

Communication Traps: Applying Game Theory to Succession in Family Firms

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Abstract

Using game theory to expand our understanding of the interaction between a founder and a successor in a family business, we explore the impact of poor interpersonal communication on family harmony during the succession process. Results show how deficient communication leads to disagreements and clashes between the founder and the successor and systematically reduces family harmony during the succession process. We term these situations *communication traps*. The findings demonstrate how inadequate communication hampers a transition process above and beyond psychological effects, even when the involved individuals share the same priorities, attitude, and interests.

Keywords

succession, game theory, communication, harmony

Introduction

Although communication has been identified as a key component of effective succession planning in family firms (Handler, 1994; Morris, Williams, & Nell, 1996), it has received limited attention in the literature. Reviewing the literature, Botero, Thomas, and Fediuk (2012) identified only four studies that included succession and communication in their title or abstract. Communication is not included in several acknowledged conceptual models explaining succession (e.g., Cabrera-Suarez, De-Saa-Perez, & Garcia-Almeida, 2001; Le-Breton-Miller, Miller, & Steier, 2004; Sharma, Chrisman, & Chua, 2003a). In other succession models, communication has been used as a secondary variable (De-Massis, Chua, & Chrisman, 2010; Dyke, Mauws, Starke, & Mischke, 2002; Sharma, Chrisman, & Chua, 2003b; Sharma, Chrisman, Pablo, & Chua, 2001), not as a central construct. Sharma et al. (2003b) suggest that understanding the role of communication in succession is valuable. This study explores the impact of communication between a founder and a successor on family harmony in launching a transition process.

Following Blumentritt, Mathews, and Marchisio (2013), we apply a modified version of the entry and battle of the sexes games (Mas-Colell, Whinston, & Green, 1995) to gain insights on *how* deficient communication during a transition process hampers family

harmony. Deficient communication leads to uncertainty with respect to the founder's priorities in launching a succession process or holding it back. Results show that deficient communication leads to disagreements and clashes between the founder and the successor, systematically harming family harmony. We term these situations *communication traps*. The findings reveal that deficient communication, *in itself*, hinders family harmony, even when the involved individuals are rational and share the same attitude and interests.

Extending Blumentritt et al. (2013), the present study contributes to the family business literature by showing how deficient communication leads to disagreements when there is no real conflict between the founder and the successor. That is, the results highlight a structural problem in succession processes. While Blumentritt et al. (2013) demonstrate the impact of talent on the outcome of a succession process, applying a different game provides means for finding the critical negative impact

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of deficient communication. Moreover, the findings suggest that deficient communication is detrimental even when not accompanied by additional sources of succession failures (e.g., De-Massis et al., 2010).

The findings also extend Handler and Kram (1988) and Lansberg (1988) because they are based on rational considerations not on emotions or feelings of the involved individuals. They suggest that rational considerations as well as psychological effects affect the family harmony and affect effective succession.

The results have practical implications for improving the effectiveness of succession processes in family businesses. Understanding the chain of causation emphasizes the need to improve the communication between the founder and the successor. The results draw attention to the important role of information transfer made by consultants, advisors, and other family members involved in the succession process. Simply said, reducing the information gap between the founder and the successor will enhance family harmony and increase the effectiveness of the succession process.

We start with describing the application of game theory and characterize the model. Next, the model results and the communication traps are presented. Then we discuss our findings and sum up, with limitations and suggestions for future research.

The Role of Communication in Launching a Succession Process: A Game Theoretic Approach

Using Game Theory for Family Business Research

Game theory is a collection of models attempting to understand and explain situations in which individuals interact with one another (Kreps, 1990). It is widely used in the social sciences to formalize, structure, analyze, and understand decisions made by rational individuals in strategic interactions, in which an individual's success in making choices depends on the choices of others, and the decisions of one individual affect the payoffs of another. A game is described by its players, each player's choices, called strategies, and by the resulting payoffs from each outcome. Applications of game theory attempt to find equilibrium in games. In equilibrium, each player in the game adopts a strategy that he is unlikely to change. Several equilibrium concepts have been developed in attempts to capture this

idea, the most famous being the Nash equilibrium (Nash, 1950, 1951).

Recently, Blumentritt et al. (2013) introduced the application of game theory to expand our understanding of succession in family businesses.¹ Specifically, they demonstrate the impact of talent on the outcome of a succession process by examining a set of rational and interdependent choices made by family members. Earlier, Lee, Lim, and Lim (2003) showed that a family prefers to appoint its offspring to head its business if the business is highly idiosyncratic. Almeida and Wolfenson (2006) provide a new rationale for pyramidal ownership in family businesses. A pyramid allows a family to access all retained earnings of controlled firms and to share these earnings with shareholders of the original firm. Morck and Yeung (2004) build on game theory to show that entrusting the governance of a country's great corporations to a few wealthy families promotes a high level of trust within a small elite, in contrast with a low level of trust in society at large. Burkat, Panunzi, and Shleifer (2003) present a model of succession in a public firm that is controlled and managed by its founder, showing that professional management emerges as the equilibrium outcome in the presence of minority protection. However, they focus on the founder's choice between hiring a professional manager and leaving management to his heir, not on the process of in-the-family succession. Overall, Blumentritt et al. (2013) suggest that applying various games offers a promising venue to gain new insights on outcomes of interactions among the individuals involved in a family business. The internal consistency and structured foundations of game theory make it a prime tool for modeling internal interactions in family businesses.

This study applies a modified version of the entry and battle of the sexes games (Mas-Colell et al., 1995) for gaining insights on *how* deficient communication during a transition process hampers family harmony. The new perspective results in new insights on the role of effective communication between family members.

