
DOES MONEY MATTER?: WEALTH ATTAINMENT AS THE MOTIVE FOR INITIATING GROWTH-ORIENTED TECHNOLOGY VENTURES

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EXECUTIVE SUMMARY

The desire to attain personal wealth has long been regarded as the foremost motive for entrepreneurship. Other goals and values, however, may also contribute to entrepreneurial motivation. Thus, the extent to which money matters relative to other motives is an empirical question. In this study we examine the role of wealth as the motive for the decision to found new ventures.

Three focal questions guide our research: 1) does money matter more relative to other decision dimensions in deciding to start a new high-technology venture? 2) does money matter more to entrepreneurs compared to non-entrepreneurs? and 3) does money matter in absolute terms, that is, does a decision model that focuses solely on the motive of wealth attainment parsimoniously predict entrepreneurs' start-up decisions?

We conducted in-depth interviews with 51 entrepreneurs and a control group of 28 senior managers who decided not to start ventures (non-entrepreneurs) in the high-technology industry in British Columbia to address our research questions. The motives we examined are wealth attainment and an aggregate of

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other dimensions identified by entrepreneurs and managers. We considered three components of values: participants' ratings of the importance of various decision dimensions, their rating of the salience of these dimensions, and their satisfaction with prior levels of attainment on those decision dimensions. We assessed beliefs as participants' perceived probability of attaining their desired level of a particular decision dimension in each of three alternatives: the position held at the time the venture decision was made, the venture itself, and the next best career alternative at that time. The data were analyzed to compare entrepreneurs' values and beliefs regarding wealth with an aggregate of other decision dimensions (our relative hypotheses), and with those of non-entrepreneurs (our comparative hypotheses).

Our findings do not support the common perception that money is the only, or even the most important, motive for entrepreneurs' decisions to start new ventures. Wealth attainment was significantly less important to entrepreneurs relative to an aggregate of 10 other decision dimensions, and entrepreneurs did not rate wealth as any more important than did non-entrepreneurs. Non-entrepreneurs rated wealth as no more important than other motives. Wealth attainment was also significantly less salient to entrepreneurs' decisions to venture than were other motives. Non-entrepreneurs reported that wealth was significantly more salient to their decision against founding a venture than other dimensions. In fact, non-entrepreneurs rated wealth attainment as significantly more salient to their decision against founding than entrepreneurs rated it for their decision to proceed with starting a high-technology business. A significant number of entrepreneurs started businesses even when they believed that doing so offered them a lower probability of obtaining their most desired level of wealth than did one of their other alternatives.

Satisfaction ratings and stated beliefs also dispute classical predictions. Just prior to making the decision to venture, the entrepreneurs in our study were as satisfied with wealth as they were with other decision dimensions. The non-entrepreneurs were actually more satisfied with wealth attainment than with other dimensions. A comparison of the groups revealed no difference in satisfaction with wealth attainment levels. Entrepreneurs did believe that their chances of attaining their desired level of wealth were much greater through founding a new high-technology venture than through their other alternatives. This difference in beliefs, however, was not significantly greater than their optimistic beliefs about chances of attaining desired levels of other dimensions. It was significantly higher compared to the non-entrepreneurs' belief difference measures for wealth. In fact, the entrepreneurs' stated beliefs regarding the chances of attaining their desired levels of all dimensions were higher than those of the non-entrepreneurs, suggesting that entrepreneurs were simply more optimistic at the time of their decision than non-entrepreneurs. Salience findings suggest that these optimistic beliefs about wealth did not motivate the founding decision alone.

We can distinguish those people who successfully started ventures by their regard for wealth as a less salient factor, and their beliefs in higher chances of a venture producing monetary and other returns. Other motives, such as innovation, vision, independence, and challenge were more important and much more salient to this sample of entrepreneurs.

Our findings have implications for practice, teaching, and research. Venture capitalists who partially base their assessment of entrepreneurs on the extent to which they are motivated to make a great deal of money may benefit from reconsideration of this criterion. We have evidence of one group of high-technology entrepreneurs who achieved success without placing much decision weight on attainment of personal wealth. Nascent entrepreneurs and those who teach entrepreneurship can use this empirical finding to argue two main points: 1) not all entrepreneurs found a business for personal wealth reasons, and 2) one need not be motivated by personal wealth attainment to be a successful entrepreneur. Similarly, theoretical models that assume money is the primary motive for entrepreneurial activity require re-examination. Future research in entrepreneurship should focus less on wealth attainment and more on other motives for the venturing decision. A multiple-attribute decision model may be able to more fully explain venturing decisions. © 2000 Elsevier Science Inc.

