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ACQUIRING FINANCIAL RESOURCES TO FORM NEW VENTURES: PECKING ORDER THEORY AND THE EMERGING FIRM

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ABSTRACT

The “pecking order theory” of financing says that firms and individuals will use personal funds before acquiring external debt and equity. The theory has been applied to the study of established firms, but it is not clear whether entrepreneurs follow a “pecking order” when financing their start-ups. This study investigates the types of financial resources acquired over time, by individuals in the process of creating a new venture. It uses data from the Panel Study of Entrepreneurial Dynamics to investigate relationships between sources of funding and characteristics of the firm and entrepreneur. Results indicate that entrepreneurs do follow a pecking order when financing. However, contrary to most studies on entrepreneurial financing, results indicate that individual characteristics (e.g., race and prior start-up experience) may have an effect on the source of funding acquired.

INTRODUCTION

Nearly all research on business financing has focused on established firms (Astebro & Bernhardt, 2003; Chaganti et al., 1995; Ou & Haynes, 2006; Verheul & Thurik, 2001). This shift from traditional, corporate finance research to small firm financing has enhanced our understanding of how entrepreneurs finance their businesses. However, little work has been done on how entrepreneurs use financial resources in their nascent ventures. Nascent ventures are not up-and-running firms, but are firms in the process of being created. Understanding how entrepreneurs use and acquire financial resources during the nascent stage is critical to our understanding of the link between resources and new firm creation.

Pecking Order Theory (POT) is a framework for examining firm financing that states that firms attempt to reduce information asymmetries and maintain ownership by first using internal financing, followed by external debt and equity (Myers, 1984; Berger & Udell, 2003). POT was originally devised to examine the financing of large corporations, but it has also been applied to small and medium-sized businesses. This study examines the entrepreneur’s acquisition of financing at the earliest stages of a firm’s creation. Specifically, it explores how progression through the venture creation process affects the acquisition of financial resources, and whether nascent entrepreneurs first use personal sources of financing, followed by external debt, and then equity.

Using theory from research on the sources of funding for new ventures (Cassar, 2004; Gartner et al., 2009), and on pecking order and small firm financing (Holmes & Kent, 1991; Cosh & Hughes, 1994; Lopez-Gracia & Aybar-Arias, 1999; Zoppa & McMahon, 2002; Fitzsimmons & Douglas, 2006), this study offers a set of hypotheses about the sources of financing that nascent entrepreneurs pursue. These hypotheses are tested using data from the Panel Study of Entrepreneurial Dynamics; a longitudinal dataset that tracks the efforts of entrepreneurs toward starting ventures.

The remainder of this paper proceeds as follows: First, a theoretical background on small firm financing and pecking order theory is provided. Second, hypotheses are presented on how certain characteristics of the firm and entrepreneur affect how financial resources are acquired over time. Third, the dataset, variables, and research design are described. Fourth, results of the data analysis are presented. The study concludes with a discussion of the findings' implications, and suggestions for further research.

THEORY DEVELOPMENT AND HYPOTHESES

Traditional finance theories are centered on agency conflicts between shareholders and debtholders. Up until the 1990s, the vast majority of finance studies focused on large corporations and publicly traded companies. Scholars began to realize that small firms, on the other hand, differ considerably from larger firms. Small and medium-sized businesses face different agency and information asymmetry challenges. For example, they are not likely to be publically traded or incorporated, which limits the sources of financing available to them. And, because they are not required to share as much information as public companies, they are information opaque (Ang, 1991). Financing decisions for small and new ventures may also be more complex because they are closely linked to the personal wealth or contacts of the owner/manager. Consequently, agency problems may be more intense as shareholders and partners are often made up of family and friends (Ang, 1992).

The "pecking order" model of firm financing is one method firms might use to address these agency problems. According to this theory, firms do not aim for a target debt ratio. Instead, firms select from funding sources that minimize the cost of capital (Myers, 1984; Myers and Majluf, 1984). In the case of the small firm or entrepreneur, personal sources are used first, external debt next, followed by outside equity. Equity is acquired last because the entrepreneur presumably has more information than the investor. The presence of significant information asymmetries causes the investor to charge a higher rate of return on equity than on debt (Frank and Goyal, 2003). Indeed, information asymmetry costs may be much higher for small firms than for large, and the pecking order framework may therefore explain a great deal of financing behavior by entrepreneurs (Scherr, 1993; Hall et al., 2000).