The Setting

We model an interaction between a rational founder and successor, who consider launching a succession process.² The literature describes the succession process as composed of several different stages (Churchill & Hatten, 1987; Sharma et al., 2003a). To keep the game simple, we focus on the choice of launching a succession process

and look at the interaction between a founder and a successor (Cadieux, 2007; Davis & Tagiuri, 1989; Haberman & Danes, 2007).³ The succession process is defined as “the actions and events that lead to the transition of leadership from one family member to another in family firms” (Handler, 1988; Sharma et al., 2001, p. 21). The founder’s age draws attention to the potential need for succession planning and the launch of a transition (Brun de Pontet, Wrosch, & Gagne, 2007). While the founder and the successor choose to either initialize succession planning or not, this study focuses on family harmony in launching a transition process.

Our view of family harmony follows Blumentritt et al. (2013). That is, family harmony is kept if there is no discord among family members in planning or executing the succession. That is, the transfer of management control occurs without disagreement or conflict among family members. This view is consistent with previous studies showing that maintaining good family relationships is important in family firms (File, Prince, & Rankin, 1994; Morris, Williams, Allen, & Avila, 1997; Sharma et al., 2001). The more harmonious a family is, the more likely it will be that its members will want to keep a shared vision and good relationships (Goldberg & Wooldridge, 1993; Sharma et al., 2001; Venter, Boshoff, & Maas, 2005). Lansberg (1988, p. 120) tied together succession and the family’s harmony while defining succession planning as “making the preparations necessary to ensure harmony of the family and the continuity of the enterprise through the next generation.” Moreover, a higher level of business continuity is found to be tied to a higher perception of family harmony (Malone, 1989). Steier and Miller (2010) find that achieving consensus and keeping family harmony is a major characteristic of the pre-succession dynamics in family firms. Recently, Chrisman, Chua, Pearson, and Barnett (2012) have found family harmony as one of three family-centered noneconomic goals.

Consistent with the vast game theory literature, our model is based on standard assumptions that allow us to explore potential structural problems in the transition process. We aim to show that certain attributes of the transition process in its simplest form hamper its effectiveness. Therefore, we focus on the two primary individuals, the founder and the successor, and defer the analyses of the potential role of additional stakeholders for future research (e.g., the successor’s siblings, nonfamily employees).

We assume that the relationship between the founder and the successor is not symmetric. Significant power differences have been found between successors and founders (Handler, 1994). Particularly, power lies with the founders as they make the crucial decisions regarding the timing and mode of succession in family firms (Guzzo & Abbott, 1990; Sharma et al., 2003b) in their role as the family and the business leaders. The literature indicates that the succession process is controlled by the founder (e.g., Davis & Harveston, 1999; Davis & Tagiuri, 1989; Goldberg & Wooldridge, 1993; Malone, 1989; Sharma et al., 2001). Furthermore, the founders generally have enough legitimacy within the family and the firm to remain in power as long as they wish (Sharma et al., 2001). Aside from having more power in the relationship, founders are also described as being dominant owners (Davis & Harveston, 1999; Lansberg, 1999) and having domineering personalities (Kets-de-Vries, 1996; Marshall et al., 2006). In the presented game, the successor tends to follow the founder, knowing his priorities, in line with the dominance of the founder reported in the literature.

On top of playing a dominant role in the founder–successor dyad, founders tend to keep the information to themselves and not fully share it with their successors: “owner-managers may have an implicit succession plan that they never express to the chosen successors. Successors would have very little knowledge of the plan” (Handler, 1991, p. 277). Sharma et al. (2003a) find that founders tend not to communicate their views on stepping aside. This communication paradigm translates to the assumption that the successor’s priorities tend to be transparent to the founder, but the founder does not fully communicate his priorities to his successor.

The Game

Both the founder and the successor face a decision problem—each chooses either to move the succession planning forward or to hold it back and keep the status quo. In other words, both make a choice on whether to carry out succession planning or not. Clearly, the choice of the founder depends on the choice of the successor and vice versa and is likely to affect family harmony. The outcome, that is, whether succession planning is launched and whether family harmony is sustained, depends on the choices of both the founder and the successor, which are closely linked. We present a game in a strategic form to investigate this interaction.⁴

Table 1. Outcomes of the Interaction Between the Founder and the Successor.

| Founder | Successor | |
|--------------|---------------------------------------|---|
| | Hold back | Move forward |
| Hold back | Status Quo (no succession process) | Discord (no succession process) |
| Move forward | Tension (succession process launched) | Cooperation (succession process launched) |

Suppose both the founder and the successor consider their choices with respect to the prospects of family harmony and the ongoing prosperity of the family business. Each of the two individuals has two alternatives, move succession planning forward or hold it back and keep the status quo. Table 1 presents the four potential outcomes of the interaction between the founder and the successor.

Two possible outcomes involve agreement between the founder and the successor, where family harmony is sustained. The first outcome is *cooperation*. Both the founder and the successor coordinate in choosing to move forward a succession process, marked MM. This outcome yields cooperation between the founder and the successor in launching a succession plan for the transfer of leadership. A mutual agreement between the founder and the successor also characterizes the second outcome, *status quo*, marked HH, where both the founder and the successor concur in choosing to hold back succession planning.

The next two outcomes involve disagreement, which upsets family harmony. *Tension*, designated MH, is where the founder prefers to move forward the succession process, and the successor prefers to hold back. Although the founder chooses to carry on succession planning, the successor hesitates to participate in the process. These incompatible choices result in a sluggish start to succession planning and hurt the family harmony.

