between succession and firm growth in the time period from 1996 to 2004. This enables us to investigate changes in growth rates due to both, planned and realised successions. We particularly focus on the consequences of planned and realised successions on employment growth and investment behaviour. Estimation results from the 2002 survey are very similar to those reported in section IV and are thus mentioned only as far as they provide important additional information.

Table I provides a first glance on the total number of employees and total investment according to firm’s actual and planned succession behaviour in 1998. Analysing succession plans, we find hardly any significant differences in employment and investment between firms reporting succession plans for the ensuing ten years (PSUCC=1) and those that do not (PSUCC=0). Conversely, recently transferred firms (ASUCC=1) invest more and typically employ a larger number of workers than firms that did not undergo succession (ASUCC=0). The differences in employment (investment) are statistically significant in 9 (5) out of 10 years.6

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5 The extended surveys with the relevant succession information were conducted in 1999, 2002 and 2005 but the gathered information refers to the years 1998, 2001 and 2004. For reasons of simplicity we decided to refer to the former as the relevant dates of interest.

6 The observation that firms which were handed over are larger (in terms of employment) is also consistent with previous studies that found a significant positive impact of firm size on the probability of family succession (Stiglbauer and Weiss, 2000; Kimhi and Nachlieli, 2001; Glauben et al., 2002).
### TABLE I
Descriptive Statistics: Employment and Total Investment

**Notes:** Employment is total number of employees. Investment is total investments in Euro. \( ASUCC_{96} = 1 \) if a succession has taken place within the years 1996 and 1998 and 0 otherwise. Similarly, \( PSUCC_{98} = 1 \) if the entrepreneur plans to hand over the firm within the next 10 years and 0 otherwise. The top number in each cell is the mean; the bottom number is either the standard deviation (in italics) or the t-statistic (in parentheses). Asterisks denote statistical significance at the 1% (***) 5% (**), or 10% (*) level.

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment</th>
<th></th>
<th></th>
<th>Total Investment</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( ASUCC_{96} = 1 )</td>
<td>( ASUCC_{96} = 0 )</td>
<td>Difference</td>
<td>t-stat</td>
<td>( PSUCC_{98} = 1 )</td>
<td>( PSUCC_{98} = 0 )</td>
</tr>
<tr>
<td></td>
<td>33.00</td>
<td>29.79</td>
<td>(2.67) ***</td>
<td>28.13</td>
<td>31.39</td>
<td>(-0.19)</td>
</tr>
<tr>
<td>1997</td>
<td>22.90</td>
<td>18.86</td>
<td>4.05</td>
<td>18.89</td>
<td>19.16</td>
<td>-0.27</td>
</tr>
<tr>
<td></td>
<td>30.21</td>
<td>29.56</td>
<td>(2.32) **</td>
<td>27.10</td>
<td>30.55</td>
<td>(-0.25)</td>
</tr>
<tr>
<td>1998</td>
<td>23.26</td>
<td>19.10</td>
<td>4.16</td>
<td>19.51</td>
<td>19.03</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>31.89</td>
<td>31.97</td>
<td>(2.69) ***</td>
<td>31.16</td>
<td>31.34</td>
<td>(0.48)</td>
</tr>
<tr>
<td>1999</td>
<td>21.81</td>
<td>18.44</td>
<td>3.37</td>
<td>19.17</td>
<td>17.86</td>
<td>1.31</td>
</tr>
<tr>
<td></td>
<td>27.71</td>
<td>29.23</td>
<td>(1.99) **</td>
<td>28.90</td>
<td>26.98</td>
<td>(1.23)</td>
</tr>
<tr>
<td>2000</td>
<td>22.82</td>
<td>19.14</td>
<td>3.69</td>
<td>19.32</td>
<td>18.92</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>31.31</td>
<td>30.75</td>
<td>(2.01) **</td>
<td>28.89</td>
<td>30.69</td>
<td>(0.34)</td>
</tr>
<tr>
<td>2001</td>
<td>20.61</td>
<td>17.94</td>
<td>2.67</td>
<td>19.33</td>
<td>16.89</td>
<td>2.43</td>
</tr>
<tr>
<td></td>
<td>25.44</td>
<td>26.85</td>
<td>(1.50)</td>
<td>29.92</td>
<td>26.31</td>
<td>(2.13) **</td>
</tr>
<tr>
<td>2002</td>
<td>22.28</td>
<td>18.65</td>
<td>3.63</td>
<td>20.55</td>
<td>17.76</td>
<td>2.79</td>
</tr>
<tr>
<td></td>
<td>31.01</td>
<td>32.65</td>
<td>(1.76) *</td>
<td>37.38</td>
<td>28.42</td>
<td>(2.03) **</td>
</tr>
<tr>
<td>2003</td>
<td>21.85</td>
<td>17.59</td>
<td>4.26</td>
<td>18.50</td>
<td>17.07</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>27.11</td>
<td>27.24</td>
<td>(2.28) **</td>
<td>27.62</td>
<td>25.55</td>
<td>(1.18)</td>
</tr>
<tr>
<td>2004</td>
<td>21.21</td>
<td>17.31</td>
<td>3.89</td>
<td>18.41</td>
<td>16.90</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>24.97</td>
<td>26.45</td>
<td>(2.01) **</td>
<td>24.92</td>
<td>25.02</td>
<td>(1.20)</td>
</tr>
</tbody>
</table>
Table II reports descriptive statistics for long run employment and investment growth (using three-year averages\(^7\)). The results suggest that employment growth is significantly stronger for firms where succession has taken place during the previous three years. For example, 27% of businesses that experienced succession in the past have grown by one fifth or more, compared with 21% for all businesses. The impact of realised successions on investment behaviour is less clear. No differences can be observed when succession plans are considered.