To the extent that information asymmetries increase the cost of capital the smaller (and younger) the firm, the more we would expect to see entrepreneurs engage in a "pecking order" financing strategy. But, at the nascent stage of the venture creation process, is it true that all financiers who expect to own or share in a firm's profits raise the cost of equity such that the entrepreneur is driven to use more personal sources of funding? If so, then it represents a significant resource barrier for the nascent entrepreneur to overcome. This study examines the issue using the Panel Study of Entrepreneurial Dynamics I (PSED I), a sample of individuals in the process of creating a business. This allows for testing of the pecking order theory in a unique context that also takes into account the passage of time.

Based on the financial categories in pecking order theory (personal funds, external debt, and outside equity), I develop hypotheses about how nascent entrepreneurs acquire financing during the venture creation process, taking into consideration characteristics of the firm, industry, and individual. Clearly, the main component of pecking order theory is time. According to the theory, entrepreneurs should use personal funds first. As time goes by they should use more and more debt and equity sources of financing.

H1: Nascent entrepreneurs will be more likely to use personal funds early in the venture creation process. As time goes by, they will be more likely to use external debt and outside equity.

The entrepreneur's expectations of the future size of the business will significantly influence whether personal and external sources of outside funds are acquired during the start-up process. Smaller companies would require less capital. Finally, the cost to access certain kinds of funding may decline the larger the firm. Ang (1992) finds that the high transaction costs faced by small businesses in securing outside financing may preclude some sources of funding. Cosh and Hughes (1994) and Cassar (2004) find that smaller firms use relatively less outside financing.

H2: Nascent ventures that are expected to be larger in size will more likely acquire external debt and equity than nascent ventures that are expected to be smaller in size.

Financial institutions and venture capitalists may consider the form of incorporation to be a signal of credibility. Prior evidence by Coleman and Cohn (2000), and Cassar (2004) suggest a positive relationship between incorporation and leverage and/or bank financing.

H3: Nascent ventures that are incorporated will more likely acquire external debt and equity than nascent ventures that are un-incorporated.

Agency conflicts between debt and equity holders tend to be higher for firms that are expected to grow more quickly. Michaelas et al. (1999) finds that leverage and debt are positively relative to future growth. Cassar (2004) finds that future growth is positively related to the use of bank financing.

H4: Nascent entrepreneurs who intend to start firms with higher rates of growth will more likely acquire external debt than nascent entrepreneurs who do not intend to grow.

Our categorization of financing into personal and external sources assumes that the entrepreneur will be required to put in more effort (e.g. preparation of a business plan and financial projections, and legally registering the firm) when seeking external funds. It also assumes that providers of these funds will require this type of information to closely monitor the start-up's performance.

H5: Nascent entrepreneurs that have completed financial projections will more likely acquire external debt and equity than nascent entrepreneurs who did not create financial projections.

Start-ups in more asset-intensive industries such as mining, manufacturing, and construction, would be expected to require larger capital outlays early-on compared to start-ups in service industries such as consulting, financial services, and consumer services.

H6: Nascent ventures in asset-intensive industries will more likely acquire external sources of financing than nascent ventures in service-oriented industries.

Characteristics of the entrepreneur may affect access to funding. For example, education and start-up experience may provide entrepreneurs access to funding networks that may otherwise not be available, or signal lower risk to outside investors. Verheul and Thurik (2001) and Haynes and Haynes (1999) find that gender has no influence on the likelihood of getting a loan, whereas

Carter and Rose (1998) find that women tend to use less institutional finance. Bates (1990) finds that owner educational background is a major determinant of the capital structure of small firms. Coleman and Cohn (2000) find that education is positively related to acquiring external loans. Findings on the effects of the personal wealth of the nascent entrepreneur on funding choice are mixed. Avery et al. (1998) find that the majority of small business loans are backed by personal commitments made by the entrepreneur. Cassar (2004) found that once firm characteristics were taken into consideration, the characteristics of the business owner do not affect the financing of the firm.

