International Entrepreneurship and Management Journal (2021) 17:423–446
https://doi.org/10.1007/s11365-019-00613-5

How does a succession influence investment decisions, credit financing and business performance in small and medium-sized family firms?

Arndt Werner[1] · Sabrina Schell[2] · Ljuba Haunschild[3]

Published online: 20 December 2019

Abstract

We examine the influence of succession in small and medium-sized family businesses by focusing on investment decisions, credit financing, and business performance. Using data on German SMEs, we find that the succession event affects investment behavior *negatively* before but *positively* after the transfer takes place when compared to firms without any succession intentions. With respect to performance, we show that firms' growth rates increase after succession has taken place. Although hypothesized, we find no empirical evidence to suggest that banks tend to reject successors more often than they reject other business owners when deciding to extend credit to firms for investment purposes.

Keywords Family business · SME · Succession event · Investments · Performance · Financial constraints

Introduction

While successions are of considerable economic importance to national economies, they are also one of the most difficult challenges to master in the lifecycle of a family

Ljuba Haunschild died while working on this paper.

✉ Arndt Werner
Arndt.werner@uni-siegen.de

Sabrina Schell
sabrina.schell@iop.unibe.ch

[1] Management and Entrepreneurship, University of Siegen, Unteres Schloß 3, 57072 Siegen, Germany

[2] Institute for Organization and Human Resource Management, University of Bern, Engehaldenstr. 4, 3012 Bern, Switzerland

[3] Institut für Mittelstandsforschung Bonn (IfM), Maximilianstraße 20, 53111 Bonn, Germany

firm (Pyromalis and Vozikis 2009; Handler 1994). The succession event is a process (Handler 1994) during which management power and ownership is transferred step-by-step (Le Breton-Miller et al. 2004; Block et al. 2011). Thus, such transitions are not completed until ownership is fully transferred to the next generation of business owners (Nordqvist et al. 2013; Handler 1994). Consequently, interpersonal dynamics render such ownership transitions unique and critical events for predecessors as well as their successors (Lambrecht 2005). In transitions from the first generation to the second, for example, the decision-making processes during the succession are difficult to master because both parties have no ex ante knowledge or experience about (one-time) successions – as is the case with repeatable business procedures (Sonfield and Lussier 2004; Cabrera-Suarez et al. 2001). Moreover, both actors have to find their way to deal with this specific decision-making process. Predecessors have to decide if, how, when, and to whom they would like to transfer their family business. Potential successors have to be willing and competent enough to take over the family business (Cabrera-Suarez et al. 2001; McMullen and Warnick 2015). This willingness can result from their commitment to the family and the business itself as well as the economic condition of the family business to ensure the wealth of the family in the future (McMullen and Warnick 2015; Le Breton-Miller and Miller 2013; DeTienne and Chirico 2013).

As a result, business transitions involve novel management problems that the respective business partners must solve on their own. Moreover, once made, such business decisions are more or less irreversible and often deprive the former owner of a role or task to which he or she has devoted his or her entire life (Molly et al. 2010; Le Breton-Miller et al. 2004; Harvey and Evans 1995). Also, framework conditions that accompany successions like specific laws, regulations, and taxes are perceived as an additional burden. Mistakes during the succession process can therefore have an impact on the future financial endowment and, consequently, will influence future opportunities of the family business. For this reason, much research in the family business field emphasizes that early succession planning activities are of utmost importance to optimize the outcomes of business succession (Handler and Kram 1988; Gilding et al. 2015; Sharma et al. 2003).

Given these arguments, it is of little surprise that family business succession is one of the most important foci in family business research (Xi et al. 2015). However, the literature examining the effects of such transition processes is still somewhat inconclusive and data about succession processes are relatively scarce (Bocatto et al. 2010). For example, in their literature review, Nordqvist et al. (2013) noted that there is still a pressing need to study the conditions surrounding the transfer of ownership in family businesses and their consequences. These conditions frame the succession process in an entrepreneurial context. From this point of view, the succession event is a process in which new owners enter the business and add new capital and resources that have consequences for firm processes and outcomes like growth (Nordqvist et al. 2013).

Following this line of thought, we propose that new family business owners do not only bring in their own resources but also tap the resources of the family business (Cabrera-Suarez et al. 2001). The perceived and evaluated resources are also an important dimension of the decision-making process; i.e., if a takeover makes sense from a successor's point of view in terms of future business performance. This perspective on succession underlines the complexity of the process and the decisions

that need to be taken during succession planning and the realization phase (Le Breton-Miller et al. 2004). Moreover, in our paper we respond to the call of many researchers in this domain of research who have stressed the need for additional theoretical lenses and empirical approaches to capture the complexity of business succession processes in its different dimensions (Daspit et al. 2016; Madison et al. 2016; Handler 1994). Specifically, research regarding investment behavior, credit financing, and subsequent performance in the context of the succession event is still in its infancy and the literature has just begun to recognize these topics to be important for research (Molly et al. 2010; Wennberg et al. 2011; Xi et al. 2015; Hillier et al. 2018). New developments in family business research show, in particular, that agency behavior is a relevant issue also in the family businesses context (Williams Jr et al. 2018; Schulze et al. 2003). Indeed, distinct agency behavior can occur between family members, who plan or take over the succession for different reasons, as well as between family businesses and other actors involved in the succession process, such as banks, who show an early interest in who could be a potential successor to minimize risks (Schell et al. 2018; Schulze et al. 2003). Consequently, it makes sense to apply agency theory when considering different parties involved in a succession event and to include them in the analysis.

The aim of the paper is therefore to gain deeper insights into the impact of the succession event on investment decisions, credit financing and firm performance. By doing so, our paper seeks to answer the following research questions: *How does the succession process influence investment decisions in the pre-and post-succession-phase (*i.e.*, before and after the final transfer of ownership has taken place); How do investment decisions affect subsequent firm performance; Do credit constraints play a role in the context of succession events?*

We consider it especially fruitful to explore these particular questions because of the high number of business transfers each year all over the world and the potential losses in productive capital and jobs that may occur when these successions fail (Habbershon and Williams 1999; Handler 1994). Moreover, given the much discussed financial restriction that is said to be imposed especially on new business owners (Backes-Gellner and Werner 2007; Molly et al. 2010), the study at hand can shed more light on the question of whether such succession decisions really affect access to debt financing.

Taking into account agency theory, we considered the succession process in family-owned companies and also included the role of financing by banks (Akerlof 1970; Williams Jr et al. 2018). With the use of data from the Kreditanstalt für Wiederaufbau (German Reconstruction Loan Corporation, KfW), the only representative data source on SMEs in Germany, we find that former business owners are less likely to invest in their firm prior to ownership transfer as compared to companies not faced with such takeover events (*investment backlog hypothesis*). However, we also show that this investment deficit is counterbalanced by investments of the new owner as early as within one year after the takeover has occurred (*investment incentive hypothesis*). Moreover, our analysis provides evidence that, following company acquisition, the new business owner generally seeks a new business strategy. That is, the new business owner seems to take advantage of new growth opportunities which are reflected in higher turnover growth rates and more optimistic turnover and return in equity forecasts as compared to other businesses (*growth impulse hypothesis*). Last but not least, although hypothesized, our analysis provides no empirical evidence to suggest that

credit institutions reject loan applications of new business owners more often than those of established business owners (*financial restriction hypothesis*).

We consider that our paper makes the following main contributions. First, to the best of our knowledge, no previous study uses a rich dataset to test how succession simultaneously affects investment decisions, credit financing, and business performance in family businesses. Second, we contribute to the literature by broadening collective knowledge about the influence of a business succession on the willingness and ability of successors to borrow debt capital from banks (Parker 2016). Third, our study adds to the research base by examining in detail the impact of succession on subsequent business development (Ahrens et al. 2019).

The remainder of the paper is structured as follows. We begin by discussing the findings of previous studies related to our research questions and outline a conceptual framework for our empirical analysis. Then, we test several hypotheses by drawing on representative data on SMEs in Germany. Finally, we conclude with a discussion of our main results, limitations of our analysis, and suggestions for future research.