### IV. Estimation Model and Results

More detailed evidence on the ‘shadow of succession’ can be obtained from estimating econometric models on employment and investment for firm \(i\) at date \(t\):

\[
\ln Y_{i,j} = \alpha + \beta \ln Y_{i,j-1} + \gamma J\text{SUCC}_i + \delta X_{i,j} + \varepsilon_{i,j} \quad J = P, A \quad (1)
\]

\(^7\) Three-year averages are used since the respondents were asked for realised successions within the past three years. Each firm, of which at least one observation over the relevant three years is available, is considered in that variable. This procedure guarantees that only a minimum of observations is lost and that short-run cyclical fluctuations are removed.
Our dependent variable is the logarithm of employment and investment, respectively. \( \ln Y_{i,t-1} \) is the logarithm of each company’s initial employment or investment level. \( JSUCC_i = (PSUCC_i, ASUCC_i) \) is our dummy for planned succession and actual succession. \( PSUCC \) is set equal to 1 in cases where entrepreneur \( i \) plans to hand over the firm within the next 10 years and is 0 otherwise. Similarly, \( ASUCC \) is set equal to 1 where a succession has taken place within the last 3 years and is 0 otherwise. \( X_{i,t} \) is a vector of additional explanatory variables which we include to control for specific firm and market characteristics. Our control variables include dummies for industry, region and generation, the company’s age, the owner’s gender and the owner’s age. We are primarily interested in comparing the parameter \( \gamma \) over time to see how the impact of succession considerations on firm performance changes over time.

Our analysis of the relationship between succession and firm growth consists of a series of multivariate OLS regressions. To begin with, equation (1) is estimated using three-year averages. Table III reports the coefficient estimates for the succession variables; more details on the results of the regression model are provided in the Appendix. Analysing succession plans, we do not find a significant effect on employment growth and investment behaviour. The parameter estimates for the dummy ‘planned succession’ are not statistically significant at the 5% level. This may have two reasons. First, succession plans could be very vague due to the long planning horizon of ten years. This reduces the liability of the answers and increases the probability of an intention-behaviour discrepancy. 8 Second, one could also reject our hypothesis that future succession plans cast their shadows on firm performance. 9

In contrast to succession plans, actual succession in the past is found to have a significant and positive impact on employment growth for the 1998-2004 time period. The coefficient for ‘actual succession’ reported in Table III is significant at a 1% level and suggests that employment growth is 14 percent points larger for firms that experienced succession in the past compared to firms that reported no succession. Given an average level of employment of roughly

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8 Authors from different fields of economics (and, in particular, from economic psychology and marketing) have challenged the usefulness of intention measures (such as succession plans) as a predictor for actual behaviour. Foxall (1983), for example, argues that a high intention-behaviour correspondence should be expected only under strictly limited (and unrealistic) conditions. Empirical support for the intention-behaviour discrepancy in succession plans is provided by Väre et al. (2004).