H7a: Male nascent entrepreneurs will more likely acquire external debt and equity financing compared to females.

H7b: Non-minority nascent entrepreneurs will more likely acquire external debt and equity compared to minorities.

H7c: Nascent entrepreneurs with higher levels of education will more likely acquire external debt and equity compared to nascent entrepreneurs with low levels of education.

H7d: Nascent entrepreneurs with more start-up experience will more likely acquire external debt and equity compared to nascent entrepreneurs with little industry experience.

METHOD

Sample

This study uses data from the Panel Study of Entrepreneurial Dynamics I (PSED). The PSED is a representative sample of working-age adults in the United States that were in the process of creating a new venture between 1999 and 2003. The first stage of the sampling procedure took place between July 1998 and November 1999, and involved a nationwide telephone screening of 64,622 households (Gartner et al., 2004). Two samples were created from the telephone screener: one made up of 830 nascent entrepreneurs; and a comparison group of 431 respondents not involved in starting a business. Respondents in the nascent entrepreneur group met each of the following criteria: they expected to be owners or part owners of a new firm; they had been active in trying to start a new firm in the previous 12 months; and the new venture had not had positive monthly cash flow covering expenses for more than 3 months. Follow-up interviews were conducted at 12, 24, and 36 months after the initial interview.

This study makes a number of corrections to the original data file. First, note that 384 of the 830 nascent entrepreneurs in the PSED are from two oversamples (female and minority). The first follow-up interview for the minority oversample actually took place at the time of the *second* follow-up interview for the rest of the PSED sample. Therefore, the variable names for the oversample respondents were recoded to match the item numbers in the rest of the sample. Second, a “cleaning” file written by Kelly Shaver in July 2006 was used to eliminate a number of problem cases. Cases excluded from the analysis include start-ups that are actually infant businesses with positive monthly cash flow, and start-ups that show expected non-person ownership of greater than 50%. Finally, this study does not use the 431 cases in the comparison group, and they are dropped from the analysis. The resulting sample consists of 817 nascent entrepreneurs.

Dependent variable

Personal, debt, or equity financing. Table 1 lists the different sources of financing from the PSED questionnaire, and illustrates how the different items were combined to construct the dependent variable. Personal sources reflect financing that comes directly from the entrepreneur, other members of the start-up team, spouses or household partners, 2nd mortgages, and credit cards. Respondents were classified as “personal only” if they acquired no external financing and used *only* personal sources. Funding sources were classified as “debt” if the questionnaire asked “...how much money has/have [source] loaned the business – money they expect to get back, with or without interest?” Debt financing includes money from a current employer; suppliers or subcontractors; personal finance companies; the Small Business Administration and other government agencies; family; friends; banks; and private investors. A funding source was classified as “equity” if the questionnaire asked “...how much money has/have [source] put into the business, expecting to share ownership and profits?” Equity sources of funds include funds from family and relatives; friends and business associates; federal, state, or local government agencies; banks; venture capitalists; and private investors.

Note that the questionnaire items related to funding sources in the PSED I are inconsistent across waves. Questions asking about one source of financing in Wave 1 might, in subsequent waves, disappear. And, questions that ask about sources separately in one wave (e.g. bank and venture capital financing), might be combined into one question later on. Analyses using PSED financial data must take all of this into account. For example, Wave 1 financing questions do not ask respondents about what was actually acquired, but rather about expectations of future financing behavior. To correct for this, two additional questionnaire items for each source of financing are considered. The first asks whether the respondent has asked [source] for funding for the new firm; the second asks whether that source agreed to provide the funds. If the response to both questions is “yes”, then the dollar amount for that source was included in the analysis. However, the principal Wave 1 items that ask about personal contributions (e.g., q198) do not ask about expectations. These questions ask what has actually been contributed to the nascent venture.