The last outcome, *discord*, designated HM, appears when the founder prefers to hold back succession planning, while the successor wants to move it forward. These opposite choices lead to discord—the founder hinders succession planning, and the successor wishes to carry it on. The successor's choice is interpreted as disrespectful and provocative, triggering disputes and clashes (Handler, 1991). The founder perceives the successor as aggressive. The succession planning is not launched, and family harmony is harmed.

Priorities of the Founder and the Successor

The priorities of the founder over the four possible outcomes are likely to differ from those of the successor

(Handler, 1991, 1994; Morris et al., 1997). To capture these priorities, game theory uses the payoff, a number that reflects the desirability of an outcome to a player. In this study, we use priority ranks over the four outcomes (MM, HH, MH, HM) as the players' payoffs, a higher number indicating greater desirability. The rankings of the priorities are the payoff values in subsequent tables.

Succession planning takes place if both choose to move forward and is not launched if both choose to hold back. The interaction between the founder and the successor can end with a disagreement if they make opposite choices, which reduces family harmony due to clashes and disputes.

Considering the priorities of the founder, we assume two types of priorities regarding a potential launch of succession planning: conservative or activist.⁵ These types indicate the founder's attitude and preferences toward launching a succession process and toward family harmony. A conservative founder prefers to hold the succession process back, whereas an activist founder wishes to move the succession process forward. In both cases, the founder prefers agreement over disagreement to preserve family harmony.

The priorities of a conservative founder have been described in prior studies. A conservative founder prefers not to let go and step aside (e.g., De-Massis et al., 2010; Goldberg & Wooldridge, 1993; Sareshmukh & Corbett, 2011; Sharma et al., 2001). Particularly, Fox, Nilakant, and Hamilton (1996) relate to the reluctance of the conservative parent to launch succession. Davis and Tagiuri (1989, p. 50) explain this phenomenon and point to life stage theory, declaring that the founder is more conservative since "older men are generally more conservative than younger men." Several studies report that a conservative founder resists launching a succession process because of the need to face mortality and confronting changes (e.g., Brockhaus, 2004; De-Massis et al., 2010; Handler, 1994; Lansberg, 1988; Sharma et al., 2001). That is, the conservative founder primarily prefers outcomes that postpone a succession process (status quo, discord) over outcomes that advance a succession process

Table 2. Priorities of the Conservative Founder.

| Priority rank | Outcome | | Founder | Successor | Launch of succession planning |
|---------------|-------------|----|--------------|--------------|-------------------------------|
| 4 (best) | Status quo | HH | Hold back | Hold back | No |
| 3 | Discord | HM | Hold back | Move forward | No |
| 2 | Cooperation | MM | Move forward | Move forward | Yes |
| 1 (worst) | Tension | MH | Move forward | Hold back | Yes |

Table 3. Priorities of the Activist Founder.

| Priority rank | Outcome | | Founder | Successor | Launch of succession planning |
|---------------|-------------|----|--------------|--------------|-------------------------------|
| 4 (best) | Cooperation | MM | Move forward | Move forward | Yes |
| 3 | Tension | MH | Move forward | Hold back | Yes |
| 2 | Status quo | HH | Hold back | Hold back | No |
| 1 (worst) | Discord | HM | Hold back | Move forward | No |

Table 4. Priorities of the Successor.

| Priority rank | Outcome | | Founder | Successor | Launch of succession planning |
|---------------|-------------|----|--------------|--------------|-------------------------------|
| 4 (best) | Cooperation | MM | Move forward | Move forward | Yes |
| 3 | Status quo | HH | Hold back | Hold back | No |
| 2 | Tension | MH | Move forward | Hold back | Yes |
| 1 (worst) | Discord | HM | Hold back | Move forward | No |

(cooperation, tension). As a secondary priority, the conservative founder craves family harmony and wishes to avoid conflicts. Therefore, agreement with the successor is preferred over disagreement. Table 2 presents the priorities of the conservative founder across the four possible outcomes.

On the other hand, some founders are activists, who prefer to look forward to transferring the leadership to the next generation and initiating succession planning (e.g., De-Massis et al., 2010; Sharma et al., 2001). Unlike the founder who is reluctant to initiate the succession process, an activist founder is found to be ready to move on to a new stage in his life (Cadieux, 2007) and to step aside (Sharma et al., 2003a). He looks forward to transferring the leadership to the next generation and initiating succession planning. That is, the activist founder primarily prefers outcomes that advance a succession process (cooperation, tension) over outcomes that postpone a succession process (status quo, discord). As a secondary priority, the activist founder also craves family harmony and wishes to avoid conflicts. Therefore, the activist founder prefers agreement with the successor

over disagreement. Table 3 presents the priorities of the activist founder across the four possible outcomes.

The successor for his part understands that cooperation with the founder is essential for the transfer of leadership of the family business (Schein, 2004) and important for keeping family harmony. Moreover, he recognizes the founder's power in transferring the leadership (Davis & Tagiuri, 1989; Sharma et al., 2001; Sharma et al., 2003b). Therefore, agreement with the founder and avoidance of disputes over succession issues are crucial and become the successor's first priority. For this reason, the successor prefers to concur with the founder rather than to disagree. Therefore, cooperation and the status quo are preferred over tension and discord. As a secondary priority, the successor prefers moving succession planning forward over holding it back, which results in preferring cooperation over the status quo and tension over discord. Table 4 presents the priorities of the successor across the four possible outcomes.

Now, communication enters the game. We presume that the successor fully communicates his priorities to

the founder, making them totally transparent. However, the founder does not fully communicate his type to the successor. The type of the founder, though, can be either conservative or activist, and the successor cannot know the founder's type if the founder does not communicate it to him. The successor can guess the founder's type, but he does not know it with certainty.