Conceptual framework

Studies focusing on information asymmetries among predecessors, successors, and other stakeholders (e.g., banks) (Davis and Harveston 1999; Giambatista et al. 2005; Dehlen et al. 2014; Miller et al. 2007) point to agency problems in the succession process that originate from family conflicts or dysfunctional altruistic behavior (Madison et al. 2016; Schulze et al. 2003). These factors can manifest themselves in several ways, such as risk-averse behavior of actors, a lack of financial resources, and an overall reluctance to grow (Schulze et al. 2003; Kaye and Hamilton 2004; Zellweger and Kammerlander 2015; Shepherd and Zacharakis 2000). In this context, a related stream of literature examines the antecedents of succession events and their subsequent effects on performance, highlighting the role of investment behavior (De Massis et al. 2008), changes in goals (Kotlar and De Massis 2013; Williams Jr et al. 2018), ownership dispersion (Schulze et al. 2003), and competencies and skills (Barach and Ganitsky 1995). In the aggregate, most studies in the extant literature have found evidence for a performance change in family firms after an ownership transfer takes place. However, both positive and negative effects have been identified (Diwisch et al. 2009; Molly et al. 2010; Wennberg et al. 2011; Bennedsen et al. 2007). In what follows, we will describe a conceptual framework via which we propose a set of hypotheses predicting specific behavioral effects in the context of the business succession process.

Generally, a business succession involving the transformation of ownership and management rights can be described as a *handover* or *takeover* (Le Breton-Miller et al. 2004). The depiction depends on the perspective from which the transfer of these ownership and management rights is viewed. From an economics perspective, a *handover* can be seen as the liquidation of all of the tangible assets, financial assets, and intangible assets tied up in the business and their transfer into the private assets of the previous business owner (divestment). From the perspective of the new business owner, the transaction represents an investment in future earnings from entrepreneurial activity (DeTienne 2010).

We frame our theoretical analysis within the perspective of investment and financial theory under uncertainty and assume that information asymmetries also exist in a takeover process between the predecessor and the successor in the family business context (Madison et al. 2016). In the German tax and legal system, various options for transferring shares exist (e.g., donation, heritage, and purchase), but in every case financial costs like bureaucracy costs and taxes occur (Felden and Pfannenschwarz 2008; Olbrich 2005). Moreover, management resources are needed to plan and realize the ownership transfer, so an investment of tangible and intangible assets is needed from both actors. Thus, also where the family business is transferred internally, contracting situations with principals and agents occur (Lubatkin et al. 2005). On the one hand we assume that the former business owner has an informational edge over the new business owner, which will affect the purchase price of the takeover and other contracting conditions such as pension plans, life estate, or other liabilities towards the former generation (DeTienne 2010; Dehlen et al. 2014; Kammerlander 2016). On the other hand, the potential successor is the one who knows best if he/she is willing to take over the family business which is nowadays no longer self-evident because the predecessor has a need to have a willing and competent successor (McMullen and Warnick 2015; Zellweger et al. 2011; Williams Jr et al. 2018; De Massis et al. 2016). Extant research shows, for example, that such principal-agent conflicts can also arise in family businesses and there are tentative hints that they are also prevalent in the business succession situation (Madison et al. 2016). More generally, both actors have information which they can use to influence the contracting situation before and during the business succession process. Consequently, following this line of thought, we propose that agency behavior can exist in family business internal succession processes as well as principal-principal-situations which can occur (Madison et al. 2016; Zellweger and Kammerlander 2015; Schulze et al. 2003).

Financial theories are generally based on the assumption that individuals behave in a rational manner; that is, with the objective of maximizing their expected utility. Following this neoclassical postulate, former family business owners will have a strong incentive to engage in fewer investment activities than would otherwise be the case, as their investment planning horizon is fixed to the date of divestment; that is, the point in time when the transfer in ownership is scheduled to take place (Le Breton-Miller et al. 2004). In a related vain, it can be argued that in the period after these investments have taken place (but before the actual takeover event) new market information may become available. Taking this into account may indicate that the forecasted investment payoffs will be less favorable than expected at the time when the investment was made, thereby reducing the profitability of the business and the price that the successor will be willing to pay to the predecessor (Handler 1994; Kammerlander 2016; Lee et al. 2003). Moreover, the family business has to be in good economic condition and should be evaluated as an attractive opportunity by potential successors, because the pool of potential internal (and external) successors is limited (Sharma and Irving 2005; Basco and Calabrò 2017). Although internal business succession is the preferred option in most family firms, for example because from the view of former business owners it allows preservation of socioemotional wealth through generations (Carr et al. 2016; Miller et al. 2003; Basco and Calabrò 2017), it is no longer self-evident that potential successors are always willing to take over the family business (Zellweger et al. 2011). Consequently, succession also has to be an attractive career option for internal

candidates; that is, basis conditions like the financial strength of the firm will be important factors in the successor's decision-making process. In line with this argument, former family business owners may also reduce former investments because a high stock of equity could be more attractive for potential (internal) successors than a high stock of debt. Moreover, as already noted, a business succession process needs a large amount of resources for handling taxes, laws, and bureaucracy (Bjuggren and Sund 2005; Yu et al. 2012; Miller et al. 2003) and reducing investments before the succession may be one way of providing these resources to the successor. Thus, following this line of reasoning, it can be argued that former owners will have a strong aversion to making long-term investment decisions shortly before transfers in ownership (Chrisman and Patel 2012; Ajzen 1985; De Massis et al. 2008).

In contrast, because downsizing investments in the pre-succession phase may reduce the value of a company, an upcoming succession could also motivate the former owner to increase his or her investment activity to make the business more attractive to potential successors and, consequently, to increase the perceived value of the business (Kimhi 1997). Thus, it is conceivable that investments will increase before transition and predominantly involve those investments that increase the value of the business in the short run; that is, until the takeover occurs. As such, the practice of increasing the value of a company in favor of the former owner just prior to the effective date of the takeover could also be purely opportunistic in nature and labeled as "window dressing". In this case, one would have to assume that a positive relationship exists between a forthcoming business succession and investment activities.

In sum, we therefore formulate the following two competing hypotheses:

> *Hypothesis 1a: Investments are lower in family firms in a pre-succession phase compared to family firms without any succession plans* (*investment backlog hypothesis*).
> *Hypothesis 1b: Investments are higher in family firms in a pre-succession phase compared to family firms without any succession plans* (*window dressing hypothesis*).

Investments are an essential prerequisite for business growth and a reduced willingness of the predecessor to invest prior to a takeover event may have a negative impact on a firm's subsequent growth (Ward 2011). Consequently, reduced investment activity by the former owner can influence the investment behavior of the new owner after the transmission of ownership has taken place. On the one side, the new owner has to establish conditions conducive to restructuring the business through new investments; on the other, financial sunk costs can lower the successor's proclivity to take risk and investment actions after the takeover of the business (Shepherd and Zacharakis 2000).

Nevertheless, a healthy family firm and financial conditions which offer possibilities to "reinvent" the business should be more attractive for potential successors (Ward 2011; Jaskiewicz et al. 2016; Basco and Calabrò 2017). Moreover, the view that family business succession is an entrepreneurial process offers fruitful insights. That is, successors insert their own financial (as well as social and human) capital and use the business succession process as an opportunity to promote entrepreneurial activities (Nordqvist et al. 2013; Ahrens et al. 2019). Open investment decisions, a stock of

equity, and financial possibilities will positively influence such entrepreneurial activities (Ahrens et al. 2019). Successors will restructure the company in line with their own set of objectives, thereby mobilizing future business potentials and triggering a spurt in growth (Kotlar and De Massis 2013). Therefore, the investment activity of the new owner after the takeover can be seen as strategic, affecting performance of the business in the longer term.

Consequently, and irrespective of the investment activities of the predecessor, the succession event will trigger additional investment activities to promote entrepreneurial activities after the succession event has taken place and will spur post-succession performance.

Therefore, we hypothesize the following:

Hypothesis 2a: Investments are higher in family firms in a post-succession phase compared to family firms without any succession plans (*investment incentive hypothesis*).
Hypothesis 2b: Performance is higher in family firms in a post-succession phase compared to family firms without any succession plans (*growth impulse hypothesis*).

