Family Business Decision-Making: Factors and Influences on Choosing a Successor

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Selected Paper prepared for presentation at the Agricultural & Applied Economics Association's 2012 AAEA Annual Meeting, Seattle, Washington, August 12-14, 2012.

This paper reports results from the Intergenerational Transfer for Strong and Sustainable Small and Medium-Sized Farm Family Businesses Project**,** which was supported by Agricultural and Food Research Initiative Competitive Grant no. 2009-55618-05056 from the USDA National Institute of Food and Agriculture.

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Abstract: This paper investigates the factors that lead a family business to name a successor for the business, as the succession process often begins with naming a successor. We further separate family businesses into farm and non-farm businesses to compare and contrast the results. The factors used in the probit regression are clustered into three groups: business factors, family factors, and individual factors. Identifying the barriers that family businesses face when naming a successor will help Extension and other small and family business consulting agencies and organizations to formulate a guide to assist families when working through this process.

Introduction

The transfer of a businesses' ownership from one individual to the next is a plight that is affecting as much as 40% of American businesses at any one point in time (Bowman-Upton, 1991; De Massis et al., 2008). Gersick et al. (1997) cited that as much as 65-80% of the business enterprises in the world are family-owned or family-managed. Yet, a very small percentage of family businesses survive when transferred from one generation to the next (Bowman-Upton, 1991; De Massis et al., 2008).

Bowman-Upton (1991) notes that possibly the most difficult decision that a family business has to make is to whom the family business will be transferred, or who will become the successor of the family business. There is no doubt that naming a successor can have huge implications for a business and that family businesses may choose different characteristics to focus on when choosing a successor. Some businesses may choose to focus on skill level, others on demographic characteristics, interpersonal characteristics, or motivation levels of that particular potential successor (Morris et al., 1996). Whether or not a successor has been named

can greatly influence how a family business is managed and planned out for the future (Potter and Lobley, 1992). For example, the presence or absence of a named and identified successor can greatly impact how the owner of a family business decides to operate the business and also how he or she makes decisions, both in relation to the family and the business.

There has been an extensive amount of research conducted surrounding succession planning and intergenerational transfer and many factors have been identified that affect the transition of a business from generation to generation (Bowman-Upton, 1991; Calus and Van Huylenbroeck, 2008; De Massis et al., 2008; Laband and Lentz, 1983; Mishra and El-Osta, 2007; Morris et al., 1996; Weigel and Weigel, 1990). However, although much literature has been published surrounding business succession, there are still gaps that have not yet been filled. In particular, few studies have been able to quantify family-business interactions and individual relationships. Moreover, many of the studies have been conducted with relatively small samples of family businesses (Gibson and Cassar, 2002) and fewer yet have studied family farm businesses. Intergenerational transfer is especially important for farms because of the farming profession's high occupational inheritance rate (Laband and Lentz, 1983).

Researchers have found it difficult to quantify a successful succession process and its characteristics. It is not always clear which person in the business should be interviewed or if there should be a consensus among family members involved in the business. Most studies that have been able to overcome this barrier and quantitatively express their results have had small sample sizes, normally no larger than 175 observations in the sample (Dumas et al., 1995; Morris et al., 1996; Potter and Lobley, 1992). Only a few such as Mishra and El-Osta (2007) and Duffy et al. (2000) have had large sample sizes (over 1000 observations). Specifically, Gibson and Cassar (2002) noted that, "Additional studies with larger samples are needed." (pp. 172).

Research regarding succession has to be approached differently when examining family businesses than when examining non-family business entities. When the "family" is integrated with the business, there are familial bonds and interactions that affect the succession decision. The succession process is usually not as straightforward as lining up the candidates and seeing which is the most qualified. When the family unit becomes intertwined in the decision-making process of the family business, objectives and goals of the business may become skewed or altered in order to maintain family bonds. The maintenance of family relationships can sometimes come as an expense to the family business. The succession process of a family business can be extremely complicated because personal feelings can easily play a role in decision-making and the process of succession is not strictly adherent to numbers and contracts.

Most research has focused on either business characteristics, owner characteristics, or family characteristics or two out of three facets. Few have been able to focus on all three aspects of the family business. We contribute to the literature by not only integrating all three (family, business, and owner characteristics) but also how management practices affect the succession process of identifying a successor. We are also able to compare farm family businesses to non-farm family businesses, which has not often been done in the past.

Theoretical Background

We modify the Theoretical Model of Successor-Related Factors that Influence Successful Succession modeled by Venter et al. (2005). Venter et al.'s proposed model was in a non-sequential configuration, leading to the emergence of sub-models, where some variables were shown to affect more than one variable. For example, the relationship between the owner-manager and the successor is influenced by family harmony, but is subsequently assumed to

moderate both preparation level of the successor and perceived success of the succession process. Venter et al. also excluded business characteristics from their model. Our model simplifies this structure, allowing us to add additional variables, categorized into one of the following groups: business characteristics, family characteristics, or owner characteristics.

Venter et al.'s Theoretical Model included factors such as a successor's willingness take possession of the business, preparation level of the successor, and the relationship between the business owner and the successor. Venter et al. proposed that rewards from the business, trust in the successor's abilities and intentions, and personal needs alignment to the successor's willingness to take over all influence the perceived success of the succession process, hence assuming that the family business had already named a successor. However, we propose that this leads to naming a successor, which is one of the first steps to a successful succession.

Figure 1 Here

We propose that the model would be more comprehensive of the succession process if it consists of three main "groups" of variables that lead to the variable "named successor", shown in Figure 1. The three groups would be representative of 1) business factors, 2) family factors, and 3) individual factors pertaining to the successor. Past research has shown that business factors also play a significant role in naming a successor (Danes et al., 2008; Mishra and El-Osta, 2007; Remble et al., 2010). In fact, the Sustainable Family Business Model (Danes et al., 2008; Stafford et al., 1999) incorporated both family and business factors and demonstrated that disruptions in the family can hinder processes in the business, and vice versa. The Sustainable Family Business Model also demonstrated how the two entities, the family and the business, were often considered interwoven but competing for resources and time. We combine Venter et al.'s (2005) Theoretical Model of Successor-Related Factors That Influence Successful

Succession and Stafford et al.'s (1999) Sustainable Family Business Model by incorporating business, family, and individual variables in order to determine their impact on naming a successor.

Literature Review

There can be many causes for an unsuccessful business transfer, stemming from business, family, or individual factors and characteristics. For example, in the case where an heir is not present or interested in continuing to run a family-owned business, then that particular business can cease to exist when the owner retires or otherwise exits the business. In other cases, family dynamics can be a barrier to succession; perceived unfairness, lack of integrity and lack of trust between family members who actively participate in the family business can prevent succession (De Massis et al., 2008).

Business Factors

Family business literature has used income to calculate business size. Past research has found that farm income and farm size affect farm transition (Calus et al., 2008; Gibson and Cassar, 2002; Mishra and El-Osta, 2007). Calus et al. (2008) found that having a named successor led to an increase in total farm assets, just as Stavrou (1999) found that as business size increased, the offspring's intentions to join the family business also increased. Studies thus far have shown that total sales volume, total farm assets, number of employees, and business size all had a positive influence on the incidence of business planning (Calus et al., 2008; Gibson and Cassar, 2002; Mishra and El-Osta, 2007). We focus on family business income as a measure of business size.

The “Succession Effect”, as proposed by Calus and Van Huylenbroeck (2008), noted that when a successor was present, then the family business had an incentive to expand. Their research found that a farmer was more likely to invest in his or her own business when there was a likely successor. Calus and Van Huylenbroeck also found that in the presence of a known successor, business owners were more likely to have expanded the business by investing in capital or by increasing output.