Communication Traps

The role of communication in encouraging family harmony during a transition process is far from being well understood. Communication has been suggested as a variable in some succession models (Dyck et al., 2002; Handler, 1994; Sharma et al., 2003b) but not as a central construct, and it is not included in other acknowledged conceptual models explaining succession (e.g., Cabrera-Suarez et al., 2001; Le-Breton-Miller et al., 2004; Sharma et al., 2003a). Communication between family members is scarcely mentioned in Le-Breton-Miller et al.'s (2004) review of the succession literature. Botero et al. (2012) identified only four studies that included succession and communication in their title or abstract.

Communication is recognized by some scholars to play a meaningful role in a mutual choice to launch a succession process (e.g., De-Massis et al., 2010; Schroeder, Schmitt-Rodermund, & Arnaud, 2011; Sharma et al., 2001). However, it is not unequivocally defined or measured in a succession context: It is viewed as a synonym to teamwork (Dyck et al., 2002), shared vision (De-Massis et al., 2010), mature relationships (Barach & Ganitsky, 1995), or as one out of several dimensions of relational competence (Hatak & Roessl, 2013).

Several scholars emphasize the need to understand better the role of communication in their discussions on future research. For instance, "A lack of open communication concerning succession planning may explain role differences" (Seymour, 1993, p. 278) or "Mature communication is required to reconcile the expectations of both generations regarding succession" (Cabrera-Suarez et al., 2001, p. 44). Overall, we conclude that the impact of communication between family members on the effectiveness of succession processes has been insufficiently explored in the literature.

Addressing this void, we focus on the role of communication between the founder and the successor in launching a succession process. We start by presenting the outcome in a naïve case of perfect communication

Table 5. Game: The Activist Founder and the Successor.

| Founder | Successor | |
|--------------|-----------|--------------|
| | Hold back | Move forward |
| Hold back | (2, 3) | (1, 1) |
| Move forward | (3, 2) | (4, 4)* |

Note. The table cells present priority ranks for the founder and successor, respectively. An asterisk indicates the equilibrium.

between the founder and the successor—the successor knows the type of the founder (conservative or activist) with certainty. The case of perfect communication serves as a comparative benchmark for the case of deficient communication.

Perfect Communication

The game is an interaction between the founder and the successor regarding the choice to move forward or hold back the succession process. This choice is made by both the founder and the successor, who understand their possible choices (move forward or hold back) and consider the four possible outcomes. Having perfect communication between them, the founder and the successor discuss the issue in an open manner. During these talks, the founder truly conveys his priorities to the successor, who recognizes the founder's type (conservative or activist). That is, the founder and the successor know each other's priorities. Although this may not be a realistic assumption, it is necessary at this stage and will be relaxed later. Keeping their priorities in mind, the founder and the successor make their choices independently, each on his own. They simultaneously choose to move forward or to hold back. Assuming that the successor knows the founder's attitude toward succession with certainty, we explore the outcome of the game when the founder is either conservative or an activist.

First, suppose the founder is an activist and the successor knows this. The founder and the successor simultaneously make their choices, move forward or hold back, to achieve the best outcome for each of them. In the subsequent tables, rankings of priorities are the payoff values. If the successor chooses hold back then the founder will choose to move forward because 3 is more than 2 (see Table 5). If the successor chooses to move forward then the founder will also choose to move forward because 4 is more than 1. The activist founder chooses to move forward regardless of the successor's

Table 6. Game: The Conservative Founder and the Successor.

| Founder | Successor | |
|--------------|-----------|--------------|
| | Hold back | Move forward |
| Hold back | (4, 3)* | (3, 1) |
| Move forward | (1, 2) | (2, 4) |

Note. The table cells present priority ranks for the founder and successor, respectively. An asterisk indicates the equilibrium.

choice because it is his dominant choice. The successor recognizes this and anticipates the founder's choice. Therefore, the successor chooses to move forward, because 4 is more than 1. In equilibrium, both choose to move forward. The outcome of this game is that both the founder and the successor choose to launch a succession process. An agreement results in keeping family harmony.

Second, suppose the founder is conservative and the successor knows this. The founder and the successor make their choices, to move forward or hold back, to achieve the best outcome for each of them. Table 6 presents this game: pairs of priorities for each of the four outcomes (the founder's priority is on the left, the successor's priority is on the right). If the successor chooses to hold back then the founder will also choose to hold back because 4 is more than 1. If the successor chooses to move forward then the founder will choose to hold back because 3 is more than 2. In this case, the conservative founder chooses to hold back regardless of the successor's choice because to hold back is his dominant choice. This is called a dominant choice, because choosing to hold back is better for the founder, no matter how the successor plays his choice. The successor recognizes this and anticipates the founder's choice. Therefore, the successor chooses to hold back, because 3 is more than 1. In equilibrium, both choose to hold back.⁶ The asterisk in Table 5 indicates the equilibrium outcome. The outcome of this game is that both the founder and the successor choose to hold back, and the succession process is not launched. A somewhat naïve agreement is achieved and family harmony is sustained.

Under perfect communication, the successor knows the founder's type (either conservative or activist) with certainty. An activist founder leads the successor to launch a succession process, whereas a conservative founder encourages the successor to agree on no succession process. Perfect communication leads to an

agreement between the founder and the successor. More important, the successor's choice follows the founder's choice, resulting in conformity and family harmony.