Finally, it can be argued from a principal-agent perspective that information asymmetry problems between potential financiers and new business owners are also greater compared to the case where companies have not changed hands (Akerlof 1970). As described above, the successor is confronted with the task of having to redirect the company, which involves considerable investments (Harvey and Evans 1995). At the same time, outside financiers have little reliable data to draw on as a benchmark to evaluate the quality of the new business owner as well as his or her new business strategy - resulting in well-known adverse selection problems and credit rationing (Stiglitz and Weiss 1981). Creditors concerned about adverse selection may ration credit, finance only a fraction of assets and operations, or claim high collateral (Cressy 1996; Binks and Ennew 1996). This can lead to financing problems (i.e., a negative effect on the ability to gain access to debt credit), which may hinder the implementation of newly planned investment programs in the context of succession. Moreover, financial problems can also arise because financing the business takeover may have already fully exhausted the financing options of the new owner and his/her potential collateral, so that the new owner themselves could be forced to postpone investments. Overall, then, we expect in these cases that, after the takeover event has occurred, companies may experience reduced investment activity due to financial constraints (De Massis et al. 2008; Koropp et al. 2013). In sum, strong information asymmetries exist in the succession context because external financiers' (e.g., bank employees) knowledge about the skills and traits of the new successor is limited (Madison et al. 2016) and the selection process vis-à-vis internal candidates in family firms is often perceived as unprofessional, which can reinforce the feeling of existing information asymmetries (Stewart and Hitt 2012; Jaskiewicz et al. 2013). In this setting, banks, for example, may be less willing to provide debt capital to new owners in the post-succession phase of a company (Barach et al. 1988; Lee et al. 2003). Therefore, we hypothesize the following:

Hypothesis 3: The availability of debt credit is lower for family firms in the post-succession phase compared to family firms without any succession plans (financial restriction hypothesis).

Data and variables

Data Set The empirical component of this paper is based on the KfW (Kreditanstalt für Wiederaufbau) SME Panel, which was made available to one of our researchers by the KfW during a joint research project. The data sources for this study are consecutive surveys conducted over the 2002–2006 period. The starting point for the statistical analysis is the survey taken in the year when the succession event has occurred (t_s). From this point of origin, the wave details from other survey waves (i.e., before and after a succession event) were linked. In addition, a sample of companies that had not undergone succession and does not plan to do so in the near future was included for the purpose of comparison (hereafter referred to as "reference companies"). Due to data restrictions, the period covered by statistical analyses starts one year before and ends two years after the takeover (t_{s-1} until t_{s+2}).

Note that the data set has both cross-sectional and time-series (panel) dimensions. Essentially, the data consist of pooled cross sections sampled from a large population in different years, that is, from 2002 to 2006. However, we are able to follow some of the firms – e.g., those that had recorded a succession event – across time. Based on these, and to test hypotheses 1a, 1b, 2a, and 2b (using turnover growth rates (in percent) for the first and second year after succession as the dependent variable), we estimate separate regression models in the pre- and post-succession phases. The reason for using separate pooled cross-sectional data sets in the pre- and post-succession phase is to increase the sample size in the regression models.

The data cover small- and medium-sized firms with turnovers of less than €50 million and less than 500 employees. Moreover, we frame the sample only in terms of the owner-managers of SMEs, as they are perceived to be the most knowledgeable about firms' practices and strategic decisions (Block et al. 2011; Handler 1994). Finally, in our analysis, we only include those business successions that are still within family property after the succession event. Thus, as noted above, we analyze internal business successions of family firms.

Dependent Variables To test hypotheses H1a, H1b, and H2a (i.e., *investment backlog hypothesis*, *window dressing hypothesis,* and *investment incentive hypothesis*, respectively*)*, detailed information of companies investment decisions in the pre- and post-succession phase was used. Specifically, (i) the investment probability (a binary variable, which takes on the value of "1" if the firm has invested and "0" otherwise) and (ii) the investment volume (in Euros) in the pre- and post-succession phase was analyzed. To test H2b (*growth impulse hypothesis*), the following measures of post-succession business performance were used. First, two subjective success indicators that capture expected turnover and expected return. That is, after the takeover had occurred, the new business owners were asked to estimate whether their turnover would increase, remain the same, or decrease and whether their profitability would improve, remain the same, or deteriorate in the following two years. Second, to capture real

business performance, information on the turnover growth rates (in percent) for the first and second year after succession was utilized. Finally, to test H3 (*financial restriction hypothesis*), we used detailed information on specific banking lending patterns. First, to analyze bank induced financial restrictions directly, the businesses were asked to comment on the financing aspects of their investments. To this end, they were given the following response options in the questionnaire: "The business did not make (and did not plan) any investments during the period under review"; "The business made investments during the period under review, but these investments were made without prior negotiation or participation by banks"; "The company undertook investment activity, yet after bank negotiation, the company did not accept the loan offer from the bank"; "The company undertook investment activity without financing assistance from the bank since, after negotiation, no loan offer from the bank was made"; "All investments were made with the assistance of bank loans." Second, to account for investment success in the context of such bank induced financial problems, the business owners were additionally asked whether the businesses had invested as planned or less than planned during the period under review. In our regression models, both direct effects and the effect of financing problems with banks on real investment success were taken into account.

Independent Variable For our regression analysis, a "takeover" business is defined as a business that was taken over in 2002 or later and was founded prior to 2001. In this way, we can be suitably sure that turnover (and not start-up) effects are being analyzed. The reference companies are defined as companies that were taken over before 1999 or, if the year of takeover is not known, were founded before 2001 and have not been the subject of any takeovers since. In total, we have information on up to 520 takeovers (coded as "1" because the succession event occurred in the covered period) and around 14,000 reference companies (coded as "0" because a succession event had not occurred in the above mentioned time frame) in the data set.

Control Variables Besides these dependent variables and the takeover variable, we included different control variables that are important with regard to the succession decisions of SMEs (e.g., Diwisch et al. 2009; Molly et al. 2010). That is, in the empirical models discussed below, we regress the observed decisions of investments, business performance, and financial constraints based on the firm's age, the number of its employees, its industry, the degree of its internationalization, and its location. Although the selection of elements included in our estimation models is, in part, data-driven, we are confident that we have included those determinants that are most salient to the succession process from a firm-level perspective.

A description of the variables used in this process of hypotheses testing is reported in Table 1. The means and standard deviations of all variables included in the econometric models, as well as their bivariate correlations, are presented in Table 2.

Analytical approach

For all models with dichotomous dependent variables, we constructed Probit regressions. To reiterate, these dependent variables are as follows: *investment probability,*

Table 1 Variables and operationalization

Variable	Item Description
Takeover:	Firm belongs to the group of takeover companies (1 = yes, 0 = no)
Investments (H1a, H1b, H2a)	
Probability:	Probability of investing in the pre- and post-succession phase (1 = yes, 0 = no)
Volume:	Volume of investment in the pre- and post-succession phase (in Euros)
Turnover Growth Rates und Future Expectations (H2b)	
Growth Rate:	Growth rate turnover in the two years following succession (in percent)
On Return:	Return expectations in the two years following succession (1 = better, 0 = other)
On Turnover:	Turnover expectation in the two years following succession (1 = better, 0 = other)
Financing Restrictions (H3)	
Credit Restrictions:	Credit restrictions in the post-succession phase (1 = No investments planned / made, 2 = Investments planned / made, but bank declined loan request, 3 = Investments planned / made but firm received no loan offer from bank, 4 = Investments made with bank loans, 5 = Investments made without ex ante applying for a bank loan)
Credit Restrictions and Investment Success:	Investment success in the post succession phase (1 = invested less than planned, 0 = invested as planned)
Controls	
Firm's Age:	Age of business in t_n (in years)
Firm's Size:	Number of employees in t_n
Location:	Business location in t_n (1 = East Germany, 0 = West Germany)
Degree of Internationalization:	Degree of internationalization in t_n (1 = ratio of exports in turnover is at least 10%, 0 = less than 10%)"
Industry Sectors:	"Six indicators (manufacturing, building, retail, wholesale, services, other = Reference)"
Survey Years:	"Five indicators (2002–2006, 2005 = reference)"

t_n = from one year before to two years following the takeover event; t_{s-1} = one year before the takeover event; t_s = takeover year; t_{s+1} = one year after the takeover event; t_{s+2} = two years after the takeover event

Source: KfW SME Panel

future expectations on return and turnover, and *investment success* (Tables 3, 6, and 8, respectively). Because the dependent variable for *investment volume* has a lower limit of "0" (non-investing businesses), a Tobit model was used (Table 4). The dependent variable in the model for determining credit restrictions is nominal (with the five characteristics described above), so a multinomial response model was estimated (Table 7). The last model with a continuous dependent variable (*turnover growth rate*) was estimated using OLS with standard errors robust to heteroskedasticity (Table 5). Estimation results (coefficients) are presented as marginal effects evaluated at the multivariate means of the (other) independent variables.