Although the questions on sources of financing are not consistent across waves, they are consistent in asking whether the funding should be categorized as debt or equity. For this study the dependent variable was coded “1” if the respondent used some external equity financing; “2” if some external debt, but no equity; and “3” if the respondent used only personal sources of financing. “Personal only” serves as the reference category for the multinomial logistic regression model.

Independent variables

Time in the venture creation process. The passage of time during which financial resources were acquired was calculated by observing the number of interview waves the respondent participated in. Data was collected across four waves. Individuals who either started a new firm or abandoned the process after Waves 1 or 2 were coded “1”. Waves 1 and 2 were combined because only one respondent acquired equity financing in the first wave (recall that the Wave 1 financing questions ask about external financing expectations, not what was actually acquired). Individuals who exited the process after Wave 3 were coded “2”, and those who remained through all four waves were coded “3”. Wave 4 is the baseline.

Firm and industry-level variables. Firm size is the log of the expected revenue in the fifth year of operations. The legal form of the business is a dichotomous variable coded “1” for non-

incorporated start-ups and “2” for incorporated. Non-incorporated start-ups include sole-proprietorships, general partnerships, and limited partnerships. Incorporated start-ups include limited liability corporations, sub-chapter S corporations, and general corporations. Intent for firm growth is a self-reported measure coded “1” for respondents who “want the business to be as large as possible” and “2” for those who “want a size to manage by self or with key employees.” Financial projections identifies whether the nascent entrepreneur has prepared income states, cash-flow projections, or break-even analyses: “1” if they have; “2” if they have not been developed. Industry is a categorical variable, broken up into dummies for the analysis. The variable coding is based on the industry SIC codes: “1” for asset-intensive industries (agriculture, construction, mining, transportation, utilities, manufacturing); “2” for wholesale distribution and retail; and “3” for service-oriented industries (business, consumer, health and education, social). Team size is categorical and coded “1” for solo, “2” for partnerships, and “3” for teams of three or more.

Individual-level variables. Gender is a dichotomous variable coded “1” for female and “2” for male. Race is a categorical variable broken up into dummies and coded “1” for Other races, “2” for Hispanic, “3” for Black, and “4” for White. Education is categorical and coded “1” for individuals with a high school diploma, “2” for post-high school, “3” for college, and “4” for post-college. Finally, entrepreneurial experience is measured as the number of prior start-ups the respondent was involved in, and coded as “1” for none, “2” for one previous start-up, and “3” for two or more.

Design

The categorical dependent variable representing the three categories of financing (personal funds only, external debt, and external equity) was tested using multinomial logistic regression. The model estimates the odds of a respondent acquiring either debt or equity versus the use of only personal funds, given a set of predictor variables (i.e., time, firm characteristics, and individual characteristics). All analyses are weighted so that the sample better matches the general population. Of the 817 cases in the sample, 605 are used, since cases with missing values were dropped from the analysis.

RESULTS

Descriptive statistics

Table 2 shows a cross tabulation of the use of equity, debt, and personal funds by interview wave. In Waves 1 and 2, of those nascent entrepreneurs that acquired financing, about 5% did so from equity sources compared to almost 70% who used only personal funds. By Wave 4, half of all nascent entrepreneurs that acquired financing of any time acquired equity financing (i.e., the personal or institution providing the funds expected to own part of the new firm, or share in the profits). The difference between frequencies is statistically significant at $p < .001$.

Analysis

Hypothesis 1 is supported. Table 3 shows the results of the multinomial logistic regression. The amount of time in the venture creation process (wave) is statistically significant across all models. Nascent entrepreneurs in later waves are 3.7 times more likely to acquire equity financing, and almost 1.5 times more likely to acquire debt financing, compared to those in Waves 1 and 2.