The case of perfect communication serves as a naïve benchmark, where the founder perfectly communicates with the successor and clearly reveals his type (activist or conservative). This benchmark provides means for highlighting the impact of deficient communication, when the successor is uncertain with respect to the founder's preferences and cannot perfectly anticipate the founder's choice.

Deficient Communication

However, perfect communication between the founder and the successor is rare. Scholars find that founders tend not to share information regarding the succession process with their successors (Davis & Tagiuri, 1989; Seymour, 1993; Sharma et al., 2003a). Welsch (1993) examined 260 family business and reported that 70% of them state that "management succession is not always openly discussed." In similar vein, the founder communicates with the successor at some level but does not share all his thoughts with the successor. The founder may hold some cards close to his chest. At the same time, he may also provide the successor with some signals on his priorities. For example, a conservative founder may avoid discussions about succession. In contrast, an activist founder may ask the successor to join the family business or offer him various opportunities for professional training.

When the communication is less than perfect, the successor has to speculate the type of the founder based on available signals. This situation is well documented in the literature: "The successor must be able to sense or know when the predecessor is at this point and then must somehow assert himself or herself in the most opportune manner" (Goldberg & Wooldridge, 1993, p. 70). Therefore, we now presume that the successor has incomplete information on the type of the founder. Based on the available signals, the successor speculates whether the founder is conservative or an activist but does not know for certain. This uncertainty stems from lack of perfect communication between the founder and the successor, resulting in the successor being not sure about the founder's priorities and his attitude toward succession planning. Overall, less than perfect communication introduces uncertainty into the successor's comprehension of the founder's type, which relaxes the

Table 7. The Condition for the Successor to Prioritize Move Forward Over Hold back.

| Successor's expected payoff from choosing move forward | ≥ | Successor's expected payoff from choosing hold back |
|--|---|---|
| $4\alpha + 1(1 - \alpha)$ | ≥ | $2\alpha + 3(1 - \alpha)$ |
| α | ≥ | 0.5 |

Table 8. The Condition for the Successor to Prioritize Move Forward Over Hold Back: The Case of High Conflict Aversion, $L = -5$.

| Successor's expected payoff from choosing move forward | ≥ | Successor's expected payoff from choosing hold back |
|--|---|---|
| $4\alpha + (-5)(1 - \alpha)$ | ≥ | $2\alpha + 3(1 - \alpha)$ |
| α | ≥ | 0.8 |

certainty assumption made in the perfect communication game. Now, the successor chooses to move forward or hold back under uncertainty with respect to the founder's type.

We gain insights into how the successor's uncertainty about the founder's type and attitude toward succession planning influences their mutual choices and the outcome. Lacking certain identification of the type of the founder, the successor has expectations based on the signals he receives, his familiarity with the founder, and perhaps working experience. Formally, the successor attributes a subjective probability α to the founder being an activist and $1 - \alpha$ to the founder being conservative, $0 < \alpha < 1$.

As before, the founder and the successor make their simultaneous choices, move forward or hold back, to achieve the best expected outcome for each of them. The choice problem of the founder is straightforward: He chooses to hold back if he is conservative (Table 6 applies) or move forward if he is an activist (Table 5 applies). In contrast, the successor does not know the founder's type with certainty and, therefore, does not know which type applies. In the presence of uncertainty about the founder's type, the successor cannot perfectly anticipate the founder's choice. Under uncertainty about the founder's type, the outcome of the game (status-quo, discord, tension, or cooperation) depends heavily on the choices of both players (hold back or move forward). This is the primary tension in our game, which will be shown sufficient to make communication important.

Although the founder's type is uncertain, the successor knows that if the founder is conservative then they will be playing the game presented in Table 6, and if the founder is an activist then they will be playing the game

presented in Table 5. In attempting to maximize his expected payoffs, the successor attributes probability α to an activist founder and probability $1 - \alpha$ to a conservative founder.

The successor's choice (move forward or hold back) depends on the value of the subjective probability α . The payoffs obtained by choosing to move forward are 1 if the founder is conservative (and Table 6 applies) and 4 if the founder is an activist (and Table 5 applies). Similarly, the payoffs obtained by choosing to hold back are 3 if the founder is conservative (and Table 5 applies) and 2 if the founder is an activist (and Table 6 applies). To maximize his expected payoffs, the successor chooses to move forward if the expected payoffs from choosing to move forward exceed those from choosing to hold back (see Tables 7-8).

In equilibrium, the successor chooses to move forward if the probability that he assigns to the founder being an activist exceeds 50%. This result is intuitive: The successor chooses to move forward if he believes the founder is more likely to be an activist than conservative. More important, under uncertainty driven by deficient communication the founder cannot dictate the resulting state of family harmony. That is, deficient communication between the founder and the successor leads to two discouraging outcomes (discord—HM, tension—MH), which hurt family harmony. We call them *communication traps*.

In the first *communication trap*, the successor anticipates that the founder is more likely to be an activist and therefore chooses to move forward. However, the founder turns out to be conservative and chooses to hold back. The outcome in this case is discord (HM), which involves a disagreement and harms family harmony.

This outcome occurs because the founder did not communicate his conservative type to the successor. Discord (HM) is the outcome ranked lowest by the successor and only second best for the conservative founder. Succession planning is not launched, and the successor is viewed by family members as aggressive and pushy. Discord (HM) hurts the family harmony without advancing the succession process. Although the successor is not able to impose the succession, he prefers to avoid being accused of offensive behavior.

This unfavorable outcome is driven by deficient communication. In contrast, the status quo is achieved under perfect communication between a conservative founder and his successor (as seen in Table 6). Both the founder and the successor prefer the status quo (HH) over discord (HM). Overall, the deficient communication drives the discord (HM) outcome, which harms family harmony and is termed the first *communication trap*.