9 Further estimation experiments using information on realised successions between 1999 and 2001 and analysing firm performance prior to the succession events have been carried out. Again no significant relationship between employment growth and future succession is found, providing further evidence for the rejection of the ‘shadow of succession’ hypothesis prior to transition.
TABLE III
Effects of Actual and Planned Successions on Employment Growth and Investment Behaviour

<table>
<thead>
<tr>
<th>Dependent Variable: In Employment</th>
<th>Independent Variable Actual Succession</th>
<th>Independent Variable Planned Succession</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef. ASUCC&lt;sub&gt;9698&lt;/sub&gt; t-value Obs.</td>
<td>Coef. PSUCC&lt;sub&gt;98&lt;/sub&gt; t-value Obs.</td>
</tr>
<tr>
<td>9901</td>
<td>0.036 (1.30) 1007</td>
<td>-0.020 (-1.12) 1017</td>
</tr>
<tr>
<td>0204</td>
<td>0.146 (3.65) *** 1021</td>
<td>-0.024 (-0.93) 1031</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable: In Total Investment</th>
<th>Coef. ASUCC&lt;sub&gt;9698&lt;/sub&gt; t-value Obs.</th>
<th>Coef. PSUCC&lt;sub&gt;98&lt;/sub&gt; t-value Obs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9901</td>
<td>0.134 (1.22) 850</td>
<td>0.054 (0.71) 858</td>
</tr>
<tr>
<td>0204</td>
<td>0.037 (0.30) 835</td>
<td>0.074 (0.86) 839</td>
</tr>
</tbody>
</table>

Notes: Estimated equation: (1). Dependent Variable: Three-Year averages. Estimation method: OLS; Asterisks denote statistical significance at the 1% (***) 5% (**), or 10% (*) level.

19 employees over the 1996 to 1998 time period, this corresponds to 3 additional jobs per firm, revealing a considerable medium-run succession effect. Contrary, no such effect is found for the short-time period from 1991 to 1998, indicating that there is a consolidation time period after succession before employment effects are observable.

Neither short-run nor medium-run effects are found when investment behaviour is analysed. The parameter estimates reported in Table III are positive but not significantly different from zero. Thus, no significant relationship between past succession and investment behaviour is found. This result remains unchanged when alternative investment measures such as investment in buildings or investment in machinery and equipment are considered.

Table IV reports more details on the regression analysis for the only specification in Table III, in which the parameter estimate of a succession variable is significantly different from zero. The estimation model in Table IV is statistically significant at the 1% level or better as measured by the F-statistic. Also, a relatively large proportion of the variance in the data can be explained in the econometric model, as indicated by the R-squared. However, important determinants of firm growth such as the financial structure of firms, profitability and productivity, the employee’s attitude toward risk are not considered in the model and may account for part of the unexplained variation.

The parameter estimate of LEMPLOY<sub>9698</sub> provides evidence on ‘Gibrat’s Law of Proportionate Effects’, which states that the rate of firm growth is independent of initial firm size. The specific case where the coefficient is equal to unity implies that proportionate changes in size are independent of size. For estimates greater than unity, large firms grow faster than small ones, and vice versa for estimates less than unity. According to Table IV, the parameter
estimate of LEMPLOY_{9698} is less than unity, indicating that small firms grow faster than larger ones. However, statistical tests show that the coefficient is not significantly different from unity.

However, it is also evident from Table IV that our analysis potentially suffers from an endogeneity problem. More specifically, there is a problem of distinguishing cause and effect with respect to succession and firm size. A firm that experienced succession in the past, for example, might grow faster and employ additional staff. Yet, the causation could also be reversed. Empirical studies on the probability of succession suggest that the decision to transfer the firm is positively affected by the size of the company (Stiglbauer and Weiss 2000; Glauben et al. 2002). Again, firm size and succession would be positively correlated and would bias our estimates of the causal impact of realised succession upward. To address this problem of reversed causality, we apply a two-step procedure to investigate both, the decision to transfer the firm and the consequences of succession. First, a single equation probit model is estimated for realised succession between 1996 and 1998. Firm size is included, using the average employment level over the years 1996, 1997 and 1998. In a second step, the calculated
probabilities are introduced into our original model instead of the succession dummy variable. Our results are robust to these changes and are available from the authors upon request.