Perceived success of a family business could differ greatly based on a number of factors ranging from income to level of family tension, and more importantly the metric each business owner used to judge success. Perception can be a vital aspect of succession. Venter et al. (2005) found that the willingness of a successor to take over the family business had a positive influence on the perceived success of the succession process. Even though some research has been conducted on perceived success of the succession process, there is little research pertaining to the correlation between perceived success of a business and having named a successor. We hypothesize that perceived success will be positively correlated with the business having named a successor.

Each family business could have different goals, ranging from maximizing profit to including and integrating family members into the business. The goal of the business could be determined by what the business owner was seeking to gain from the business. The act of setting business goals helped members of the family who were involved in the business have a sharper vision of where the family business is headed in the future (Bowman-Upton, 1991). The differences in business goals could define where a business is going and what it would accomplish, whether their goal was profit or passing the business to a family member. Due to the very high occupational inheritance rate that was found to exist among farmers (Laband and

Lentz, 1983), we could assume that the most important goal for farmers could be to pass his or her business down to his or her son or daughter. Because the family was often integrated into many agricultural businesses and they existed at the intersection of the business and the family, their goals may also include maximizing the quality of life for their family (Harper and Eastman, 1980).

Owner expectations and intentions of how to exit the business could be an important factor in determining the outcome of the business. As it relates to naming a successor, the decision that made the most sense when a successor is named is to sell or give the business to a relative or sell the business to a nonrelative. One study in particular showed that when surveying farms in Germany, only 30% of farm owners planned to close their business when they retired (Glauben et al., 2004). Thus, in the case where the intention of the business owner or owners was to liquidate the business, it was a waste of that businesses' time when it came to planning to name a successor, when no business would be left to manage.

When businesses planned for future endeavors that the business may encounter, there was more likely to be a positive outcome (Gibson and Cassar, 2002). An owner's perception of their preparedness and their actual preparedness may differ when it came to business planning. Venter et al. (2005) showed a direct positive correlation between the preparation level of the successor and a successful succession process, and also between the preparation level of the successor and the continued profitability of that family business.

Business location and industry could have an effect on succession planning. Policies regarding taxes and businesses often vary from state to state, some of which could affect estate planning and business succession decision-making. The family businesses for this study were separated into two categories: farm and non-farm, in order to compare the two samples.

Business Hypotheses. The current literature surrounding family business succession leads us to the following hypotheses:

H1: The probability of naming a successor increases as perceived success of the business by the business owner increases.

H2: The probability of naming a successor increases when the expectations and intentions of the business owner is to sell or give the business to a relative versus liquidating the business.

Family Factors

The relationship that exists amid the owner and the successor of a family business could have a large impact on the success of business transition. Family dynamics and relationships have been shown to affect the successful transition of a family business. Venter et al. (2005) and Morris et al. (2003) found that family harmony, otherwise stated as lack of family conflict, and sustainability of the succession process were positively correlated. Stress, both produced from the business and from the family, have also been proven to affect the efficiency of the succession process, with stress having a negative correlation with success of a transfer (Taylor and Norris, 2000; Wilson et al., 1991).

Not only family dynamics but also the structure of a particular family could have an effect on the succession process. When there was a question of who would become the successor of a family business, many family business decisions automatically became more complicated and the otherwise obvious decision of who would inherit the family business became less clear. Even the difference in age between the possible successors, often the children of the business owner, could affect succession. As the age gap between the children widened, the difficulty of naming a successor increased (Kimhi, 1995). This stemmed from the need of the oldest child to

establish him or herself, while the aspirations of the younger child remained unknown or underdeveloped.

Research conducted by Wilson et al. (1991) showed that other features of a family, such as the span of time that the owner-manager of a business and his or her spouse had been married, could affect the stress levels in their business, hence affecting the succession process. Wilson et al. also hypothesized that the number of household dependents had an affect the stress level. Wilson et al.'s other hypotheses expressed that a relationship existed between a family businesses' stress level and marital adjustment (which was supported for the fathers) and also with income satisfaction (which was supported for both fathers and mothers). Many if not all of these features were intertwined and affected each other, and also affected the succession process. For example, if there was a high level of stress between a husband and wife who owned a business, the fact that they had a high level of stress was likely to hinder their decision-making and ability to plan.

There has not been significant research done on the discussion of goals within a family business. Danes and Lee (2004) conducted research in accordance with family and business goals. Danes and Lee hypothesized that in reference to goals in a family and business sense, the perceived achievement from a wife and from a husband would differ. This was not supported, based on its lack of statistical significance. However, Danes and Lee's research did not link the discussion of goals to the success of succession. We propose that the discussion of goals will lead to more planning, hence leading a family business to take part in succession planning and naming a successor.

"Part of the reason estate planning is highly stressful is the lack of knowledge about and use of available technical legal, economic, and tax-related tools" (Fetsch, 1999, pp. 2). An estate

plan could be a very important piece of information for both the business unit as well as the family unit, especially when voiced from a neutral party (Sander and Bordone, 2006). The owner of a family business was not usually an expert in all legal and financial matters and needed a professional to guide them through the process of handing down the business or dealing with succession-related legalities (Smith, 2010). Without the presence of an estate plan, the heirs of a business were likely to receive minimal amounts of what their deceased relatives left to them due to taxes (Bowman-Upton, 1991). Mishra et al. (2010) found that there can be many benefits gained when a successor was involved in the business that they would someday take over, and many of those stemmed from estate tax benefits. However, many family businesses have not met with an estate planning professional. Meeting with an estate planner could help to both protect the business and the family heirs who expected to inherit it.

Just as important as the willingness of the successor to take over the business was the willingness of the senior generation to hand the business down to the next generation. Generally, the business owner was hesitant to retire and hand over the business (Salamon et al., 1986). One of the most cited reasons for the hesitancy to retire was the fear for loss of salary and benefits (Bowman-Upton, 1991). Moreover, the owner who had more than likely put a lot of effort and time in the business usually did not want to relinquish control, for fear that the business would not be run the way that he or she had envisioned.

The needs of the senior generation could have huge implications for whether or not a new successor could be named and integrated into the business. The senior generation or current owner could hinder the succession process if he or she was not ready to let go of the business and hand over power. If the current owner wanted to bring a new generation into the business, then

they were likely to be more open to naming a successor and eventually handing over the business to someone else.

The desire to retire versus the fear of losing the business or fear of losing power and work within the business have been found to lead to a more successful transfer plan (Bowman-Upton, 1991). Owners who had determined who will succeed them in their family business often preferred semi-retirement in comparison with full retirement (Barclay et al., 2007). In the case that an owner was ready to give up the business to retirement, it would more than likely lead to a more successful succession process and naming a successor.

The number of relatives and children involved in the family business could complicate the succession process. Because the succession process can be at the intersection between the business and the family, emotions and personal opinions can taint decisions that might be made. When there were more offspring to choose from as potential successors, the decision became even more complicated, hence the chance of having named a successor was lower. When the owners made a decision and chose a child as a successor, the other children might have had a perception that their parents were choosing favorites, and tension could be generated from this decision. In order to counteract this tension, some owners might just avoid the decision altogether, letting the children and family members to make their own decision in the wake of the owner's death (Bowman-Upton, 1991).

As one might imagine, leaving the offspring and relatives of the late business owner to name a successor to take over the family business could lead to problems. The business would not have an owner for a while, and no one would be trained to take over. Also, many relatives might not want to face the decision-making process due to their grief over the loss of a family member (Bowman-Upton, 1991).