In the second *communication trap*, the successor expects that the founder is more likely to be conservative and therefore chooses to hold back. However, the founder turns out to be an activist and chooses to move forward. The outcome in this case is tension (MH), which involves a disagreement and harms family harmony. This is the outcome ranked second lowest for the successor and only second best for the conservative founder. Had the successor known that the founder was an activist, he would have chosen to move forward, and the outcome could have been better for both the founder and the successor. The deficient communication generates uncertainty over the founder's type, which yields the tension outcome (MH). Under this outcome, the successor looks as if he is hesitant to launch a transition process. Moreover, the opportunity to fully cooperate with the founder is missed. The succession planning is initiated, but due to the disagreement family harmony is not sustained. Once more, deficient communication between the founder and the successor harms family harmony, a second *communication trap*.

Interestingly, both communication traps involve opposite choices of the founder and the successor, which lead to inferior and disappointing outcomes for both the founder and the successor and impair family harmony. The communication traps arise because the founder does not fully communicate his true attitude toward the succession of the successor, and this results in disagreements and clashes between the founder and the successor.

That is, the founder and the successor are trapped in these adverse situations only because of the deficient communication between them. Had the founder communicated his type to the successor and the successor known of the founder's priorities, these adverse situations, which hurt the family harmony and reduce the likelihood of an effective transition, could have been avoided.

Particularly, both *communication traps* occur because the successor lacks information on the founder's attitude toward the succession, not because there is any real disagreement between them or ambivalent feelings. Above all, the adverse consequences of disrupted family harmony and lack of progress in the succession planning are not caused by personal relationships, individual characteristics, emotions or feelings, but by deficient communication between the founder and the successor due to the structural features of the process of launching a succession process.

Conflict Aversion Exacerbates the Communication Traps

In the earlier game, the successor's priorities (presented in Table 4) express the successor's preference to avoid conflicts with the founder to some extent, portraying the centrality and dominance of the founders in the business, the family, and the succession process. Now, we proceed to investigate a highly conflict-averse successor, who assiduously avoids conflicts with his father.

If the successor is highly conflict averse then he will go to great lengths to avoid the discord outcome (HM), where he is perceived to be aggressive and disrespectful. That is, the discord outcome is much lower in priority than all the other three outcomes. To allow for extreme conflict aversion in a successor, we replace the rank of the discord outcome in Table 4, which had the lowest rank, 1, with an exceptionally low priority value, L , for the discord outcome (HM), $L < 1$.

We illustrate the argument using $L = -5$ as an example of high-conflict aversion. Then, we recompute the condition for the successor to prioritize move forward over hold back. The conflict-averse successor chooses to move forward only if the probability he assigns to the founder being an activist is at least 80%. The more extreme the successor's conflict aversion, the less likely he will be to choose to move forward, out of concern to avoid the discord outcome.

Table 9. The Condition for the Successor to Prioritize Move Forward Over Hold Back: The Case of Extreme Conflict Aversion, $L \rightarrow \infty$.

| Successor's expected payoff from choosing move forward | \geq | Successor's expected payoff from choosing hold back |
|---|--------|---|
| $4\alpha + L(1 - \alpha)$ | \geq | $2\alpha + 3(1 - \alpha)$ |
| α | \geq | $(3 - L)/(5 - L)$ |
| For $L \rightarrow -\infty$, $\alpha = \lim_{L \rightarrow -\infty} [(3 - L)/(5 - L)] = 1$ | | |

Successors choose to hold back to avoid discord with the founders unless they are “almost” sure that the founder is an activist. In the extreme form of conflict aversion, we let $L \rightarrow -\infty$, which means that conflict aversion is the sole consideration in making the choice between moving forward and holding back. Again, we compute the condition for the successor to prioritize moving forward over holding back. The result indicates that the extremely conflict-averse successor chooses to move forward only if he knows with certainty that the founder is an activist. If there is a slight chance that the founder is conservative, a highly conflict-averse successor chooses to hold back (see Table 9).

The game-theoretic approach allows insights on how a successor's conflict aversion influences his choice of whether or not to launch a succession process. The conflict aversion of the successor detracts from launching a succession process even when there is an extremely high likelihood (but not certainty) that the founder is an activist. The fear of a discord outcome and accusations of being disrespectful keep the conflict-averse successor away from a choice that may lead to disagreement with the founder.

Moreover, conflict aversion increases the likelihood of falling into the second *communication trap* with the tension outcome. A conflict-averse successor chooses to hold back even when the probability of an activist founder is high. That is, conflict aversion increases the likelihood of a tension outcome (MH), when the founder chooses to move forward, and the successor chooses to hold back. In sum, conflict aversion leads to an increased likelihood of falling into the second *communication trap* and of reducing family harmony because it ties the successor's hands and prevents him from choosing to launch a succession process.

Discussion

This study uses a game as an instrument for expanding our knowledge on how deficient communication during

a transition process obstructs the family harmony. Specifically, we follow Blumentritt et al. (2013) in building on the familiar entry and battle of the sexes games (Mas-Colell et al., 1995) to highlight communication traps. Using a different game than the game demonstrated by Blumentritt et al. (2013) provides the means to learn how communication traps during a transition process harm family harmony.

Applying a game allows us to distill the impact of deficient communication between the involved individuals on family harmony during a transition process, independently of other effects. Whereas prior studies suggest deficient communication as a secondary reason for succession failures (Dyck et al., 2002; Handler, 1994; Sharma et al., 2003b), our findings demonstrate how a communication trap, *in itself*, hinders the family harmony during a transition process, above and beyond the psychological approach expressed in these earlier studies.