Finally, it should also be noted that we employed a hierarchical block-building approach with regard to the question of whether bank-induced financing problems are responsible for a shortfall in investment in the case of takeovers (Table 8). Here, model

Table 2 Means, standard deviations, and Pearson's correlations among key variables

Variables[1]	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Investment Probability	.609	.488	1.000										
2. Investment Volume	199,414	817,944	.202*	1.000									
3. Turnover Growth Rate	.0176	.471	.012	.052*	1.000								
4. Future Expectations on Return	.2693	.444	.069*	.061*	.160*	1.000							
5. Future Expectations on Turnover	.3098	.462	.151*	.139*	.093*	.615*	1.000						
6. Credit Restrictions[2]	.0628	.243	.090*	.035	.174*	.068*	.059*	1.000					
7. Takeover	.0340	.181	.052*	.002	.055*	.036*	.043*	−.003	1.000				
8. Firm's Age	31.765	35.852	.072*	.079*	.072*	.011	−.002	−0.015	.057*	1.000			
9. Firm's Size	32.708	49.112	.222*	.301*	.258*	.101*	.141*	0.045*	−.041*	0.209*	1.000		
10. Location	.40508	.491	−.064*	−.036*	.592*	−.112*	−.093*	−0.021	−.052*	−0.194*	−0.070*	1.000	
11. Degree of Internationalization	.17812	.383	.116*	.130*	−.124*	.127*	.181*	0.046*	−.029*	0.013	0.169*	−0.096*	1.0

* Correlation is significant at the 0.05 level (two-tailed); [1] Growth rate variables were measured as t_{s+1}/t_s (one year after the takeover event / takeover year), all other variables were measured in t_s (takeover year) [2] 1 = Investments planned / made but banks declined a loan request or firms did not accept the bank's loan offer, else = 0

Source: KfW SME Panel

Table 3 Probit estimation results – investment probabilities

	Pre-Succession	Post-Succession		
	Model t_{s-1} dF/dx[1]	Model t_s dF/dx[1]	Model t_{s+1} dF/dx[1]	Model t_{s+2} dF/dx[1]
• Takeover	−0.288*	0.122**	0.073	−0.043
	(−2.06)	(4.33)	(1.09)	(−0.57)
• Firm's Age	0.00016	0.00012	0.00003	−0.00004
	(0.59)	(0.78)	(0.09)	(−0.10)
• Firm's Size	0.003**	0.003**	0.004**	0.003**
	(9.94)	(18.21)	(11.81)	(8.13)
• Location	−0.021	−0.034**	−0.015	0.041
	(−1.04)	(−3.06)	(−0.74)	(1.55)
• Degree of Internationalization	0.091**	0.085**	0.132**	0.047
	(3.48)	(5.78)	(4.91)	(1.30)
Constant	0.246	0.144	0.245	0.0868
	(1.21)	(1.19)	(1.28)	(0.36)
LR-Chi[2] Test	199.20**	745.12**	294.11**	120.93**
Pseudo R^2	0.055	0.065	0.075	0.057

t-statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. [1] Marginal effects. All regressions additionally include variable controls indicating industry sector and survey years

Source: KfW SME Panel

Table 4 Tobit estimation results – investment volumes

	Pre-Succession	Post-Succession		
	Model t_{s-1} dF/dx[1]	Model t_s dF/dx[1]	Model t_{s+1} dF/dx[1]	Model t_{s+2} dF/dx[1]
• Takeover	−135841*	65897**	61,253	−19,604
	(−2.38)	(2.67)	(1.20)	(−0.59)
• Firm's Age	1612**	2295**	2145**	1804**
	(14.49)	(27.56)	(16.34)	(13.96)
• Firm's Size	362*	214+	172	−89
	(2.49)	(1.79)	(0.86)	(−0.47)
• Location	3224	−15,706+	−2807	−10,522
	(0.29)	(−1.78)	(−0.21)	(−0.82)
• Degree of Internationalization	69713**	88374**	84476**	36042*
	(4.48)	(7.21)	(4.38)	(1.96)
Constant	−301,682.2*	−226,389.5*	−247,594.9	−161,439.8
	(−2.28)	(−2.07)	(−1.51)	(−1.18)
LR-Chi[2] Test	345.45**	1169.30**	406.24**	259.76**
Pseudo R^2	0.008	0.007	0.009	0.010

t-statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. [1] Marginal effects (censored). All regressions additionally include variable controls indicating industry sector and survey years

Source: KfW SME Panel

Table 5 OLS estimation results – turnover growth rates in the post-succession phase

	Post-Succession	
	Model t_{s+1}/t_s	Model t_{s+2}/t_s
• Takeover	0.145+ (1.82)	0.208+ (1.74)
• Firm's Age	−0.000453+ (−1.72)	−0.000853* (−2.05)
• Firm's Size	0.0000647 (0.26)	0.000645 (1.38)
• Location	−0.0148 (−0.81)	−0.00585 (−0.20)
• Degree of Internationalization	−0.00361 (−0.15)	0.0525 (1.33)
Constant	0.0625 (0.79)	0.0304 (0.39)
F-Test	1.85*	2.01*
R^2 (adjusted)	0.007	0.014

t-statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. All regressions additionally include variable controls indicating industry sector and survey years

Source: KfW SME Panel

1 includes control variables only. In model 2, we entered control variables and financial constraint variables as moderator variables, whereas the final model 3 additionally contains interaction terms to test if takeovers are confronted with stronger debt credit constraints than the reference companies without a succession event. That is, if the interaction term "Takeover * Firm declined Credit Offer" and/or "Takeover * Bank made no Credit Offer" is positively significantly related to the outcome variable (i.e., firms have invested less than planned), this can be used as empirical evidence that takeover firms experience reduced investment activity due to financial constraints.

Results

Tables 3, 4 and 5 present the results of multivariate analyses for determining investment probabilities, investment volumes, and turnover growth rates from one year before to two years after the takeover. The variable of interest is the takeover variable, which takes the value of 1 if a takeover takes place during this period of time or takes the value of 0 if this is not the case.

As noted, the coefficients of the independent variables reflect marginal effects. That is, in the case of the takeover variable, the coefficient gives us information about how different success indicators change when a company is taken over. In the case of investment probabilities (Table 3), for example, the takeover coefficient is $\beta = -.288$ ($p < .05$) one year before the takeover and $\beta = .122$ ($p < .01$) in the year after the takeover event. This means that, when controlling for the other variables, takeover companies are associated with a negative investment probability of 28.8% one year

before the takeover date. In contrast, takeover companies show a 12.2% higher investment probability in the year directly following the takeover event. It is worth bearing in mind here that the level of investment volume in the takeover year took place after the succession event and is not distorted by the effect of the purchase price of the company, that is, information on personal funds and company funds has not been pooled. The coefficient of the takeover variable in the estimates one year after the takeover, although positive, is statistically insignificant. The same holds with respect to the coefficient estimate two years after the takeover event. In other words, there is no difference between takeover companies and reference companies at one and two years after the takeover in terms of investment probabilities.

Similar results can be observed when one considers investment volumes (Table 4). Compared to the reference companies, takeover companies show, on average, a €135,000 lower investment volume one year prior to the takeover. In the year directly after succession, however, takeover company investment volume is about €66,000 more than that of the reference companies. Likewise, in both years after the takeover, there is no statistical difference between the two types of companies as far as investment behaviors are concerned. Thus, in sum, hypotheses H1a (investment backlog hypothesis) and H2a (investment compensation hypothesis) are supported while H1b (window dressing hypothesis) can be rejected.