The number of generations involved in the day-to-day management of the business can also have an effect on naming a successor. Although it sounds similar to the number of relatives involved in the business, the two are in fact different. The number of potential successors (number of relatives in the business) and the number of generations in the business picked up different effects. As the number of generations involved in the business increased, there are more people to direct those who will name a successor. In the case that only one generation is involved in the business, there was not a sense of urgency for naming a successor, and the current owner and management may not have any options for a potential successor. When there were more generations involved in the family business (more than one or two), then there were great benefits that could be employed. For example, in the instance where a successor was involved in the business, the two generations benefit from the savings that could be found through estate taxes (Mishra et al., 2010).

There have been many different approaches to measuring the effect of a family on the business (Dyer, 2006). There have also been many different dimensions relating to the family in the business and how that affects business efficiency, ranging from differences in performance between family and non-family businesses due to family governance (Chrisman et al., 2004)) to valuing assets of a family business such as human, social, physical, and financial capital (Adler and Kwon, 2002; Haynes et al., 1999; Ward, 1988). Dryer (2006) proposed a typology of family firms that used the intersection of family assets, agency costs, and family liabilities to separate the businesses. Dryer also noted the difficulties in quantifying the different types of family firms (extending from mom and pop firms to professional family firms) in order to compare efficiencies.

Just like the Sustainable Family Business Model (Stafford et al., 1999) showed, the family and the business were continuously competing for both time and resources from both systems. Danes and Lee (2004) found that in farm businesses, the highest level of tension between couples was generated from the struggle to balance work and family. There were constraints and resources shared between and amongst the two systems: the family and the business, which in turn affected the sustainability of the family business as a whole.

A family business could choose to emphasize the business first, the family first, or find a balance between the two. Basco and Pérez Rodríguez (2009) found that when the family business decided to focus on both the family and the business instead of just on the business, then family success increased and business success remained constant. If the business owner put the business first, then it was likely that the family would then have fewer resources and be less successful because the resources that were once shared had gone to the business (Stafford et al., 1999). Overall, businesses are more successful when the family and business share time instead of emphasizing one over the other (Basco and Pérez Rodríguez, 2009; Stafford et al., 1999).

Family Hypothesis. The current literature surrounding family business succession regarding family factors leads us to the following hypothesis:

H3: The probability of having named a successor increases with increased family discussion of future business goals.

Individual Factors

Demographic characteristics such as gender, age, and education could have an effect on succession (Weigel and Weigel, 1990) as well as successor preferences. Venter et al. (2005) noted that the willingness of a potential successor to step into the lead management role, or become the new owner, of the family business could have an effect.

The generation of the owner could affect whether or not he or she had thought about naming a successor. In the case that the owner was of the founding generation, then he or she had not experienced a succession process and hence would be less inclined to have thought about it as part of their business planning process. In the case that the owner was either second generation or higher, he or she had experienced a succession process in one way or another – either passing the business down or having the business passed down to them.

As a business survived through many generations, they usually acquired more human and physical capital with each generation (Mishra et al., 2010). As generation after generation took over the family business, much capital was likely passed down from one to the other. If a successor was not named, hence a succession plan had not been drawn up; more could be lost in the case that a business does not continue.

Bowman-Upton (1991) reported that there was a very low success rate for transfer of a family business from one generation to the next generation. The success rate dropped even further when the business owner was attempting to transfer an operating business from the second generation to the third generation. From this, we can infer that with each added generation, the likelihood that they will survive the next transition decreases. To date most of the research has focused on owner generation and its effect on the success of the actual succession process, with little research focused its effect on identifying a successor.

Mishra et al. (2003) found that as education increased, the probability of having a family member built into the succession plan increased. The likelihood that the older generation of the business had given up the power and ownership of the business increased as the owner (older generation) ages (Remble et al., 2010). Mishra et al. (2003) stated that age had an effect on the timing of business succession, or business transfer. Of the farmers interviewed, Mishra et al.

found 34% of them had a succession plan if they planned on retiring in the next five years, and 80% of those had a family member named as the successor. Also, 40% of the farm operators who were aged 65 or over, who did not have retirement plans, did have a succession plan.

Potter and Lobley (1992) identified some characteristics that were often common of elderly farmers who did not have a successor. Those without a successor tended to have lesser amounts of both land and capital. They also tended to have simpler enterprise mixes – there was no reason to expand into new ventures if there was no one to inherit the family business. The intensity of work on the farm was commonly found to be lower when a successor was not present. This condition yielded less of an incentive to expand and grow the farm or agribusiness.

Gender has historically been a limiting factor for daughters who wanted to take over or even be employed by the family business (Stavrou, 1999). For a long time, the woman's role on a farm had been restricted to a limited number of tasks, such as taking care of animals and bookkeeping. However, the amount of farm women who took off the farm employment had been increasing in the United States. As of 2001, 62% of farm women who were of working age had off-farm jobs. It was found that women who were involved in their own family's farms versus those who were involved with their husbands' family farm were more likely to be involved in decision-making on the farm (Findeis and Swaminathan, 2003). Past research also showed a relationship between gender, specifically males, and succession. Glauben et al. (2002) found that the number of men had a significant influence on the likelihood of succession. When there was an increase in the number of men in the family business, the business was more likely to go through the succession process compared to an increase in the number of women.

Not much research can be found in regards to how marital status affects having a named successor. Glauben et al. (2002) found that the percentage of married farm operators varied

greatly between those businesses that had a likely or certain successor and those that did not have a likely or certain successor. When there was a likely or certain successor for the farm, 90.8% of farm operators were married and when there was not a likely or certain successor for the business, that rate fell to 79.6%. This showed that the marital status of a farmer could have an effect on whether or not a successor was named.

When dealing with a family business, the intersection of the family and the business were crucial to the operational efficiency of the business. Having not only a family member but a spouse involved in the management of the business could affect how the business is run and also decisions that were made by the business owner. The spouse of the business was often involved in many facets of the business (including management decisions); regardless of if they were an active part of the management team (Keating and Munro, 1989). Danes and Lee (2004) found that when family resources were used to transfer from the family to the business side of the interaction, tensions were likely to be much higher. Any tension or unrest that was generated within a family-business unit could affect the entire operation. The naming of a successor could be affected by spousal interactions within the family business.

Individual Hypothesis. The current literature surrounding family business succession regarding individual factors leads us to the following hypothesis:

H4: The probability of having named a successor increases as owner's years of experience increase.

Data

The data for this research was gathered for the study of intergenerational transfers of small and medium-sized farm and non-farm family businesses. Thirty minute telephone

interviews were conducted from April 2011 through January 2012 and spanned family-owned business in Illinois, Indiana, Michigan, and Ohio. The Family Business Succession Survey (FBSS) was used, consisting of eight sections of questions for the business owner or operator to answer. The sections include the following: business demographics, succession, family business organization, management strategies, business success, family tensions, business and household finances, and lifecycle questions. A mixture of continuous, Likert-scale, and binary variables measured the responses of the surveyed business owners.

There was an overall cooperation rate of 34% for the Family Business Succession Survey. The Farm sample had a cooperation rate of 44% and the Non-Farm sample had a 12% cooperation rate. The response rate for this survey was approximately 26.4%, with 35.9% of the Farm sample and 8.6% of the Non-Farm sample responding. There were a total of 736 interviews conducted, 497 of which could be used for this study.

It was interesting to look at what percentage of our sample had a named successor compared to past studies. Out of the 497 observations used in the model, 29.58% had a designated successor; and simply looking at the farms, 31.78% had a designated successor. Of the non-farm businesses, only 24.68% had a designated successor. This is somewhat consistent with past research. For example, Calus et al. (2008) and Calus and Van Huylenbroeck (2008) found that in their study only 18.7% of their businesses had a designated successor, in contrast, to those who did not have a designated successor (36.6%) and those who were not certain who their successor would be (44.7%). In a nation-wide study, Mishra et al. (2003) found that only 27% of farm operators had named a successor.