Hypothesis 2 is partially supported. Firm size, measured as the log of expected revenue in the fifth year of operations, was significant for the use of debt compared to personal funds. Nascent entrepreneurs that expected a larger firm size were 1.5 times more likely to acquire debt than entrepreneurs expecting a smaller firm size. Results for equity financing were not statistically significant. Hypothesis 3 is partially supported. Nascent ventures that are incorporated were twice as likely to acquire debt financing over personal funds, compared to ventures that are unincorporated. Findings comparing equity financing to personal financing were not statistically significant. Hypothesis 4, that nascent entrepreneurs intending to start firms with higher rates of growth will be more likely to acquire external debt, was not supported. Results for neither the equity or debt model were statistically significant. Hypothesis 5 was partially supported. Nascent entrepreneurs that did not complete financial projections were only half as likely to acquire equity financing. So, financial planners were more likely seek out and acquire equity compared to non-planners. Results comparing debt to personal funds were not statistically significant. Hypothesis 6 was supported. Firms in asset-intensive industries were 2.5 times more likely to acquire debt financing over use of personal funds, compared to firms in service-oriented industries. And, firms in the wholesale and retail industries were twice as likely to acquire debt, compared to service firms.

Hypothesis 7a, that males are more likely to acquire external debt and equity, was not supported. Results were not statistically significant. Hypothesis 7b was partially supported. Hispanics were half as likely to acquire equity financing than Whites. However, respondents of “other” racial makeup were over four times more likely than Whites to acquire debt financing, compared to using personal funds only. Hypothesis 7c, that nascent entrepreneurs with higher levels of education will more likely acquire external debt and equity, was not supported. Results were not statistically significant. Hypothesis 7d, that nascent entrepreneurs with more start-up experience are more likely to acquire external debt and equity, was not supported. Results were not statistically significant. However, respondents with significant start-up experience were less likely to use debt over equity, compared to those with no start-up experience.

Figures 1-4 illustrate the predicted probabilities as one independent variable changes from its minimum to maximum value, holding all other variables at their base value. The changes in predicted probabilities for each independent variable can be found on the right side of Table 3. Figure 1 shows how in Waves 1 & 2, entrepreneurs are highly likely to use personal funds as their sole source of funding. In subsequent waves, this probability drops, while the probability of acquiring equity financing rises. In Figures 2 – 4 we see a similar pattern for each of the independent variables: for Waves 1 & 2 (the reference category), the probability of using personal funds decreases if the firm incorporates, is larger in size, and for educated entrepreneurs. At the same time, the probably of using debt increases.

DISCUSSION

Consistent with prior research on pecking order theory in small and medium-sized businesses, this study finds that nascent entrepreneurs do seem to use personal funds as the sole source of financing, early in the venture creation process. As these individuals advance in the process, the likelihood of acquiring external sources of debt and equity increases. Perhaps of greater interest is the finding that characteristics of the entrepreneur do seem to have an effect on the acquisition of financial resources. Most studies on start-up financing find that it is only characteristics of the firm and industry that affect the decision (or ability) to finance. I would surmise that these individual characteristics play a crucial role for firms in the process of being created, especially when it comes to resource acquisition. As Gartner (1988) reminds us, “How can we know the dancer from

the dance?" (Yeats, 1956). These findings suggest that the further back one examines the process, the more difficult it is to separate the entrepreneur from what he or she is creating.

This study is not without limitations. The dependent variable only reflects whether a certain type of funding was used. It does not specify how much. If in later waves, the entrepreneurs in the sample are using more personal money as a proportion of total funds, it may indicate that pecking order does not apply to nascent ventures. One could create a different model, with a dependent variable that is coded according to whether the firm acquired greater than, or less than, the median amount of a certain type of funding (Zoppa & McMahon, 2002). It also is not clear whether the apparent confirmation of pecking order theory in emerging firm financing reflects actual strategy on the part of the entrepreneur, or if entrepreneurs are simply using those resources which are on hand. It might be that entrepreneurs use their own money first, and as the start-up and entrepreneur grow the venture and gain more legitimacy, they are able to attract external funds. Once it is possible to use debt, why continue paying out of pocket? Future research might control for the value of the opportunity, or, the entrepreneur's social network (which may provide easy access to financial resources).