INTRODUCTION

The assumption that people start new ventures as a way to increase their personal wealth underlies much of the research in entrepreneurship. Campbell (1992), for example, de-

lineated an economic decision model for entrepreneurial acts, such as start-up decisions, in which an entrepreneur's comparison of the net present values of entrepreneurship and wage labor determined whether the entrepreneurial activity would be undertaken. According to Day and Sunder (1996, p. 140) "the neo-classical abstraction of the firm is an entrepreneur who maximizes profit subject to various resource constraints." Traditional measures of success for entrepreneurs emphasize monetary factors such as firm revenue, profitability, and the creation of personal wealth, along with a myriad of other indicators such as revenue growth and sustainability. The goal of personal wealth is assumed paramount. Thus, the terms "wealth" and "entrepreneurship" are inextricably linked in the minds of many people, including researchers, in capitalist societies. Precisely because the assumed link between the desire for wealth attainment and an entrepreneur's decision to venture is so deeply embedded in our culture, it is worth asking whether this assumption is borne out by empirical evidence.

We assume that money matters, and is not only a goal for entrepreneurs, but is also the foremost motive for venturing. Other goals and values, however, may also contribute to entrepreneurial behavior (Kuratko, Hornsby, and Naffziger 1997; Monroy and Folger 1993). In fact, Roberts (1991) found that money was not a significant motive for the initiation of high-technology ventures; motives such as independence and challenge were more important. Thus, the extent to which money matters relative to other decision dimensions is an empirical question. The primary question "does money matter?" requires an object. We are specifically interested in the role that the desire for wealth attainment plays in start-up decisions made by entrepreneurs. We assume that money matters *more* to entrepreneurs than to non-entrepreneurs because of the traditional association between entrepreneurship and wealth.¹ Yet this, too, is an empirical question. Three focal questions guide our research: 1) Does money matter more *relative* to other decision dimensions in deciding to start a new venture? 2) Does money matter more to entrepreneurs as *compared* to a control group of individuals who decide not to start a new venture? and 3) Does money matter in *absolute* terms, i.e., does a decision model which focuses solely on the motive of wealth attainment parsimoniously predict entrepreneurs' start up decisions? These questions have received scant attention in the entrepreneurship literature.

This study addresses the role of wealth attainment as a motive for decisions to start a new business in the context of technology industries in British Columbia. This industry is useful for testing traditional models of new venture decision making because of the high rate of career mobility, including venturing. There are three reasons why we focus on money in isolation rather than giving equal attention to the other possible goals. We do not claim that rational economic maximizers take only money into account, but it is a common practice for researchers to focus only on money as a proxy for that which is truly being maximized. However, while a rational decision maker with considerable information-processing capability may be able to take a number of goals into account, a logical initial focus of study is to ascertain whether decisions can be explained by a single dimension. Only if an explanation based on a single goal is insufficient would one want to utilize a more complex multiple-goal model (Douglas and Shepherd 1996).

¹ It is tempting to consider agency theory as a justification for this assumption, since agency theory predicts differences between the motivational factors of owners, as residual claimants, and managers, as non-residual claimants (see, e.g., Jensen and Meckling 1976; Jensen and Murphy 1990). However, in the context of this study, both entrepreneurs and managers are making the decision of whether or not to become owners. Thus, agency theory is not useful in this context. We thank an anonymous reviewer for this point.