Methodology

Empirical Model

The sample was separated in order to run three models: one for the Full FBSS sample, one for the Farm sample, and one for the Non-Farm sample. With three separate sets of results, we can compare factors among farm businesses and non-farm businesses that affect succession. In the case of the farm businesses, all of the businesses are either family agribusinesses or family farm businesses (i.e. falling into the category of "Agriculture, Forestry, and Natural Resources"). The businesses that make up the sample for the non-farm model have the primary purpose of one of the following: Manufacturing (4.55%), Wholesale Trade (8.44%), Retail Trade (22.73%), Education (0.65%), Health Care (0.65%), Entertainment (2.60%), Food Services (28.57%), or Other (31.82%). The full FBSS model contains all of the categories previously mentioned, with 69.01% of the businesses falling into the farm category.

Each variable's name, definition, how it was dummied, and its unit of measurement are shown in Table 1. The dependent variable of the proposed models is *id_a_successor*. This variable, which quantifies naming a successor, is binary, one signifies that a successor has been named and zero signifies that no successor has been named. The variables of interest that fall into the "business characteristics" category are the owner's perceived success of his or her business and the expectations and intentions of the business owner to sell or give the business to a relative. The perceived success of the family business by the business owner is measured by having a value of one if the business owner thinks that his or her business is "somewhat successful" or "very successful" and a zero if the owner thinks that his or her business is "very unsuccessful", "somewhat unsuccessful", or "uncertain".

Table 1 here

The variable of interest that falls into the "family characteristics" category is the frequency of family discussion of future business goals. The business has options of saying that they "never" discuss goals, "yearly" discuss goals, "quarterly" discuss goals, "monthly" discuss goals, or discuss goals "all the time". In the case that the business answered "all the time" to the question, it was grouped into the "monthly" dummy variable.

The variable of interest that falls into the "individual characteristics" category is the owner's years of experience, which we calculated the owner's age (as of 2012) and then subtracted the number of years of education that he or she had completed. The owner's age minus their number of years of education is presumably their number of years of experience (assuming that no breaks were taken throughout). This is based off of Mincer's (1993) estimation of the experience variable that he used to estimate its effect on the incidence of unemployment (Mincer had two separate variables in his estimation, one for education and he calculated an *experience* variable by taking the worker's age and subtracting from it the legal working age).

Most of the variables in this model were binary because they were dummied. Only two variables, experience and the number of relatives that are employees, were left as continuous variables. The experience variable was calculated in order to account for both a person's age and their education, hence calculating their number of years of experience that they have acquired. To calculate this variable, the number of years of education is subtracted from the owners age, which has incorporated many dimensions and picks up the effects of both education and owner age. The variables that have been dummied take on a value of "1" if the business falls into that specific "category" and takes on a value of "0" otherwise. The frequencies of the binary variables as well as the descriptive statistics of continuous variables are shown in Table 2.

Table 2 here

Probit Model Estimation

A probit model can be used to model binary and limited response variables, just as Glauben et al. (2004) used a probit model to estimate effects on the likelihood of farm succession and Lange et al. (2011) used to estimate transfer decisions on family farm businesses. A probit model was used to model the factors that affect the likelihood of a business having a named or designated successor. The response variable, whether or not a business has named a successor, is binary. Therefore, the coefficients on each of the independent variables can be interpreted as individual influences on the probability of the model, ceteris paribus. An example of the model form is as follows:

(1) $P(y = 1|\mathbf{x}) = G(\beta_0 + \beta_1 x_1 + \ldots + \beta_k x_k) = G(\beta_0 + x\beta).$

Where G is a function taking values strictly between zero and one: $0<G(z)<1$, for all real numbers z (Wooldridge, 2009). It is this rule of G (z) lying between zero and one to ensure that the estimated probability generated from a given linear probability model will not project a negative probability or a probability over the value of one. For this model, we are assuming a standard normal distribution for the error term, ε. In order to account for the heteroskedasticity that is often inherent to survey data, we used robust standard errors instead of normal standard errors.

(2) $P(id\_a\_successor = 1) = \alpha + \beta * Business + \gamma * Family + \delta * Individual + \varepsilon$

There are a few techniques that can be used in a linear probability model to measure the model's goodness of fit. The first technique is calculating the percent correctly predicted. Because the model has a binary response variable, the method of determining if the prediction was correct or not can be difficult. In order to decide whether or not the predicted value ($\tilde{y}_i$) matches the observed value (y_i), we must convert the predicted values into binary values.

Therefore, in the case that $\tilde{y}_i \geq 0.5$, the predicted value then becomes 1. In the case that $\tilde{y}_i < 0.5$, the predicted value becomes 0. From there, a simple percentage can be calculated to observe the percent correctly predicted from the model. Because only 148 of our owners (29.4%) of the observations in our full sample model have responded that they have named a successor, this measure can be misleading. Looking strictly at the farms, there is a slightly higher percentage that has named a successor, 31.7%. For the percent correctly predicted, the number of each responses that fall into the "have named a successor" (id_a_successor=1) and "have not named a successor" (id_a_successor=0) should be roughly equal between the observed values and the predicted values (Wooldridge, 2009).

Pseudo R-squared is another technique that can be used to measure the goodness of fit of a model with a binary response variable. A pseudo R-squared for a probit model is similar to an R-squared for an OLS model, which measures how close $\hat{y}_i$ is to y_i. The pseudo R-squared is not expected to be as high as a conventional R-squared for an OLS estimate because of the binary response variable. It is not likely that many of the predicted values will come out to be exactly 0 or exactly 1; it is more likely that the predicted values are found to be somewhere in between (Wooldridge, 2009). The continuity of a response variable allows the model to be a better fit and there is an increased ease of measuring the goodness of fit for the given model, which will not apply in this case.

Results

Business Characteristics

Results of the probit models are shown in Table 3 for the Full FBSS sample, the Farm sample, and the Non-Farm sample. The marginal effects of all three models are presented in

Table 4. Although much of the past literature has found a link between level of income of a family business and succession planning, none of the models showed income as having a statistically significant effect on the probability of having a named successor.

The perceived success of the business by the business owner was found to be statistically significant and have a positive effect on the probability of having a named successor in all three models. Hence, Hypothesis 1 is supported for all three models, but has the most statistical significance in the Full FBSS Model. The marginal effect for perceived success is significant in the Non-Farm model, but not significant in the probit model. Looking at the marginal effects of perceived success, the Full FBSS Model shows that when the business owner thinks that the business is successful when compared to when they think that the business is unsuccessful, the probability of having a named successor increases by 12.2%. Having positive perceived success increases the probability of having a named successor in the Farm Model by 13.3%.

In both the Full FBSS Model and the Farm Model, when it is the intention of the owner to sell or give the business to a relative after he or she exits the business, the effect is positive and statistically significant on having a named successor (Hypothesis 2 is supported for Full FBSS Model and Farm Model). The Full FBSS Model shows that when it is the intention of the business owner to sell or give the business to a relative, that business has an increase in probability of naming a successor by 22.0% when compared to an owner having the intention to liquidate the business. The Non-Farm Model does not show that the intention to sell or give the business to a relative is statistically different from zero (Hypothesis 2 is not supported for the Non-Farm Model). There is no statistically significant effect in any of the models when it is the intention of the business owner to sell the business to a nonrelative.