Also, the model in this study does not take into consideration the time period *prior* to Wave 1 data collection. Some respondents in the PSED took their first action toward creating a firm five years prior to the interview, and others only a few months before. Entrepreneurs who have been dabbling about for decades are likely to receive less money than someone who just started since either the opportunity being pursued is not a good one, or that person is putting in less effort as the years have gone by. This study was primarily interested in the specifics of acquiring and using financial resources, and detailed information on this process is available only for the 4-year time period of the interview.

CONCLUSIONS

Nascent entrepreneurs do seem to use personal funds as the sole source of financing during the early stages of the venture creation process. The likelihood of using external sources of funding increases as time goes on (at least to the point where the interviews stopped). This conclusion might seem obvious if we assume that entrepreneurs will first use those resources that are least costly and easy to obtain. It also might seem self-explanatory that the longer in process, the greater the chance that the opportunity being pursued is worthwhile, which in turn leads to the acquisition of more financing.

However, we often assume that entrepreneurs get others to bear the risks of pursuing opportunities. These findings suggest that only after personal financing occurs do external financing partners participate. It may be that entrepreneurs are more likely to use resources close at hand, lending support to "bricolage" theory (Baker and Nelson, 2005) and more effectual strategies (Sarasavathy, 2007) in assembling financial resources to start firms.

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Table 1: Dependent variable construction from funding sources in the PSED I data set

Source of Financing*	Personal Only	External Debt	External Equity
Personal savings	●	-	-
Spouse or household partner	●	-	-
Team member	●	-	-
Spouse of team member	●	-	-
2 nd Mortgage	●	-	-
Credit cards	●	-	-
Current employer	-	●	-
Suppliers or subcontractors	-	●	-
Personal finance companies	-	●	-
Small Business Administration	-	●	-
Family and relatives	-	●	●
Friends and business associates	-	●	●
Banks, financial institutions, or venture capital	-	●	●
Private investors	-	●	●
Federal, state, or local government agencies	-	●	●
Other	-	●	●
Banks	-	●	●
Venture capital firms	-	-	●

* Each listing above represents an item from the PSED questionnaire. Some sources appear more than once due to inconsistencies in the questionnaire between waves. Also, sources categorized as both debt and equity are actually two-part questions that ask how much is expected to be paid back (debt), and how much is expected to lead to ownership or profit sharing (equity).

Table 2: Cross tabulation of use of funding source by PSED wave

			Financing Category			Total
			Equity	Debt	Personal	
Wave	Wave 1 and 2	Count	11	54	143	208
		Expected Count	74.1	43.0	90.9	208.0
		% (across)	5.3%	26.0%	68.8%	100.0%
	Wave 3	Count	23	20	52	95
		Expected Count	33.8	19.7	41.5	95.0
		% (across)	24.2%	21.1%	54.7%	100.0%
	Wave 4	Count	257	95	162	514
		Expected Count	183.1	106.3	224.6	514.0
		% (across)	50.0%	18.5%	31.5%	100.0%
Total	Count	291	169	357	817	
	Expected Count	291.0	169.0	357.0	817.0	
	% (across)	35.6%	20.7%	43.7%	100.0%	

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	141.026	4	.000
N of Valid Cases	817		

Table 3: The impact of time spent in the venture creation process, and firm and individual characteristics, on the acquisition of financial resources

Independent Variables	Multinomial Logit Estimates ^a			Δ in Predicted Probabilities ^b		
	Equity vs. Personal	Debt vs. Personal	Debt vs. Equity	Personal	Equity	Debt
Wave	1.307*** (.157)	.301* (.133)	- 1.006*** (.169)	-.26	.26	-.01
Log expected revenue	.205 (.120)	.353** (.140)	.148 (.141)	-.48	-.01	.49
Legal form	.378 (.290)	.695* (.298)	.317 (.291)	-.17	.001	.16
Intent for growth	.230 (.273)	.040 (.285)	-.191 (.293)	-.02	.01	.001
Financial projections	-.792*** (.221)	-.411 (.245)	.381 (.243)	.11	-.02	-.09
Industry [Asset Intensive]	.371 (.299)	.906** (.310)	.535 (.311)	-.19	.003	.19
Industry [Wholesale & Retail]	.087 (.251)	.715** (.271)	.629* (.281)	-.15	-.01	.15
Gender	-.199 (.229)	-.162 (.267)	.036 (.274)	.04	-.01	-.04
Race [Other]	.663 (.636)	1.465* (.623)	.802 (.523)	-.28	.01	.27
Race [Hispanics]	-.818* (.416)	-.129 (.379)	.689 (.472)	.05	-.04	-.01
Race [Blacks]	.266 (.270)	-.047 (.313)	-.313 (.315)	.005	.01	-.02
Education	.118 (.119)	.153 (.135)	.036 (.133)	-.11	.01	.11
Start-up experience	.167 (.131)	-.127 (.146)	-.294* (.146)	.04	.02	-.07
Intercept	- 4.366*** (1.142)	-3.717** (1.260)	.649 (1.300)			