The findings draw attention to five aspects of communication in succession processes. The first aspect builds on Lansberg (1988) and Handler and Kram (1988), who show that the ambivalent feelings of the individuals involved prevent the launching of the succession. We extend these influential studies by adding an embedded perspective of the outcomes of deficient communication between founder and successor. We find a compelling analogy between the first *communication trap* and the psychological perspective presented in these two studies, which focuses on ambivalent feelings as the primary source of succession planning avoidance. Specifically, Lansberg (1988, p. 121) argues, “Each of the constituencies that make up the family firm experiences poignantly *ambivalent feelings* about the inevitable succession transition. This *ambivalence* prevents key decision makers from engaging constructively in planning for the exit of the founder” (italics added). Lansberg's (1988) basic argument is that each of the individuals that make up the family business experiences ambivalent feelings about the inevitable succession transition. Such feelings include

rivalry and jealousy toward the successor, fear of losing control, demotion of one's central role within a family, and other feelings. These ambivalent feelings cause the individuals in family businesses to procrastinate in developing a succession plan.

The discord outcome of the first *communication trap* is caused by deficient communication between the founder and the successor, which leads to opposite choices made by the founder and the successor. Lansberg's (1988) ambivalent feelings and the first *communication trap* have identical consequences—both the founder and the successor procrastinate in developing a succession plan. However, it is important to identify the different sources of these identical consequences for selecting a suitable intervention strategy. Lansberg's (1988) psychological approach points to ambivalent feelings of the individuals involved as a primary reason for passing up succession planning. In contrast, in the setting of our rational-expectations approach, succession planning is avoided due to a communication problem between the founder and the successor rather than ambivalent feelings. These different reasons for the same outcome call for different solutions: whereas Lansberg's influential analysis sends the involved individuals to take a psychological look into their emotions, our study implies taking a look at the quality of communication.

The *communication trap* complements and extends Lansberg (1988) and Handler and Kram (1988) in allowing insights into the challenges of launching effective succession planning by employing game theory to explore the rational interests of the primary constituencies that make up the family business. Lansberg (1988) concludes that “gaining *awareness of the reasons* for resistance among the various constituencies is an important first step towards mobilizing the planning process” (1988, p. 121). The look at succession planning highlights the awareness of a systematic glitch—the undesirable consequences are driven by the structure of the process, which requires decision making under partial communication, not the feelings or personalities of the individuals involved. By this we confirm Le-Breton-Miller et al.'s (2004) suggestion that the successful evolution of succession may be contingent on numerous “contextual and process factors” (p. 322).

In the current study, the rational behavior of the individuals involved can result in an outcome that is similar to Lansberg (1988). It is the structure of the course of actions of rational individuals in the presence of

deficient communication, not their ambivalent feelings, that leads to the undesirable outcome. Using game theory for family business research helps us better understand the frequent failures of first-generation family firms to make the transition to the next generation and offers new insights on their sources. We complement and extend previous explanations for the failure to launch a successful succession but wish to stress the role of communication in this process. Our results show that in situations with less than perfect communication, the outcome may end in a clash. Since perfect communication is almost an impossible goal to strive for, even in less complicated processes, it is important to recognize these communication traps.

The second aspect ties the second *communication trap* to Cadieux (2007, p. 98), who describes predecessors who were ready to launch succession but made no move “until at least one of their children had expressed an interest in taking over the firm.” Sharma et al. (2003a, p. 681) find that the incumbents in their sample “had a higher propensity to step aside than what was believed by the successors.” When the founder wants to launch the succession and the successor is unwilling to do so, scholars term it as lack of motivation (e.g., De-Massis et al., 2010), lack of interest, or a reluctant successor (e.g., Goldberg & Wooldridge, 1993; Sharma et al., 2001). Since empirical studies have found that the presence of a willing successor significantly influences the quality of succession (Morris et al., 1997), the perception whether a successor is willing or reluctant may have important consequences. The second *communication trap* shows that a successor may hold back because of a rational expectation that the founder is conservative.

The third aspect draws attention to a structural problem in the process of launching the succession rather than focusing on the individuals involved. The succession literature has been primarily interested in founders and successors as individuals, looking mainly into their personal characteristics (Le-Breton-Miller et al., 2004). Recent studies suggest that succession can be influenced by its industrial context (Royer, Simons, Boyd, & Rafferty, 2008) or process factors (De-Massis et al., 2010). We wish to emphasize a structural aspect that characterizes succession and to confirm Le-Breton-Miller et al.'s (2004) suggestion that the successful evolution of succession may be contingent on numerous “contextual and process factors” (p. 322). Emphasizing a new aspect, namely, a structural hurdle built into the process, provides room for expanding our understanding

of the succession process. Moreover, communication traps shift the succession analysis from the individual level into the dyad and group level.

The fourth aspect views communication as likely to be inter-related with emotions. In a chain of causality, emotions may indeed drive communication, especially during succession. This link has already been suggested in earlier writings looking at founders and successors:

Because this is an emotionally charged time for both men, it is possible that each will distort the messages that the other man sends and regard many of the other man's actions as threats to his meeting his own strongly felt needs. At the very least, communication between father and son at these life stage intersects is likely to be poor. (Davis & Tagiuri, 1989, p. 51)

Emotions have an important role at the social level (Hareli & Rafaeli, 2008), and they may be the impetus behind behavior between founders and successors.