The goals that were found to be statistically significant to the business having a named successor vary greatly from model to model. In the Full FBSS Model, the goals that are statistically significant are the goal to keep the business in the family and the goal to work with family. For the Farm Model, the only goal that was statistically significant was the goal to keep the business in the family. Because family farms have such a high occupational inheritance rate, it makes sense that the most significant goal to having a named successor is the goal to keep the business in the family. Farm businesses increase their probability of having a named successor by 22.3%. In the Non-Farm Model all four goals that are statistically significant to having a named successor – including the goal of having a positive reputation with customer, the goal of business survival, the goal to keep the business in the family as well as the goal to work with family; the most significant of which is the goal to work with family.

Only one regional dummy in the Non-Farm model is statistically significant. Michigan has a negative effect on the probability of naming a successor, but only in the probit model. None of the marginal effects are statistically different from zero. There may be a policy that makes it difficult for non-farm businesses to pass down a business in Michigan, such as heavy taxes. However, the statistical significance is not strong, so it may be picking up another effect.

Family Characteristics

The frequency of the discussion of goals and its statistical significance varies from model to model. In the Full FBSS Model, the yearly discussion of goals is statistically significant at a 10% level in the marginal effects, but not in the probit regression. The quarterly discussion of future business goals is the most significant of the "discussion of goals" variables, followed by the monthly discussion of goals. Overall, the discussion of goals increases the probability that a business has a named successor (Hypothesis 3 is supported for the Full FBSS Model). For the

Farm Model, all three "discussion of goals" variables have a significant and positive effect on the probability that a business has a named successor when compared to families who never discuss future business goals (Hypothesis 3 is supported for the Farm Model). The results of the Farm Model marginal effects show that the quarterly discussion of future business goals has the largest coefficient; when the family business discusses future business goals on a quarterly basis, then there is an increase in probability that a business has a named successor by 37.1%. The Non-Farm Model showed that none of the "discussion of goals" variables are statistically different from zero (Hypothesis 3 was not supported for the Non-Farm Model).

The discussion of an estate plan can encompass effects from both the family and the business as separate but intersecting entities as they relate to succession planning. Roughly 60% of the total owners in our survey have met with an accountant, financial planner, lawyer, or business consultant to discuss their estate planning strategies, which leaves almost half of them that have not. Both the Full FBSS Model and the Farm Model show that discussing an estate plan with a professional has a significant positive impact on the probability of a business having a named successor. Both models show that the effect of discussing an estate plan increases the probability by roughly 10%. The Non-Farm Model shows no significance between estate planning with a professional and having a named successor.

Often discussed in the literature is the senior generation's willingness to hand over the business (Venter et al., 2005). The Full FBSS Model shows that when the senior generation is ready to hand over the business, there is a statistically significant positive effect on the probability that a family business has a named successor. The marginal effects show that when the senior generation is ready to hand over the business (versus when the senior generation is not ready to hand over the business), the business has an increase of 15.9% of having a named

successor. For the Farm Model, none of the "willingness to hand over the business" variables were statistically different from zero, whereas both were in the Non-Farm Model. The Non-Farm Model showed that whether the senior generation was somewhat ready or ready, there was a significant positive effect on having a named successor. The effects on the increased probability in relation to somewhat willing to hand over and ready to hand over are 63.4% and 92.2%, respectively.

Just as literature has discussed, the number of relatives that are involved in the business, presupposing this is the same as the number of possible successors, has a negative correlation with having a successful transition process. In both the probit results and the marginal effects of the Full FBSS Model and the Farm Model, there is a negative relationship between the number of employees that are involved in the business and the likelihood of having a named successor. The marginal effect for the number of employees in the Farm Model is -2.4%. The Non-Farm Model only shows this correlation is statistically significant in the probit regression, but it is significant at a 1% confidence level. When there are more choices of potential successors, then it is likely that the process becomes stalled or even comes to a standstill because the decision that a family would make for the business could have negative impacts on the family.

As Danes et al. (2004) and Stafford et al. (1999) have often discussed, the fragile balance between families and the business when dealing with a family business often is difficult to maintain. The struggle for time and resources between the family and the business was positive and statistically significant in the Non-Farm Model. The Non-Farm model shows a significant increase in the likelihood of having a named successor the more the owner puts the family first (versus putting the business first more often). An explanation for this can be explained by the structure of the different types of businesses (Farm and Non-Farm). In the case of family farms,

the family's role is often endogenous to the existence of that business; hence the family and the business exist simultaneously. This leads to the continuum of choices between putting the business first and the family first having no to little effect on the decision to name a successor. On the other hand, non-farm businesses such as food businesses are more likely to have a distinct division between the family and the business. The impact of the non-farm business owner putting the family first more often than he or she puts the business first has a positive impact on the probability of having a named successor.

Individual Characteristics

The literature has shown that less than 30% of businesses survive the transition from the first to the second generation, and that percentage drops when going from the second generation to the third (Bowman-Upton, 1991). However, our models, there was no statistical significance between the generation of the current owner and having a named successor, whether it is second generation or third generation and higher.

The owner's years of experience has a positive influence on the business's probability of having a named successor. The experience variable is statistically significant for both the Full FBSS Model and the Farm Model at a 5% confidence level and a 1% level, respectively (Hypothesis 4 is supported for the Full FBSS Model and the Farm Model). The owner's years of experience were not significant for the Non-Farm Model (Hypothesis 4 is not supported for the Non-Farm Model).

Gender influence was a present factor in both the Full FBSS Model and the Farm Model. There is a statistically significant positive relationship between gender (female) and the probability of having a named successor. The probability of having a named successor increases by 8.3% when the business has an owner that is female in the Full FBSS Model, and increases by

12.2% in the Farm Model. There is not a statistically significant relationship between an owner being female and the probability of having a named successor in the Non-Farm Model.

An owner's desire to bring a new generation into the business can be a driving force in the succession process. In both the Full FBSS Model and the Farm Model, there is a positive relationship between the owner's desire to bring a new generation into the business and the probability that the business has named a successor. However, the owner's desire to retire is not statistically significant in any of the three models.

The variable that explains whether or not the current owner inherited the business and also the marital status of the owner are not significant in either the Full FBSS Model or the Farm Model, although they both have positive coefficients. The marital status of the owner is significant in the probit results for the Non-Farm Model and has a positive effect.

Overall Fit of the Models

As mentioned above in *Probit Model Estimation*, one way to measure the overall fit of the model is to look at the percent correctly predicted. Another way to measure the overall fit of the model is to look at the pseudo R-squared. For the Full FBSS Model, the model correctly predicted 390 of the 497 observations, or 78.47%. The Farm Model correctly predicted 271 of its 343 observations, leading to a 79.01% correctly predicted. The Non-Farm Model, had both the highest percent correctly predicted and pseudo R-squared of all three models, with 131 of its 154 observations, or 85.06%, correctly predicted. The pseudo R-squared values for the Full FBSS Model and the Farm Model were 0.288 and 0.301, respectively.

Conclusions

This study encompassed a probit and marginal effects analysis of factors that influence the probability of a family business having a named successor. This was further divided into three samples: Full FBSS Sample, Farm Sample, and the Non-Farm Sample. Factors and their influence of a family business having a named successor fall into three categories: business characteristics, family characteristics, and individual (owner) characteristics.

The goal of improving the rate of successful succession begins with a business naming a successor, and ultimately results in business longevity and sustainability. Much can be learned from the differing results from each of the three models (Full FBSS Model, Farm Model, and Non-Farm Model). The differences as well as the similarities across these models will help to determine which characteristics are most important to small- and medium-sized businesses as a whole (Full FBSS Sample) and also further dissect the businesses into their specialty (Farm or Non-Farm). It seems as though there are many differences between farm and non-farm business samples, though they all fall into the "food, farm, and agribusiness" category.