The econometric results in Table 5 show that, compared to the reference companies, the takeover companies have significantly higher turnover growth rates two years following the takeover event, compared to the reference companies. Therefore, by this time, the takeover companies appear to have succeeded in offsetting the drop in turnover growth rate induced by the takeover process. Table 6 shows multivariate estimates pertaining to subjective turnover and return expectations. In both cases, a positive coefficient can be interpreted as a probability of a positive expectation of return and turnover in the 24 months following the succession event. The coefficients of the takeover variable in both models are positive and statistically significant. The probability of a positive return estimate in the case of a takeover company is 6.8% higher than that of a reference company. The probability of a positive turnover estimate in the case of a takeover company is 7.9% higher than that of a reference company. Overall, then, H2b (growth impulse hypothesis) is supported by our empirical analysis.

Table 7 shows the results of the multinomial analysis concerning possible direct credit restrictions with regard to investments for the post-succession phase (i.e., the period directly after and one year after the takeover event has occurred). As described above, bank-induced financing problems were measured by asking the companies if they made or planned investments under the condition that (a) after negotiating with the bank, the company did not accept the loan offer from the bank or that (b) after negotiation, no loan offer from the bank was made. The reference category in this multinomial model was composed of companies with no reported bank-induced financing problems. The results show that, both directly and one year after the takeover event, no significant differences are revealed between takeover companies and reference firms with respect to possible bank-induced financing problems. In other words, takeover companies are not more likely to be rejected by banks when applying for a bank loan.

Finally, in Table 8 we analyze whether, after the succession event, the businesses invested less than planned ("1") compared to the situation of having invested as

Table 6 Probit estimation results – future expectations on return and turnover in the post-succession phase

	Expected Return dF/dx[1]	Expected Turnover dF/dx[1]
• Takeover	0.068* (2.51)	0.079** (2.80)
• Firm's Age	−0.0006** (−3.97)	−0. 0009** (−6.41)
• Firm's Size	0.0007** (6.42)	0.001** (10.04)
• Location	−0.094** (−9.26)	−0.076** (−6.96)
• Degree of Internationalization	0.088** (6.60)	0.135** (9.45)
Constant	0.223+ (−1.81)	−0.329* (−2.54)
LR-Chi² Test	393.63**	734.85**
Pseudo R^2	0.040	0.073

t-statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. [1] Marginal effects. All regressions additionally include variable controls indicating industry sector and survey years

Source: KfW SME Panel

planned ("0") and whether bank-induced financing problems, in the case of business succession, are responsible for a possible shortfall in investment. Here, three models were specified and in all cases, companies that had not invested at all in the period under review (and did not plan to do so) were excluded from the analysis. Model 1 in Table 8 shows that, compared to the reference companies, the takeover companies invested significantly less than planned, with a 10.1% higher probability. Model 2 additionally uses information from the credit restriction equation from Table 7. That is, the dependent variable in Table 7 was recoded in such a way that both characteristics indicating financing problems with banks can be included in the new calculations as independent dummy variables. Both variables now take on the value of "1" in the case of credit restrictions, whereas problem-free bank financing is reflected by a value of "0". As expected, the results of the second model, which includes the credit restriction variables, show that businesses with bank problems have a significantly higher probability of investing less than planned. Specifically, companies that have refused a loan offer made by banks have a 15.2% higher probability of investing less than originally planned, and companies that, despite negotiations with the bank, have received no loan offer have a 45.2% higher probability of investing less than planned. Additionally, compared to the reference companies, the takeover companies still show a significantly higher probability of investing less than planned (+8.9 percentage points) – even after controlling for bank-induced financing problems. This finding can be taken as the first hint that problems of access to credit cannot be assumed to be responsible for a strong tendency towards investment shortfalls by takeover companies. Moreover, this finding is also supported by the third model specification, in which two additional interaction terms were introduced. These interaction terms capture the joint influence of the takeover variable and the credit restriction variables; that is, the introduction of both

Table 7 Multinomial estimation results – credit restrictions in the post-succession phase

Reference: All investments were made with the assistance of bank loans	Model t_s dF/dx[1]		Model t_{s+1} dF/dx[1]	
The company undertook investment activity without financing assistance from the bank since, after negotiation, no loan offer from the bank was made				
• Takeover	−0.239	(−1.02)	−0.373	(−0.46)
• Firm's Age	−0.00226	(−1.62)	−0.00741+	(−1.77)
• Firm's Size	−0.00445**	(−4.34)	−0.00331	(−1.31)
• Location	0.474**	(4.97)	0.0649	(0.24)
• Degree of Internationalization	0.198+	(1.66)	−0.0431	(−0.13)
Constant	−1.113**	(−2.81)	−1.232	(−1.42)
The company undertook investment activity, yet after bank negotiation, the company did not accept the loan offer from the bank				
• Takeover	−0.409	(−1.58)	−0.475	(−0.44)
• Firm's Age	−0.00216	(−1.59)	−0.00951+	(−1.75)
• Firm's Size	−0.000242	(−0.30)	−0.00249	(−0.86)
• Location	−0.0642	(−0.63)	−0.120	(−0.37)
• Degree of Internationalization	0.235*	(2.00)	0.326	(0.90)
Constant	−0.159	(−0.48)	−0.578	(−0.74)
The business made investments during the period under review, but these investments were made without prior negotiation or participation by the banks				
• Takeover	−0.757**	(−4.73)	−0.272	(−0.66)
• Firm's Age	−0.00166+	(−1.89)	−0.00727**	(−3.53)
• Firm's Size	−0.00260**	(−4.52)	−0.00287*	(−2.39)
• Location	0.301**	(4.50)	0.248	(1.64)
• Degree of Internationalization	−0.0763	(−0.94)	−0.204	(−1.17)
Constant	0.361	(1.25)	0.432	(0.81)
The company did not make (and did not plan) any investments during the period under review				
• Takeover	−1.022**	(−6.12)	−0.829*	(−1.99)
• Firm's Age	−0.000469	(−0.53)	−0.00373+	(−1.88)
• Firm's Size	−0.0163**	(−16.53)	−0.0220**	(−10.94)
• Location	0.340**	(5.17)	0.255+	(1.71)
• Degree of Internationalization	−0.368**	(−4.20)	−0.705**	(−3.84)
Constant	0.869**	(3.20)	1.178*	(2.40)
LR-Chi[2] Test	1169.08**		433,39**	
Pseudo R^2	0.047		0.070	

t-statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. [1] Marginal effects. All regressions additionally include variable controls indicating industry sector and survey years

Source: KfW SME Panel

interaction terms into the model enables us to separately analyze the effect of the takeover event with regard to credit problems. The interactions proved to be insignificant, which means that, in comparison with reference companies, takeover companies

do not invest less than planned because of greater credit restrictions imposed by banks than other companies. Thus, in sum, H3 (financial restriction hypothesis) is not supported by our data.

Discussion

Business succession is of considerable economic importance because of the high number of potential such successions per year. Many family firms perceive business succession more as a time of struggle than as a time for renewal (Ward 1988; Daspit et al. 2016). Succession planning is therefore crucial to help maximize the chances of a successful succession and should include planning for the transfer of management and ownership (Ward 1988; Lee et al. 2003; Le Breton-Miller et al. 2004; Pyromalis and Vozikis 2009). Strategic planning offers the possibility to use succession as a time for renewal through innovation or reformulation of strategic plans, for example (Hauck and Prügl 2015; Kotlar and De Massis 2013). Financial planning and, consequently, investment decisions before and during business succession will impact the financial

Table 8 Probit estimation results – investment behavior in the post succession phase

1 = Businesses have invested less than planned 0 = Firms invested as planned (=Reference)	Model 1 dF/dx[1]	Model 2 dF/dx[1]	Model 3 dF/dx[1]
• Takeover	0.101**	0.089*	0.081+
	(2.66)	(2.35)	(1.90)
• Firm's Age	−0.0004	−0. 0004	−0.0004
	(−1.62)	(−1.57)	(−1.55)
• Firm's Size	−0.0004*	−0.0003*	−0.0003*
	(−2.42)	(−2.01)	(−2.01)
• Location	0.028	0.022	0.022
	(1.53)	(1.25)	(1.25)
• Degree of Internationalization	−0.009	−0.026	−0.025
	(−0.37)	(−1.14)	(−1.13)
• Firm declined Credit Offer: (1 = yes)		0.152**	0.151**
		(4.96)	(4.77)
• Bank made no Credit Offer: (1 = yes)		0.452**	0.448**
		(11.73)	(11.15)
• Takeover * Firm declined Credit Offer			0.018
			(0.12)
• Takeover * Bank made no Credit Offer			0.050
			(0.40)
Constant	−0.873*	−1.393**	−1.406**
	(−2.08)	(−3.07)	(−3.07)
LR-Chi[2] Test	55.10**	208.79**	208.98
Pseudo R^2	0.021	0.080	0.080

t-statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. [1] Marginal effects. All regressions additionally include variable controls indicating industry sector and survey years

Source: KfW SME Panel

endowment of the family business and must therefore be viewed as an important part of succession planning behavior. Therefore, the study at hand dealt with the investment performance of businesses before and after a takeover by a new owner as well as with access to financing in the wake of an ownership transfer. This article offers relevant contributions that stand at the interface of succession, investment decisions, and performance.