A number of additional control variables are included in the estimation model. Previous studies suggest that younger firms grow faster than older ones. However, we do not find evidence for a significant impact of the company’s age (AGEC) in the estimation model. We further introduced firm owner’s age (AGEO) and firm owner’s age squared (AGEO²) into the model. In contrast to previous studies (Gale 1994; Weiss 1999), the results do not suggest an age effect to exist in the present context.

Following Villalonga and Amit (2005) four generation dummies for management ownership in the first, second, third, fourth or even earlier generation (GEN-1, GEN-2, GEN-3, GEN-4) have been included to test the hypothesis that there is a significant difference in firm growth between founder controlled firms and descendant controlled firms. According to Table IV there is some evidence that descendant controlled firms grow more slowly than founder controlled firms. The coefficient estimates for GEN-2, GEN-3 and GEN-4 are all negative albeit not statistically significant. This result is also in line with previous studies reporting that descendants perform worse than founders (Morck et al. 1998; Anderson and Reeb 2003; Villalonga and Amit 2005).

The coefficient for the gender of the company’s owner (GENDER) has a negative sign indicating that male business owners perform worse than female entrepreneurs. Again, this effect is not significantly different from zero, though this contrasts to previous studies reporting significantly higher growth rates for companies operated by men (Variyam and Kraybill 1994; Weiss 1999).

Finally, nine regional dummy variables and 21 sectoral dummy variables have been added to the equation to control for regional and sectoral fixed effects. The parameter estimates are not reported in Table IV but are available from the authors upon request.

Figure I reports the results of estimating the employment growth function for different time periods. In addition to the parameter estimates, an interval of plus/minus 1.96 times the standard error is shown. Figure I suggest that the parameter is positive but insignificant at first, but then displays a strongly significant and positive effect of succession on subsequent employment growth. After some years of consolidation successors start expanding and hire additional employees. A succession coefficient of 0.16 for the period from 1998 to 2004 implies for example that over this period recently transferred companies grow 16 percent points faster
than equivalent companies that reported no succession. The short run employment effects are considerably smaller as indicated by a coefficient estimate of 0.02 for the period from 1998 to 2001. Hence, analysing employment growth for different time periods largely supports the findings from Table III.\(^{10}\)

V. Conclusion

The aim of this paper was to analyse the relationship between succession and firm performance. Using a unique panel data set on a sample of roughly 4,000 Austrian family firms we examine empirically the impact of past (actual) succession as well as future (planned) succession on employment growth and investment behaviour. Analysing succession plans, we do not find a ‘shadow of succession’ effect. No significant difference in employment growth and investment behaviour is found between firms that plan to transfer the firm in the next ten years and those who do not. In contrast, past succession exerts a significant and positive employment

\(^{10}\) These employment effects remain unchanged when adding the control variables into the model. Succession results based on the 2001 sample largely confirm these results; the only difference being a shorter consolidation phase. The relevant coefficient is statistically significant from the second year after the succession period onward.
growth effect which becomes stronger over time. The impact of past succession on investment behaviour is also positive but not significantly different from zero. Thus, our findings provide support for the existence of a positive employment shadow after a transfer, whereas the shadow of succession hypothesis has to be rejected prior to transition.

Two limitations to the results have to be mentioned. First, selection bias is a potentially serious weakness of our analysis as we were unable to study the effects of succession on the probability of firm exits. The results in this paper should be seen strictly as an analysis of employment and investment growth inside continuing businesses. And second, the present analysis does not take into account that succession within the family may have different consequences compared to firms where the successor is not a family member. The fact that we focus on successions in general and do not analyse succession within and outside a family separately makes comparison with previous studies in this field difficult.

However, by analysing performance changes over time the present study provides direct evidence on the consequences of succession and can be seen as a major contribution to existing cross sectional studies on this issue. The positive employment effect of succession reported again underlines the importance of succession for the aggregate labour market in Austria. An estimated 51,500 Austrian small and medium sized enterprises will face the challenge of succession over the decade 2004-2013, potentially affecting 438,000 employees or 17% of all jobs in the Austrian industry (Mandl 2004). Therefore, the success of business successions is, not at least because of the effect on the labour market, of particular importance for the economy. Our results strongly support the notion that it is essential to raise public awareness of the importance of business succession as an attractive alternative to starting up one’s own business.
References


Austrian Institute for Small Business Research (Ed.), (2002), Unternehmensübergaben und -nachfolgen in Österreich, Wien