Finally, the occurrence of communication traps is enhanced by the fear of conflict. Specifically, the more extreme the successor's conflict aversion, the less likely he will be to choose to move forward, driven by a concern to avoid the discord outcome. Successors choose to hold back to avoid discord with the founders unless they are almost sure that the founder wants to start the succession process. Since founders have been found to increase their competitive approach as they age, which has been negatively associated with formal succession plans (Marshall et al., 2006), this would increase the likelihood of the successors holding back. Thus treating the fear of conflict is another suggestion for families and practitioners: training in how to disagree and deal with different opinions. Family members may learn the possible gains from open and improved communication and thus minimize the occurrence of the traps.

There is another practical implication here for families involved in a transition process. Information does not need to be transferred directly between the founder and the successor. An intermediary such as a consultant, advisor, or another family member can serve this purpose. Recent research has already shown that different stakeholders can have an important role in the launch of the succession (Brun de Pontet et al., 2007), and our findings point in the same direction. Reducing the information gap between the founder and the successor lowers the likelihood of adverse outcomes in the transition process. This implication emphasizes the role of consultants in improving the quality of communication among family members.

In sum, we view psychological effects and rational considerations as complementary aspects of the transition process, which will expand our knowledge of why family members do not constructively engage in succession planning. Based on our findings, we suggest practical ways to use intermediaries for improving information transfer between the founder and the successor.

Limitations and Future Research

This study uses game theory to show that deficient communication leads to disagreements and clashes between the founder and the successor, even when they share the same attitudes and feelings toward launching a succession process. These situations are termed *communication traps*. In the presented game, the inadequate transfer of information between the founder and successor is the sole reason for these adverse outcomes. The findings extend the literature by suggesting that deficient communication hampers the process of initiating a transition in family businesses, above and beyond the personal characteristics of the individuals involved, their emotions, and their ambivalent feelings.

Incorporating game theory to gain insights on succession, we make simplifying assumptions to show that *communication traps* occur in a very basic transition process. Readers may find some of these simplifying assumptions to be unrealistic. Yet a meaningful contribution lies in showing that *communication traps* arise in a simple form of the process regardless of the complexities, dynamics, ambivalent feelings, and additional aspects of the transition process previously discussed in the vast literature. Therefore, our results highlight a structural problem of the transition process in its simplest form. Future studies can model dynamics of the process or model interactions with additional stakeholders, such as siblings and nonfamily members. Another promising avenue is applying repeated games for exploring an ongoing succession process, which lasts over a long period.

The game-theoretic approach assumes rational behavior of the involved individuals. On one hand, this assumption is highly restrictive. On the other hand, a psychological approach leads to similar findings (e.g., Handler & Kram, 1988; Lansberg, 1988). Therefore, we speculate that the findings hold for individuals who are not perfectly rational.

In a wider context, future studies could also apply game theory to other problems of decision making in family firms that involve multiple interactions, such as a

decision to sell the family firm, to go public, or to invest in new businesses. Since all of these different decisions occur in complicated intersections between family, ownership, and business, the rational models of game theory can shed new light on central faults in the process.

Another opportunity for future research lies in finding ways to improve communication within family firms. The literature is still vague on the factors that influence communication processes and how these factors make communication more or less effective within this field of research (Botero et al., 2012). Pyromalis and Vozikis (2009) claimed that communication in family firms affects satisfaction with the succession process. Future studies on communication in succession processes should bear in mind that communication is influenced by ethnicity, so family firms across different cultures may use different ways of communicating and have different norms (McGoldrick & Troast, 1993). Overall, our findings offer a number of venues for expanding our understanding of the succession process.

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Notes

1. Taking a different path, researchers have adopted a neuro-economic approach to the study of social decision making by combining game theory models with psychological and neuro-scientific methods (Leon-Guerrero, McCann, & Haley, 1998). This approach has the potential to extend our knowledge of how rational considerations, emotions, and brain mechanisms shape decisions made by individuals in rich interactive environments (Sanfey, 2007).
2. Assuming rational players allow us to find an equilibrium regardless of behavioral biases. This is, of course, a

limitation of the model. However, the detrimental impact of deficient communication is expected to be more severe under a range of behavioral biases that impede the transition process.

3. See Villalonga and Amit (2006) and Molly, Laveren, and Deloof (2010) for performance and control implications of this assumption.
4. The game we present is inspired by two well-known games: an entry game and a battle of the sexes game. Our approach is in line with understanding this interaction in terms of role transition theory (Katz & Kahn, 1978; Kelly, 1955). Role behavior refers to the actions of an individual, appropriately interrelated with the respective activities of others so as to yield a predictable outcome. Lundberg (1994) discusses the conceptual model of role-to-role communications and the communication process among family members as role performers. We also note that the game presented is not a repeated game, which is left for future studies.
5. Clearly, dichotomizing founders as activist or conservative does not cover the full range of possibilities. Myerson, R. B. 1997. *Game Theory: Analysis of Conflict*. Harvard University Press., a co-winner of the 2007 Nobel Prize in economics, states:

Game theorists try to understand conflict and cooperation by studying quantitative models and hypothetical examples. These examples may be unrealistically simple in many respects, but this simplicity may make the fundamental issues of conflict and cooperation easier to see in these examples than in the vastly more complicated situations of real life.

6. The *Nash equilibrium* (named after John Forbes Nash, the Nobel laureate who proposed it) is a solution concept of a game involving two or more players, in which each player is assumed to know the equilibrium choices (i.e., move forward or hold back) of the other players, and no player has anything to gain by changing his or her own choice unilaterally. If each player has made a choice and no player can benefit by changing his or her choice when the other players keep theirs unchanged, then the current choices and the corresponding payoffs constitute a Nash equilibrium.

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