First, this study contributes to the literature concerning business succession in family firms because there are few empirical studies currently available which have explored SME successions and their impact on finance and performance over time (Molly et al. 2010; Dyer 2006; Koropp et al. 2013). Moreover, most extant studies which focus on family business succession, have investigated management succession (Nordqvist et al. 2013). With our study we gain deeper insights into the transfer of ownership and its impacts on investments and performance. We show that investment decisions before and during the business succession process have an impact on ownership transfer and the long-term performance of family businesses. Through this, we underline that there is a need for future research in this domain to focus more on the ownership side of succession.

Second, following a call in the literature for the use of more theoretical lenses to understand family business behavior and especially the business succession situation more comprehensively, this study uses principal-agent theory to gain deeper insights (Madison et al. 2016; Daspit et al. 2016). With our theoretical model, and indeed some of our empirical results, we are able to offer new hints that agency behavior exists in the internal family business succession process. We argue that both actors are able to act as principal and agent, thus principal-principal situations can also occur. This finding has an impact on understandings of business succession in general. Further, if internal succession is understood as a contracting situation in which principal and agent operate, and with focus on ownership transfer under financial uncertainty, both actors are able to use their role to influence the succession process and the alignment of goals during this process can also be understood as part of the contracting situation (Kotlar and De Massis 2013; Williams Jr et al. 2018).

Third, with our study we were able to show that a decrease in business investment in takeover companies occurs one year before the takeover date. An upcoming takeover causes the former owner to reduce investment activity. The probability of investment in the year before the takeover is clearly lower in takeover companies than in other companies. Moreover, even if we only focus on those firms that invested, takeover companies reveal, on average, lower investment volumes than investing reference companies one year before the takeover event occurs. The *investment backlog hypothesis* (H1a) was confirmed. This restrained investment offers the opportunity for successors to invest on their own in, for example, innovative activities and through this they are responsible for future business development (Hauck and Prügl 2015; Ahrens et al. 2019). Consequently, the *window dressing hypothesis* (H1b) was not confirmed. This finding offers insights that predecessors miss investment opportunities and following this, investment and innovation stagnation may occur. This would hamper successful business development after business succession and renders succession more of a burden than an opportunity for renewal (Miller et al. 2003). Keeping this in mind, and the fact that the data only include successful business takeovers, our results

may give some clues as to why so many business successions actually fail. It is possible that former business owners of firms that could not be transferred may have neglected business investments to a greater extent than is the case with former business owners of successful takeovers, thereby reducing the profitability of their companies and making them unattractive to potential successors (Dehlen et al. 2014; Kammerlander 2016).

Fourth, we were able to show that positive effects of restricted investments in the pre-succession phase exist in the post-succession phase. The *investment incentive hypothesis* (H2a) was confirmed and we found broad empirical evidence for the *growth impulse hypothesis* (H2b). With the introduction of new owners, takeover companies experience a sharp upward movement in investment activity in the takeover year that exceeds the corresponding level of investment volumes in reference companies. In the two years following the transference of ownership, there is no discrepancy in the investment performance of these two types of businesses. From these results, we conclude that the slowdown in investment ceased within the first year of takeover. After the takeover of a business has occurred, the new owner not only compensates for the reduced investment activity of the former owner but also strives to give the business a new direction by restructuring the company and triggering a spurt in growth (Ahrens et al. 2019). This phenomenon can be observed across the entire period from which data were gathered. While reducing their manpower, takeover companies succeed in achieving new growth potential, which is reflected in higher rates of turnover growth and better future returns as well as turnover expectations.

Finally, we were able to show that a business transfer will not have a negative effect on the availability of debt credit in the post-succession phase. We argue that a takeover is not synonymous with a deterioration of financing opportunities available via credit institutions. Although the results of our multivariate analysis show that the changes induced by succession are partly responsible for the greater tendency of businesses to be engaged in investment projects to a lesser extent than planned, this effect cannot be traced back to a greater degree of rejection by banks for loan applications from takeover companies. The long-term orientation of family businesses and the possibility to introduce the successor over a long period offer the possibility to transfer the contact to the bank step-by-step (Steier 2001). Through this stepwise integration, the successor is able to free themselves from the "founder shadow" (Davis and Harveston 1999; Cadieux 2007) and bring their own social, human, and financial capital, which offer the opportunity to get additional financial support by banks (Nordqvist et al. 2013). Therefore, we conclude that reduced financial assistance for business successions due to credit constraints would not be justified from an economics point of view.

Limitations and future research

It is possible that former business owners of firms that could not be transferred may have neglected business investments to a greater extent than was the case with former business owners of successful takeovers, thereby reducing the profitability of their companies and making them unattractive to potential successors (Dehlen et al. 2014; Kammerlander 2016). Therefore, although our analysis

indicates a trend in this direction, future research should be conducted with a stronger focus on pre-succession investment behavior and its influence on succession failure. Furthermore, due to data restrictions, we were unable to analyze to what extent the investment slowdown may start at more than one year before the takeover. Therefore, it could be fruitful for future research to consider longer periods of time before the succession event.

Moreover, we also have to point out some data limitation issues which are relevant to our empirical analysis. As noted above, the data analysis is based on pooled cross-sections sampled from a large population in different years. Due to the fact that a succession event is a relatively rare occurrence and because many firms refuse to participate in subsequent interviews in the wake of such succession events, we used pooled cross-sections across time to estimate regression models in the pre- and post-succession phase to increase the sample size.[1] Viewed negatively, the group sizes were too low to run robust time-series regressions. This is a limitation in our paper which future research may wish to consider. However, following Wooldridge (2003), the statistical complications arising from using pooled cross-sections are rather minor and such data can be an effective way of analyzing the impact of a critical event (in our case the succession event) by drawing on separate data sets – i.e., before and after the event – to determine the effect on economic outcomes (in our case investment decisions and growth rates).

We frame our theoretical model in a way whereby we assume that after full ownership transfer, the former generation is no longer involved in the family business. We did this, because from our point of view, after full ownership transfer the management and the ownership power lies in the hands of the next generation and the former generation only has an informal influence (Miller et al. 2003; Davis and Harveston 1999). However, future research could explore the salience of the informal influence of former generations, to clarify if and how this influence impacts on investment behavior and performance during and after ownership succession.

Two additional constraints with regard to our data should be taken into account when interpreting the results. First, the data set only includes successful business takeovers. Therefore, analyses of the reasons for failed business successions are not within the scope of this study. Second, personal information regarding owner-managers in succession processes (i.e., information about the sociodemographic factors of the predecessor and successor) as well as for example more detailed information on family ownership proportions and family firm generations was not available in the data set. For deeper insights on the effect of restricted investments before successions, failed business successions should also be analyzed.

Our data also do not offer insights about succession decisions and the influence of pre-investment decisions on the willingness of successors (Parker 2016). In our theoretical model we propose that investment decisions of the predecessor may have an impact on the succession decision of successors, but with our data we are not able to analyze this in-depth. Again, this remains for future research.

[1] The sample size for those firms with a recorded succession event between 2002 and 2006 in the pre-succession phase was $n = 14$ (Table 3) and $n = 12$ (Table 4). The sample size in the post succession phase for these firms was $n = 60$ and $n = 45$ (Table 3, model ts + 1 and ts + 2) as well as $n = 54$ and $n = 41$ (Table 4, model ts + 1 and ts + 2).