The results of the models show a true disconnect between the business owner's perceptions and what is actually happening in his or her business. The business owners are likely to gauge success in a different way than would non-family business owners. For example, respondents perceived their business as successful (90.95% of FBSS Sample), yet their income was below $50,000 per year (42.66% of FBSS Sample). With family businesses, the owners are more likely to have a feeling of success stemming from the incorporation of their family and their work into their life and may also feel more prepared for a business disruption because people in his or her business know the business and could step in temporarily if need be.

There are some times during the survey when an owner would reply that their business is in one of the beginning stages of their management transfer plan, yet they respond "yes" to the question "if it were to happen today, is your family prepared for management succession?". This shows that there is some disjointedness between the owner's perception of planning and what their business is actually doing. There is a distinction between the number of business owners that think that the family business is ready for a management succession (41.25%) and the number that are at the end of their management transfer plan (21.13%).

Overall, the three models only share three significant variables to the probability of having a named successor: perceived success of the family business by the business owner, the goal to keep the business in the family, and the number of employees that are relatives. The results between the Full FBSS Model and the Farm Model are similar, more than likely because the Farm sample makes up 69.01% of the Full FBSS Sample. While the Farm and Full FBSS Sample share many of the same results, the Non-Farm Model has very different results and the model also has a much higher predictive power than the other two. Therefore, we conclude that the succession process may be different for farm family business and nonfarm family businesses.

Some of the variables that were used in the models are factors that are intrinsic to the business or its business owner (such as owner's years of experience, generation of the business, gender, and if the business owner inherited the business). Then, there are management-type characteristics that a business takes on due to its ownership and how the owner runs the business and makes decisions. Because management characteristics are easier to change, we would hope that those are the characteristics most influential to the probability of a business having a named successor.

All of the models show that business and family characteristics have more significance to a business having a named successor than do individual characteristics of the owner. Half of the business factors that are significant in the farm model are related to family in one way or another (i.e. the intention of the business owner to sell or give the business to a relative and the goal to keep the business in the family), while the non-farm model's significant business factors are almost all strictly adherent to the business (i.e. perceived success of the business by the owner, whether there is enough capital to implement a business transfer, the goal of a positive reputation with the customers, the goal of business survival, if the business is prepared for a management succession, and the state in which the business is located).

For family farm businesses, the historically traditionalist view of always passing the farm down through the family and treating the farm as a "family affair" is evident in the results. For example, the intention of the business owner to sell or give the business to a relative as well as the goal to keep the business in the family are prevalent forces that are driving the naming of a successor. The frequency of discussion of future business goals, whether it be yearly, quarterly, or monthly is a management strategy that can easily be implemented into a family business, but has a large impact on leading a family business to successful succession.

Non-farm businesses seem to have less of a focus on the family side of the business, but food and non-farm agricultural businesses are often less traditional in their views than are farm businesses. This is shown by all business goals in a non-farm business, from the goal of a positive reputation with the customers to the goal to work with family, being significant to having a named successor. Out of the goals that impact the probability of having a named successor, the focus is less on family matters (i.e. the goal to keep the business in the family) and more on business matters.

This study has only looked at business, family and individual characteristics that affect the probability that a family business has a named successor. However, having a named successor is just a step in the right direction for business sustainability, with the ultimate goal of having a successful succession process. The variables of interest for this study were chosen because they have not been overly studied in past literature. They include the frequency of future business goal discussion, the owner's perceived success of his or her business, how the owner plans to exit the business, and the owner's years of experience. The findings of this research prove that all four of the previous variables have an effect on naming a successor; hence they have an effect on the overall succession process.

By running a probit model, we were able to find out which variables are associated with a family farm or non-farm business naming a successor. Finding the statistical significance of each variable told us what the most important factors are for businesses to focus on when planning for a succession process. Knowing more about factors affecting farm transfer success can help Extension or other small business consulting agencies and organizations better prepare family businesses for the succession process.

Identifying the barriers that family businesses face when naming a successor will help Extension and other small and family business consulting agencies and organizations to formulate a guide to assist families when working through this process. Some of these include devising a set of guidelines for families to follow to assist them in their succession process or making a list of those "difficult subjects" that families must talk about to make their process as successful as possible. By helping family businesses to name a successor, it will increase their sustainability and help to make the occupational inheritance rate more successful.

The difference between the Farm and Non-Farm models leads two different sets of recommendations for farm and non-farm businesses, both of which need succession plans. For family farm businesses, the focus should be put on planning in a formal way. For instance, farm businesses who want to name a successor (ultimately leading to having a successful succession process) should make sure that it is the owner's intention to sell or give the business to a relative when he or she retires or otherwise exits the business. Also, the farm businesses should work on preparing a management contingency plan, seeing as it has a large influence leading to naming a successor. Farm businesses should meet with an estate planning professional, integrating the family and the business into one legal plan. This not only sets the business up for an external shock of some kind but it also makes the plans accessible to all of the family members. Family farm businesses can also formally plan without a professional in the sense that they can have an official family business meeting where the family members can openly discuss issues relevant to business planning. During these meetings, the members of the family business should plan on discussing future business goals, at least on a quarterly basis.

A question that we have found ourselves asking throughout this process is: which is more important, business management practices of the family business or owner characteristics? If management factors are more likely to influence succession decisions, then there is more to be done in the way of planning and advising small and family businesses. For example, a business advisor could help a family to plan by giving them a structured schedule of what to speak about and when (i.e. speak with a lawyer about drawing up an estate transfer plan, discuss with family members about when to start implementing the new generation into the business, etc.).

The recommendations are somewhat different for family non-farm businesses than they are for farm businesses. In order to have more successful transfer processes, non-farm businesses

need to better incorporate the "family" aspect of a family business into the everyday workings of the business. Although balancing family with the business can be difficult, a business can also be strengthened through the integration of the family and the business. Non-farm businesses should work on preparing a management contingency plan for the business. Because the family members are not nearly as involved in a non-farm business as they are in a farm business, there may not be a family member to automatically take over the business in the wake of a disruption, especially if the current owner is no longer present to manage the business. Another aspect for a non-farm business to look into is the willingness of the senior generation to pass on the business. Because their willingness has a very large influence on naming a successor, the businesses should help to prepare the older generation to slowly phase themselves out of the business for the next generation, ultimately making the succession process less disruptive for everyone involved.

Some of the limitations from this study stem from the survey structure. The interpretation of the effect of income on the naming of a successor was difficult because of how the income levels were measured. Income was a categorical variable in the Family Business Succession Survey and grouped income by annual income level instead of an actual dollar amount given by the respondent. This study was limited geographically to the states of Indiana, Illinois, Michigan, and Ohio. Also, the information collected by this survey is cross-sectional in nature, so it only represents a family business in one point in time. A more representative study, or a follow-up study could be done to transform the data into panel data. Possibly, panel data could lead to a study in which the actual succession process could be studied, not just characteristics leading up to preparing for a succession process. This could also allow "successful succession processes" and "unsuccessful succession processes" to be studied in order to analyze the differences in characteristics between the two samples of data.