(N = 605)
 χ^2 (df=26) = 169.706
Pseudo R² = .244

^a The top entries are multinomial logit coefficients. Standard errors are in parentheses.

^b Change in the predicted probabilities of using the different categories of financing, for an increase from the minimum to the maximum value of each independent variable, while holding all other independent variables constant at their means.

***p<.001; **p<.01; *p<.05

Figure 1: Predicted probabilities of change in financing over TIME

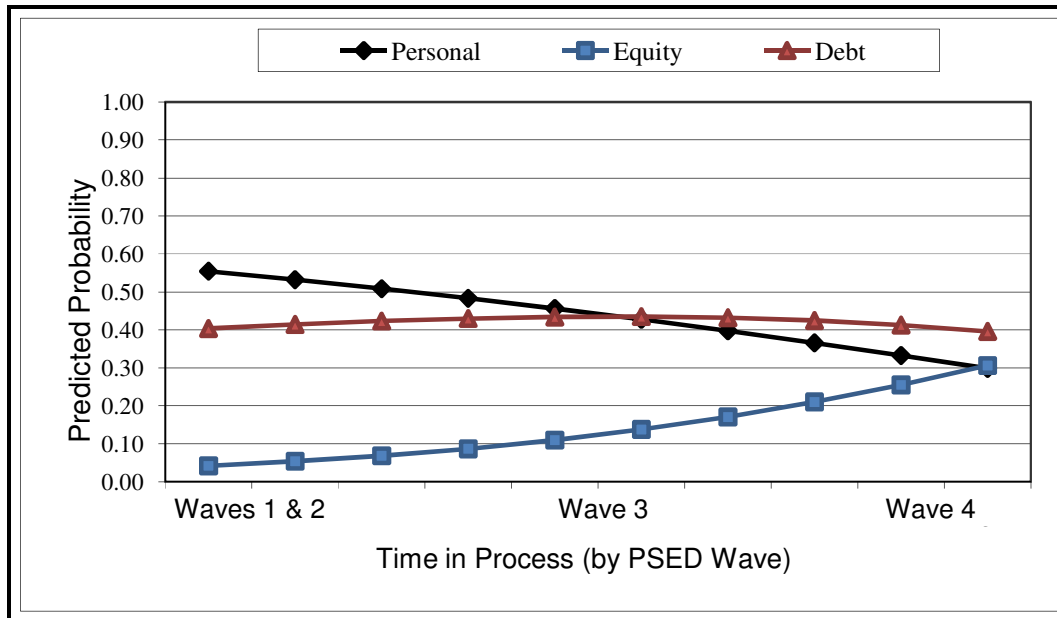


Figure 2: Predicted probabilities of change in financing by LEGAL FORM

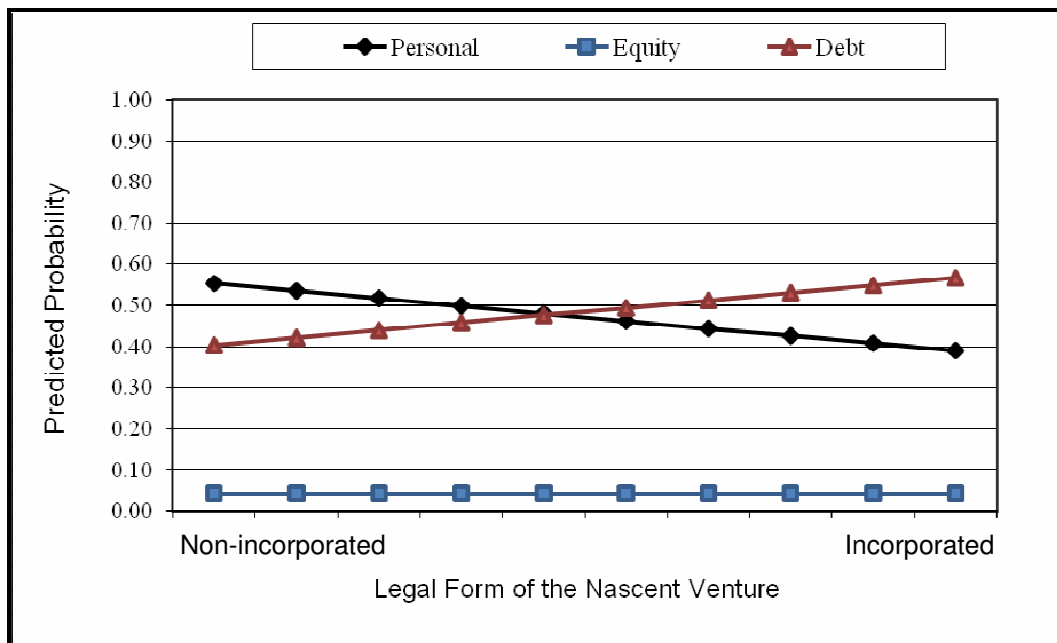


Figure 3: Predicted probabilities of change in financing by EDUCATION LEVEL

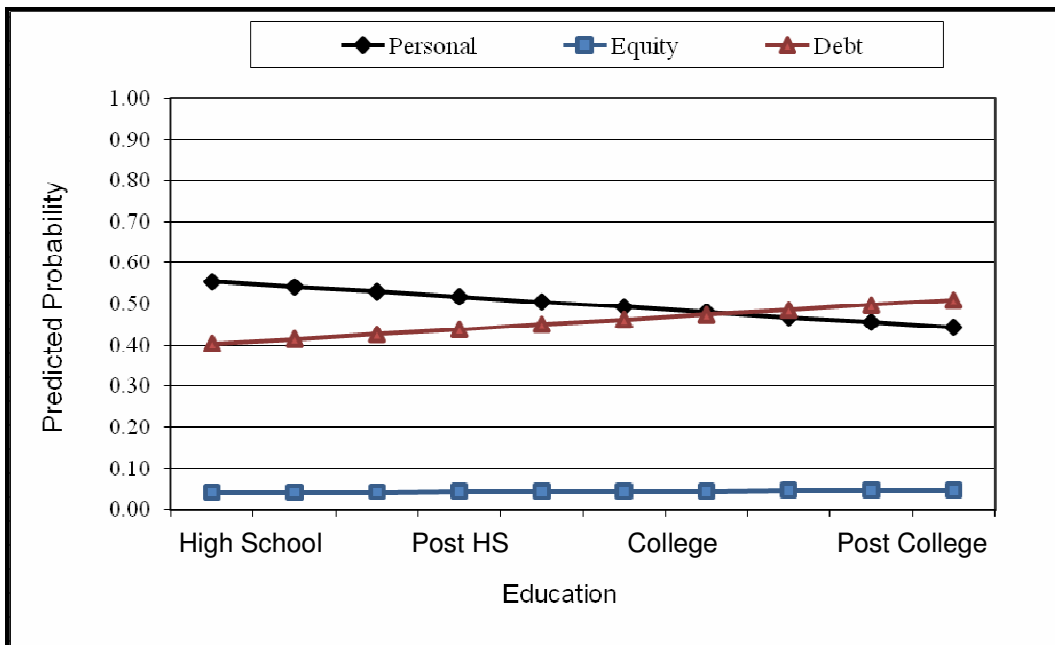


Figure 4: Predicted probability of change in financing by EXPECTED YEAR-5 REVENUE