Managerial implications

Continuous investment before, during, and after a business succession is crucial for the long-term survival of the family firm. Due to its specific characteristics, business succession could represent a substantive disjoint in the life-cycle of a family firm and hamper future innovation and development. On the one hand it is important that new business owners have the space to take their own investment and business development decisions. On the other hand, an interruption in investments because of an upcoming succession can be the beginning of the end of a family business. Our results herein show that successors are able to compensate restricted investments in the pre-succession phase and moreover we argue that they can use it as an opportunity for renewing the family business. Furthermore, we were also able to show that family business successors have debt credit available in the post succession phase. This could result from long-term succession planning, which integrates the successor in a stepwise approach which offers the possibility to effectively transfer contacts of banks and financiers. In sum, we underline the call in the extant literature for family business owners thinking about succession, to adopt a long term and stepwise approach. This also offers the opportunity to align the different goals of the predecessor and successor and take initial investment decisions together prior to the finalization of the new ownership arrangement.

Conclusions

This research offers new conceptual and empirical insights concerning the impacts of business succession on financing, investment, and business performance. In light of the economic relevance of family firms and especially the business succession process, and the assumed importance of structured and strategic investment behavior before, during, and after succession for long-term corporate success, our paper provides fruitful insights for both theory and practice.

References

Ahrens, J.-P., Calabrò, A., Huybrechts, J., & Woywode, M. (2019). The enigma of the family successor–firm performance relationship: A methodological reflection and reconciliation attempt. *Entrepreneurship Theory and Practice, 43*(3), 437–474. https://doi.org/10.1177/1042258718816290.

Ajzen, I. (1985). *From intention to action: A theory of planned behavior. Action control*. Berlin Heidelberg: Springer.

Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics, 84*(3), 488–500.

Backes-Gellner, U., & Werner, A. (2007). Entrepreneurial signaling via education: A success factor in innovative start-ups. *Small Business Economics, 29*(1), 173–190.

Barach, J. A., & Ganitsky, J. B. (1995). Successful succession in family business. *Family Business Review, 8*, 131–155. https://doi.org/10.1111/j.1741-6248.1995.00131.x .

Barach, J. A., Ganitsky, J. B., Carson, J. A., & Doochin, B. A. (1988). Entry of the next generation: Strategic challenges for family business. *Journal of Small Business Management, 26*(2), 49–72.

Basco, R., & Calabrò, A. (2017). "Whom do I want to be the next CEO?" desirable successor attributes in family firms. *Journal of Business Economics, 87*(4), 487–509.

Bennedsen, M., Nielsen, K. M., Perez-Gonzalez, F., & Wolfenzon, D. (2007). Inside the family firm: The role of families in succession decisions and performance. *The Quarterly Journal of Economics, 122*(6), 647–691.

Binks, M. R., & Ennew, C. T. (1996). Growing firms and the credit constraint. *Small Business Economics, 8*, 17–25. https://doi.org/10.1007/BF00391972 .

Bjuggren, P.-O., & Sund, L.-G. (2005). Organization of transfers of small and medium-sized enterprises within the family: Tax law considerations. *Family Business Review, 18*, 305–319. https://doi.org/10.1111/j.1741-6248.2005.00050.x .

Block, J. H., Jaskiewicz, P., & Miller, D. (2011). Ownership versus management effects on performance in family and founder companies: A Bayesian reconciliation. *Journal of Family Business Strategy, 2*, 232–245. https://doi.org/10.1016/j.jfbs.2011.10.001 .

Bocatto, E., Gispert, C., & Rialp, J. (2010). Family-owned business succession: The influence of pre-performance in the nomination of family and nonfamily members: Evidence from Spanish firms. *Journal of Small Business Management, 48*, 497–523. https://doi.org/10.1201/b10321-2 .

Cabrera-Suarez, K., Saa-Perez, P., & Garcia-Almeida, D. (2001). The succession process from a resource- and knowledge-based view of the family firm. *Family Business Review, 14*, 37–48. https://doi.org/10.1111/j.1741-6248.2001.00037.x .

Cadieux, L. (2007). Succession in small and medium-sized family businesses: Toward a typology of predecessor roles during and after instatement of the successor. *Family Business Review, 20*, 95–109. https://doi.org/10.1111/j.1741-6248.2007.00089.x .

Carr, J. C., Chrisman, J. J., Chua, J. H., & Steier, L. P. (2016). Family firm challenges in intergenerational wealth transfer. *Entrepreneurship Theory and Practice, 40*, 1197–1208. https://doi.org/10.1111/etap.12240 .

Chrisman, J. J., & Patel, P. C. (2012). Variation in R&D investments of family and nonfamily firms: Behavioral agency and myopic loss perspectives. *Academy of Management Journal, 55*(4), 976–997.

Cressy, R. (1996). Commitment lending under asymmetric information: Theory and tests on U.K. startup data. *Small Business Economics, 8*, 397–408. https://doi.org/10.1007/BF00389557 .

Daspit, J. J., Holt, D. T., Chrisman, J. J., & Long, R. G. (2016). Examining family firm succession from a social exchange perspective: A multiphase, multistakeholder review. *Family Business Review, 29*, 44–64. https://doi.org/10.1177/0894486515599688 .

Davis, P. S., & Harveston, P. D. (1999). In the founder's shadow: Conflict in the family firm. *Family Business Review, 7*(4), 311–323.

Dehlen, T., Zellweger, T., Kammerlander, N., & Halter, F. (2014). The role of information asymmetry in the choice of entrepreneurial exit routes. *Journal of Business Venturing, 29*, 193–209. https://doi.org/10.1016/j.jbusvent.2012.10.001 .

De Massis, A., Chua, J. H., & Chrisman, J. J. (2008). Factors preventing intra-family succession. *Family Business Review, 21*, 183–199. https://doi.org/10.1111/j.1741-6248.2008.00118.x .

De Massis, A., Sieger, P., Chua, J., & Vismara, S. (2016). Incumbents' attitude toward intrafamily succession: An investigation of its antecedents. *Family Business Review, 29*(3), 278–300.

DeTienne, D. R. (2010). Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing, 25*, 203–215. https://doi.org/10.1016/j.jbusvent.2008.05.004 .

DeTienne, D. R., & Chirico, F. (2013). Exit strategies in family firms: How socioemotional wealth drives the threshold of performance. *Entrepreneurship Theory and Practice, 37*, 1297–1318. https://doi.org/10.1111/etap.12067 .

Diwisch, D. S., Volthofer, P., & Weiss, C. R. (2009). Succession and firm growth: Results from a non-parametric matching approach. *Small Business Economics, 32*, 45–56.

Dyer, W. G. (2006). Examining the "family effect" on firm performance, *Family business review, 19*(4), 253–273.

Felden, B., & Pfannenschwarz, A. (2008). *Unternehmennachfolge*. München: Oldenbourg Verlag.

Giambatista, R. C., Rowe, W. G., & Riaz, S. (2005). Nothing succeeds like succession: A critical review of leader succession literature since 1994. *The Leadership Quarterly, 16*, 963–991. https://doi.org/10.1016/j.leaqua.2005.09.005 .

Gilding, M., Gregory, S., & Cosson, B. (2015). Motives and outcomes in family business succession planning. *Entrepreneurship Theory and Practice, 39*, 299–312. https://doi.org/10.1111/etap.12040 .

Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review, 12*, 1–25. https://doi.org/10.1111/j.1741-6248.1999.00001.x .

Handler, W. C. (1994). Succession in family business: A review of the research. *Family Business Review, 7*, 133–157. https://doi.org/10.1111/j.1741-6248.1994.00133.x .

Handler, W. C., & Kram, K. E. (1988). Succession in family firms: The problem of resistance. *Family Business Review, 1*, 361–381. https://doi.org/10.1111/j.1741-6248.1988.00361.x .

Harvey, M., & Evans, R. (1995). Life after succession in the family business: Is it really the end of problems? *Family Business Review, 8*(1), 3–16.