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Table 1. Definitions

Variable name	Definition
ID_A_SUCCESSOR	=1 if the business has identified a successor
Business characteristic variables used in the model	
Variable name	**Definition**
FARM	=1 if the business has an agricultural specialization; 0 otherwise
INCOME_50K_TO_199K	=1 if the business annual income is between $50,000 and $199,000; 0 otherwise
INCOME_200K_TO_499K	=1 if the business annual income is between $200,000 and $499,000; 0 otherwise
INCOME_500K_AND_UP	=1 if the business annual income is over $500,000; 0 otherwise
BUS_IS_SUCCESSFUL	=1 if the business owner considers the family business to be somewhat successful or very successful; 0 otherwise
SELL_GIVE_TO_RELATIVE	=1 if the business owner expects that the business will be sold or given to a relative when the current owner passes the business on; 0 otherwise
SELL_TO_NONRELATIVE	=1 if the business owner expects that the business will be sold to a nonrelative when the current owner passes the business on; 0 otherwise
END_OF_MGMT_PLAN	=1 if the business has a written plan, has started to implement the plan, or has finished in regards to the management transfer plan; 0 otherwise
ENOUGH_CAPITAL	=1 if there is enough money or capital to implement the transfer of the business; 0 otherwise
GOAL_POSITIVE_REPUTATION	=1 if the goal of the business is positive reputation with their customers; 0 otherwise
GOAL_BUSINESS SURVIVAL	=1 if the goal of the business is business survival; 0 otherwise
GOAL_KEEP_BUS_IN_FAM	=1 if the goal of the business is keeping the business in the family; 0 otherwise
GOAL_WORK_WITH_FAMILY	=1 if the goal of the business is to work with family; 0 otherwise
PREPARED_FOR_MGMT_SUC	=1 if the owner feels like the business is prepared for a management succession if it were to happen today; 0 otherwise
INDIANA	=1 if the business has an address in the state of Indiana; 0 otherwise
MICHIGAN	=1 if the business has an address in the state of Michigan; 0 otherwise
OHIO	=1 if the business has an address in the state of Ohio; 0 otherwise

Table 1 (continued)

Family characteristic variables used in the model	
Variable name	**Definition**
YEARLY_DIS_GOALS	=1 if the family discusses future business goals on a yearly basis; 0 otherwise
QUARTERLY_DIS_GOALS	=1 if the family discusses future business goals on a quarterly basis; 0 otherwise
MONTHLY_DIS_GOALS	=1 if the family discusses future business goals on a monthly basis or all of the time; 0 otherwise
EVER_DISCUSS_ESTATE_PLAN	=1 if family has ever met with an accountant, financial planner, lawyer, or business consultant to discuss estate planning; 0 otherwise
SENIOR_SOMEWHAT_READY	=1 if the senior generation is slightly or somewhat prepared to give up control of the family business by delegating management to heirs or successors; 0 otherwise
SENIOR_READY	=1 if the senior generation is very much or extremely prepared to give up control of the family business by delegating management to heirs or successors; 0 otherwise
RELATIVE_EMPLOYEES	= the number of business employees that are relatives
MORETHAN1GEN_D2D_MGMT	=1 if there is more than one generation (including the owner's generation) that is involved in the day to day management of the business; 0 otherwise
SPOUSE_IN_MGMT	=1 if the owner's spouse is involved in day to day management of the family business; 0 if no or if the owner is single
BUS_FAM	=continuous scale from 1 to 6, measuring which entity comes first: the family or the business, where 6 is family comes first all the time and 1 is business comes first all the time

Table 1 (continued)

Individual characteristic variables used in the model	
Variable name	**Definition**
SECOND_GEN	=1 if the current owner is a second generation owner of the business; 0 otherwise
THREE_PLUS_GEN	=1 if the current owner is a third or higher generation owner of the business; 0 otherwise
EXPERIENCE	=owner age – years of education
FEMALE	=1 if the owner of the business who responded to the Family Business Succession Survey is female; 0 if male
NEW_GENERATION	=1 if the current owner has thought about succession planning because he or she wants to bring a new generation into the business; 0 otherwise
RETIRE	=1 if the current owner has thought about succession planning because of their want to retire; 0 otherwise
INHERIT_BUSINESS	=1 if the current owner inherited the business from the previous owner; 0 otherwise
MARRIED	=1 if the business owner is married; 0 otherwise

Table 2. Descriptive Statistics

	Full FBSS Sample (n=497)		Farm Sample (n=343)		Non-Farm Sample (n=154)	
Variable	**Freq.**	**Percent**	**Freq.**	**Percent**	**Freq.**	**Percent**
ID_A_SUCCESSOR	147	29.58%	109	31.78%	38	24.68%
Business Characteristics						
FARM	343	69.01%	343	100.00%	0	0.00%
INCOME_50K_TO_199K	155	31.19%	109	31.78%	46	29.87%
INCOME_200K_TO_499K	66	13.28%	38	11.08%	28	18.18%
INCOME_500K_AND_UP	64	12.88%	40	11.66%	24	15.58%
BUS_IS_SUCCESSFUL	452	90.95%	313	91.25%	139	90.26%
SELL_GIVE_TO_RELATIVE	311	62.58%	227	66.18%	84	54.55%
SELL_TO_NONRELATIVE	76	15.29%	37	10.79%	39	25.32%
END_OF_MGMT_PLAN	105	21.13%	65	18.95%	40	25.97%
ENOUGH_CAPITAL	337	67.81%	235	68.51%	102	66.23%
GOAL_POSITIVE_REPUTATION	191	38.43%	135	39.36%	56	36.36%
GOAL_BUSINESS_SURVIVAL	72	14.49%	49	14.29%	23	14.94%
GOAL_KEEP_BUS_IN_FAM	51	10.26%	35	10.20%	16	10.39%
GOAL_WORK_WITH_FAMILY	64	12.88%	52	15.16%	12	7.79%
PREPARED_FOR_MGMT_SUC	205	41.25%	143	41.69%	62	40.26%
INDIANA	151	30.38%	76	22.16%	75	48.70%
MICHIGAN	74	14.89%	62	18.08%	12	7.79%
OHIO	97	19.52%	76	22.16%	21	13.64%

Table 2 (continued)

Family Characteristics						
	Full FBSS Sample (n=497)		**Farm Sample** (n=343)		**Non-Farm Sample** (n=154)	
Variable	**Freq.**	**Percent**	**Freq.**	**Percent**	**Freq.**	**Percent**
YEARLY_DIS_GOALS	134	26.96%	96	27.99%	38	24.68%
QUARTERLY_DIS_GOALS	79	15.90%	55	16.03%	24	15.58%
MONTHLY_DIS_GOALS	221	44.47%	146	42.57%	75	48.70%
EVER_DISCUSS_ESTATE_PLAN	304	61.17%	206	60.06%	98	63.64%
SENIOR_SOMEWHAT_READY	225	45.27%	162	47.23%	63	40.91%
SENIOR_READY	149	29.98%	100	29.15%	49	31.82%
RELATIVE_EMPLOYEES	see table below					
MORETHAN1GEN_D2D_MGMT	229	46.08%	169	49.27%	60	38.96%
SPOUSE_IN_MGMT	328	66.00%	234	68.22%	94	61.04
BUS_FAM	see table below					
Individual Characteristics						
	Full FBSS Sample (n=497)		**Farm Sample** (n=343)		**Non-Farm Sample** (n=154)	
Variable	**Freq.**	**Percent**	**Freq.**	**Percent**	**Freq.**	**Percent**
SECOND_GEN	56	11.27%	37	10.79%	19	12.34%
THREE_PLUS_GEN	87	17.51%	70	20.41%	17	11.04%
EXPERIENCE	see table below					
FEMALE	192	38.63%	135	39.36%	57	37.01%
NEW_GENERATION	370	74.45%	268	78.13%	102	66.23%
RETIRE	287	57.75%	192	55.98%	95	61.69%
INHERIT_BUSINESS	91	18.31%	70	20.41%	21	13.64%
MARRIED	442	88.93%	304	88.63%	138	89.61%

Means of Continuous Variables						
	Full FBSS Sample (n=497)		**Farm Sample** (n=343)		**Non-Farm Sample** (n=154)	
Variable	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**
RELATIVE_EMPLOYEES	2.626	2.245	2.627	2.185	2.623	2.382
BUS_FAM	4.165	1.718	4.192	1.684	4.104	1.797
EXPERIENCE	40.252	12.445	40.452	12.753	39.805	11.760

Table 3. Probit Regression Estimates with Robust Standard Errors of Factors Affecting Having a Named Successor for Family Businesses

	Farm Sample (n=343)		Non-Farm Sample (n=154)		Full FBSS Sample (n=497)	
	β	**Robust SE**	**β**	**Robust SE**	**β**	**Robust SE**
FARM					0.127	0.166
INCOME_50K_TO_199K	0.135	0.217	-0.027	0.527	0.066	0.185
INCOME_200K_TO_499K	-0.079	0.302	-0.103	0.448	0.014	0.238
INCOME_500K_AND_UP	0.413	0.300	0.210	0.540	0.259	0.237
BUS_IS_SUCCESSFUL	0.507	0.329	0.908*	0.540	0.500*	0.269
SELL_GIVE_TO_RELATIVE	1.039***	0.268	0.686	0.545	0.824***	0.221
SELL_TO_NONRELATIVE	0.413	0.365	-0.266	0.712	0.076	0.286
END_OF_MGMT_PLAN	0.588***	0.218	-0.334	0.419	0.344**	0.168
ENOUGH_CAPITAL	0.168	0.193	0.887**	0.382	0.255	0.159
GOAL_POSITIVE_REPUTATION	-0.001	0.237	1.250**	0.531	0.068	0.194
GOAL_BUSINESS_SURVIVAL	-0.193	0.302	1.080**	0.521	0.025	0.244
GOAL_KEEP_BUS_IN_FAM	0.630*	0.336	1.221*	0.657	0.548**	0.267
GOAL_WORK_WITH_FAMILY	0.328	0.280	2.250***	0.708	0.419*	0.241
PREPARED_FOR_MGMT_SUC	0.115	0.190	1.603***	0.427	0.302**	0.151
INDIANA	0.326	0.240	-0.512	0.463	0.148	0.186
MICHIGAN	0.335	0.248	-1.298**	0.661	0.111	0.214
OHIO	0.097	0.225	-0.271	0.543	0.051	0.197
YEARLY_DIS_GOALS	0.718**	0.315	-0.325	0.635	0.534	0.286
QUARTERLY_DIS_GOALS	1.030***	0.364	0.553	0.623	0.908***	0.307
MONTHLY_DIS_GOALS	0.926***	0.321	-0.255	0.603	0.681**	0.274
EVER_DISCUSS_ESTATE_PLAN	0.331*	0.201	0.754	0.361	0.377**	0.160
SENIOR_SOMEWHAT_READY	0.026	0.270	5.263***	0.689	0.194	0.219
SENIOR_READY	0.246	0.284	6.137***	0.642	0.506**	0.229
RELATIVE_EMPLOYEES	-0.076*	0.041	-0.214***	0.063	-0.065**	0.032
MORETHAN1GEN_D2D_MGMT	0.139	0.201	0.431	0.347	0.128	0.159
SPOUSE_IN_MGMT	-0.147	0.214	-0.376	0.384	-0.138	0.172
BUS_FAM	-0.074	0.052	0.226**	0.091	-0.015	0.042
SECOND_GEN	-0.267	0.338	1.000	0.697	-0.003	0.265
THREE_PLUS_GEN	0.445	0.283	0.129	0.555	0.302	0.240
EXPERIENCE	0.024***	0.007	0.014	0.015	0.016**	0.006
FEMALE	0.384*	0.200	-0.162	0.377	0.276*	0.158
NEW_GENERATION	0.502*	0.293	0.506	0.472	0.526**	0.213
RETIRE	-0.095	0.175	0.355	0.400	0.002	0.147
INHERIT_BUSINESS	0.017	0.268	0.760	0.565	0.114	0.229
MARRIED	0.232	0.325	1.359*	0.805	0.224	0.266
INTERCEPT	-4.721***	0.738	-12.851***	1.600	-4.697***	0.605

Note: Single, double, and triple asterisks (*, **, ***) denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 4. Marginal Effect Estimates of Factors Affecting Having a Named Successor for Family Businesses

	Farm Model		Non-Farm Model		Full FBSS Model	
Variable	**dy/dx**	**SE**	**dy/dx**	**SE**	**dy/dx**	**SE**
FARM					0.037	0.047
INCOME_50K_TO_199K	0.043	0.070	0.000	0.004	0.020	0.055
INCOME_200K_TO_499K	-0.024	0.089	-0.001	0.003	0.004	0.070
INCOME_500K_AND_UP	0.141	0.110	0.002	0.007	0.081	0.079
BUS_IS_SUCCESSFUL	0.133*	0.070	0.004	0.003	0.122**	0.053
SELL_GIVE_TO_RELATIVE	0.279***	0.059	0.006	0.007	0.220***	0.053
SELL_TO_NONRELATIVE	0.141	0.133	-0.002	0.004	0.023	0.087
END_OF_MGMT_PLAN	0.202**	0.080	-0.002	0.002	0.108*	0.056
ENOUGH_CAPITAL	0.051	0.057	0.006	0.004	0.072*	0.044
GOAL_POSITIVE_REPUTATION	0.000	0.073	0.024	0.019	0.020	0.058
GOAL_BUSINESS_SURVIVAL	-0.057	0.084	0.031	0.033	0.008	0.073
GOAL_KEEP_BUS_IN_FAM	0.223*	0.130	0.045	0.059	0.185*	0.100
GOAL_WORK_WITH_FAMILY	0.110	0.099	0.243	0.192	0.136	0.085
PREPARED_FOR_MGMT_SUC	0.036	0.059	0.035**	0.017	0.090**	0.046
INDIANA	0.107	0.083	-0.005	0.006	0.044	0.057
MICHIGAN	0.111	0.086	-0.004	0.003	0.033	0.066
OHIO	0.031	0.072	-0.002	0.003	0.015	0.059
YEARLY_DIS_GOALS	0.243**	0.112	-0.002	0.004	0.170*	0.097
QUARTERLY_DIS_GOALS	0.371***	0.137	0.009	0.017	0.315***	0.115
MONTHLY_DIS_GOALS	0.295***	0.102	-0.002	0.005	0.204**	0.083
EVER_DISCUSS_ESTATE_PLAN	0.100*	0.058	0.006	0.004	0.107**	0.043
SENIOR_SOMEWHAT_READY	0.008	0.084	0.634***	0.145	0.057	0.065
SENIOR_READY	0.079	0.094	0.922***	0.055	0.159**	0.075
RELATIVE_EMPLOYEES	-0.024*	0.013	-0.002	0.001	-0.019**	0.009
MORETHAN1GEN_D2D_MGMT	0.043	0.062	0.004	0.005	0.038	0.047
SPOUSE_IN_MGMT	-0.046	0.069	-0.004	0.006	-0.041	0.052
BUS_FAM	-0.023	0.016	0.002	0.001	-0.004	0.012
SECOND_GEN	-0.077	0.088	0.027	0.042	-0.001	0.078
THREE_PLUS_GEN	0.150	0.102	0.001	0.006	0.095	0.081
EXPERIENCE	0.007***	0.002	0.000	0.000	0.005**	0.002
FEMALE	0.122*	0.064	-0.001	0.003	0.083*	0.048
NEW_GENERATION	0.139**	0.069	0.004	0.004	0.138***	0.049
RETIRE	-0.030	0.055	0.003	0.004	0.000	0.043
INHERIT_BUSINESS	0.005	0.084	0.015	0.023	0.034	0.071
MARRIED	0.067	0.087	0.004	0.003	0.061	0.067

Figure 1. Conceptual Model