Hauck, J., & Prügl, R. (2015). Innovation activities during intra-family leadership succession in family firms: An empirical study from a socioemotional wealth perspective. *Journal of Family Business Strategy, 6*, 104–118. https://doi.org/10.1016/j.jfbs.2014.11.002 .

Hillier, D., Martínez, B., Patel, P. C., Pindado, J., & Requejo, I. (2018). Pound of flesh? Debt contract strictness and family firms. *Entrepreneurship Theory and Practice, 42*(2), 259–282.

Jaskiewicz, P., Heinrichs, K., Rau, S. B., & Reay, T. (2016). To be or rot to be: How family firms manage family and commercial logics in succession. *Entrepreneurship Theory and Practice, 40*, 781–813. https://doi.org/10.1111/etap.12146 .

Jaskiewicz, P., Uhlenbruck, K., Balkin, D. B., & Reay, T. (2013). Is nepotism good or Bbad?: Types of nepotism and implications for knowledge management. *Family Business Review, 26*, 121–139. https://doi.org/10.1177/0894486512470841 .

Kammerlander, N. (2016). "I want this firm to be in good hands": Emotional pricing of the resigning entrepreneurs. *International Small Business Journal, 34*(2), 189–214.

Kaye, K., & Hamilton, S. (2004). Roles of trust in consulting to financial families. *Family Business Review, 17*, 151–163. https://doi.org/10.1111/j.1741-6248.2004.00010.x .

Kimhi, A. (1997). Intergenerational succession in small family businesses: Borrowing constraints and optimal timing of succession. *Small Business Economics, 9*, 309–318. https://doi.org/10.1023/A:1007987731337 .

Koropp, C., Grichnik, D., & Gygax, A. F. (2013). Succession financing in family firms. *Small Business Economics, 41*, 315–334. https://doi.org/10.1007/s11187-012-9442-z .

Kotlar, J., & De Massis, A. (2013). Goal setting in family firms: Goal diversity, social interactions, and collective commitment to family-centered goals. *Entrepreneurship Theory and Practice, 37*, 1263–1288. https://doi.org/10.1111/etap.12065 .

Lambrecht, J. (2005). Multigenerational transition in family businesses: A new explanatory model. *Family Business Review, 18*, 267–282. https://doi.org/10.1111/j.1741-6248.2005.00048.x .

Le Breton-Miller, I., & Miller, D. (2013). Socioemotional wealth across the family firm life cycle: A commentary on "family business survival and the role of boards". *Entrepreneurship Theory and Practice, 37*, 1391–1397. https://doi.org/10.1111/etap.12072 .

Le Breton-Miller, I., Miller, D., & Steier, L. (2004). Toward an integrative model of effective FOB succession. *Entrepreneurship Theory and Practice, 28*(4), 305–328.

Lee, K. S., Lim, G. H., & Lim, W. S. (2003). Family business succession: Appropriation risk and choice of successor. *Academy of Management Review, 28*(4), 657–666.

Lubatkin, M. H., Schulze, W. S., Ling, Y., & Dino, R. N. (2005). The effects of parental altruism on the governance of family-managed firms. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 26*(3), 313–330.

Madison, K., Holt, D. T., Kellermanns, F. W., & Ranft, A. L. (2016). Viewing family firm behavior and governance through the lens of agency and stewardship theories. *Family Business Review, 29*, 65–93. https://doi.org/10.1177/0894486515594292 .

McMullen, J. S., & Warnick, B. J. (2015). To nurture or groom?: The parent-founder succession dilemma. *Entrepreneurship Theory and Practice, 39*, 1379–1412. https://doi.org/10.1111/etap.12178 .

Miller, D., Le Breton-Miller, I., Lester, R. H., & Cannella, A. A. (2007). Are family firms really superior performers? *Journal of Corporate Finance, 13*, 829–858. https://doi.org/10.1016/j.jcorpfin.2007.03.004 .

Miller, D., Steier, L., & Le Breton-Miller, I. (2003). Lost in time: Intergenerational succession, change, and failure in family business. *Journal of Business Venturing, 18*, 513–531. https://doi.org/10.1016/S0883-9026(03)00058-2 .

Molly, V., Laveren, E., & Deloof, M. (2010). Family business succession and its impact on financial structure and performance. *Family Business Review, 23*, 131–147. https://doi.org/10.1177/0894486510365062 .

Nordqvist, M., Wennberg, K., Bau', M., & Hellerstedt, K. (2013). An entrepreneurial process perspective on succession in family firms. *Small Business Economics, 40*, 1087–1122. https://doi.org/10.1007/s11187-012-9466-4 .

Olbrich, M. (2005). *Unternehmensnachfolge durch Unternehmungsverkauf*. Wiesbaden: Springer Fachmedien.

Parker, S. C. (2016). Family firms and the "willing successor" problem. *Entrepreneurship Theory and Practice, 40*, 1241–1259. https://doi.org/10.1111/etap.12242 .

Pyromalis, V. D., & Vozikis, G. S. (2009). Mapping the successful succession process in family firms: Evidence from Greece. *International Entrepreneurship and Management Journal, 5*(4), 439.

Schell, S., Hiepler, M., & Moog, P. (2018). It's all about who you know: The role of social networks in intra-family succession in small and medium-sized firms. *Journal of Family Business Strategy, 9*(4), 311–325.

Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003). Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of Management Journal, 46*(2), 179–194.

Sharma, P., Chrisman, J. J., & Chua, J. H. (2003). Succession planning as planned behavior: Some empirical results. *Family Business Review, 16*, 1–15. https://doi.org/10.1111/j.1741-6248.2003.00001.x .

Sharma, P., & Irving, P. G. (2005). Four bases of family business successor commitment: Antecedents and consequences. *Entrepreneurship Theory and Practice, 29*(1), 13–33.

Shepherd, D. A., & Zacharakis, A. (2000). Structuring family business succession: An analysis of the future leader's decision making. *Entrepreneurship Theory and Practice, 24*(4), 25–39.

Sonfield, M. C., & Lussier, R. N. (2004). First-, second-, and third-generation family firms: A comparison. *Family Business Review, 17*(3), 189–202.

Steier, L. (2001). Next-generation entrepreneurs and succession: An exploratory study of modes and means of managing social capital. *Family Business Review, 14*, 259–276. https://doi.org/10.1111/j.1741-6248.2001.00259.x .

Stewart, A., & Hitt, M. A. (2012). Why can't a family business be more like a nonfamily business? *Family Business Review, 25*, 58–86. https://doi.org/10.1177/0894486511421665 .

Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Association, 71*(3), 393–410.

Ward, J. L. (1988). The special role of strategic planning for family businesses. *Family Business Review, 1*(2), 105–117.

Ward, J. L. (2011). *Keeping the family business healthy: How to plan for continuing growth, profitability and family leadership*. New York: Palgrave Macmillan.

Wennberg, K., Wiklund, J., Hellerstedt, K., & Nordqvist, M. (2011). Implications of intra-family and external ownership transfer of family firms: Short-term and long-term performance differences. *Strategic Entrepreneurship Journal, 5*, 352–372. https://doi.org/10.1002/sej.118 .

Williams Jr., R. I., Pieper, T. M., Kellermanns, F. W., & Astrachan, J. H. (2018). Family firm goals and their effects on strategy, family and organization behavior: A review and research agenda. *International Journal of Management Reviews, 20*, S63–S82.

Wooldridge, J. M. (2002). *Introductory econometrics: A modern approach*, 2003: South-Western College Publishing, New York.

Xi, J. M., Kraus, S., Filser, M., & Kellermanns, F. W. (2015). Mapping the field of family business research: Past trends and future directions. *International Entrepreneurship and Management Journal, 11*(1), 113–132.

Yu, A., Lumpkin, G. T., Sorenson, R. L., & Brigham, K. H. (2012). The landscape of family business outcomes: A summary and numerical taxonomy of dependent variables. *Family Business Review, 25*(1), 33–57.

Zellweger, T., & Kammerlander, N. (2015). Family, wealth, and governance: An agency account. *Entrepreneurship Theory and Practice, 39*(6), 1281–1303.

Zellweger, T., Sieger, P., & Halter, F. (2011). Should I stay or should I go?: Career choice intentions of students with family business background. *Journal of Business Venturing, 26*, 521–536. https://doi.org/10.1016/j.jbusvent.2010.04.001 .