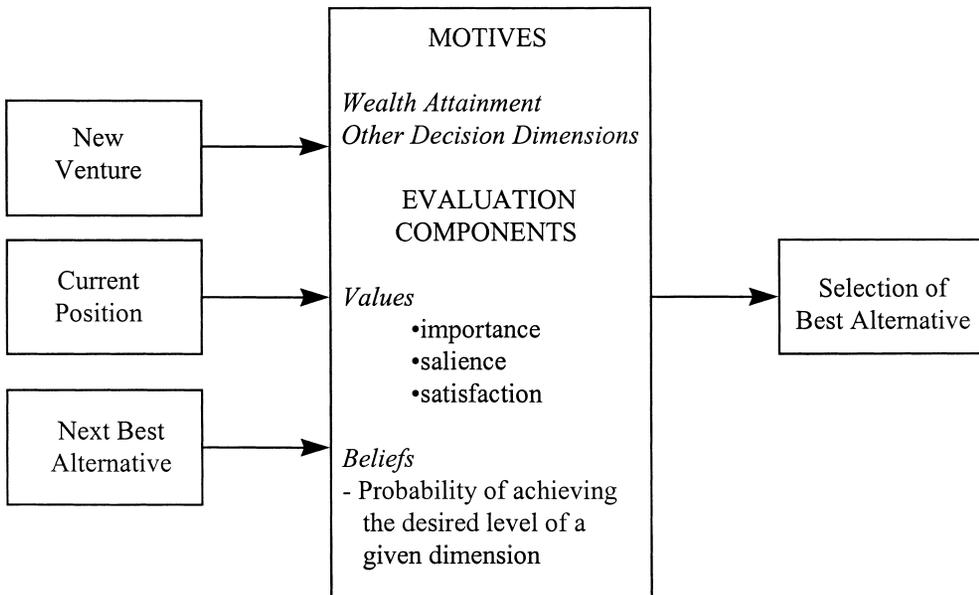


FIGURE 1 Overview of decision making model.

Bounded rationality is another reason to focus on only money. Assuming individuals are limited in their information-processing capabilities, we would expect to find assessments of a restrictive set of valuations and a restrictive beliefs assessment (Simon 1957). Thus the bounded-rationality perspective is captured by considering only the single goal of money. The final reason for considering the importance of only money in the venturing decision is the traditional association between entrepreneurship and the possibility for personal wealth.

THEORY DEVELOPMENT

All cognitive models of decision making emphasize two primary components: (1) values and (2) beliefs. Decision makers are assumed to strive toward attaining what they value subject to their beliefs. In expected utility models, values take the form of utility functions and beliefs take the form of (subjective) probabilities (MacCrimmon 1990). In prospect theory (Kahneman and Tversky 1979), value functions reflect the values and decision weights reflect the beliefs. Other significant decision models rely on the same two major components. Even in theories of bounded rationality, such as satisficing (Simon 1957), values are reflected in aspiration levels and beliefs in expectations. In this paper, the model of decision making regarding venturing is comprised of a value, represented by wealth attainment, and beliefs about chances to attain a most desired level of wealth in the context of two or three career alternatives. The model is presented in Figure 1.

In addressing the question of how money matters to the start-up decision, we focus on three key manifestations of the value component (importance, salience and satisfaction), and on the belief component. We examine how important wealth attainment is to entrepreneurs in all decision contexts. We investigate how salient money is to entre-

preneurs when they are deciding between starting new ventures and pursuing other career alternatives. We explore whether dissatisfaction with wealth attainment in the non-entrepreneurial job motivates nascent entrepreneurs to consider new ventures, as proposed by Herron and Sapienza (1992). We examine the differences between the expected money from the entrepreneurial alternative and the expected wage from other career alternatives, and we assess how sensitive individuals' choices are to changes in their beliefs about the potential for those alternatives to generate money.

For each of these value elements and beliefs, we investigate entrepreneurs' ratings of wealth attainment both relative to their ratings of other decision dimensions and compared to non-entrepreneurs' ratings of wealth attainment. The next section elaborates on the value elements, beliefs and alternatives in decisions about venturing. We generate relative and comparative hypotheses for each element and component.

Value Elements

Importance

The first value element is basic importance. Importance is a fundamental relationship among values that spans all decision contexts. If money were the driving force behind decisions to found new ventures, we would expect that wealth attainment would have a preeminent importance ranking in an entrepreneur's underlying set of goal dimensions. In this scenario, nascent entrepreneurs would evaluate all career choices primarily on the basis of wealth attainment. When considering the relative importance of various decision dimensions, they should rate wealth attainment as highly important. They should also place comparatively more importance on the dimension of wealth than do decision makers, with similar backgrounds and prospects, who do not start new ventures. These predictions are summarized in our first two hypotheses (all stated hypotheses are "alternative" hypotheses; i.e., the null hypotheses tested statistically are that the two ratings are equal):

H1: (Relative importance) Entrepreneurs give higher importance ratings to wealth attainment than to other decision dimensions.

H2: (Comparative importance) Entrepreneurs give higher importance ratings to wealth attainment than do non-entrepreneurs.

Salience

The second value element is salience. Importance and salience are conceptually similar but salience is particular to a specific decision situation, while importance is more general. Wealth attainment could be particularly salient to one career decision and less salient to another, depending on a decision maker's financial situation at the time of each decision. If money matters to the decision to found a new venture, wealth should be viewed as a salient consideration in making a decision relative to other decision dimensions. The higher the salience of money, coupled with the belief that wealth attainment is more likely from a new venture, the more likely it should be to observe new venture creation. Because salience is decision-specific, predictions involving non-entrepreneurs focus on a particular decision that included starting a venture as one alternative. For these decisions, our model suggests that non-entrepreneurs rate wealth attainment as less salient than do entrepreneurs. We thus form the following hypotheses:

H3: (Relative salience) Entrepreneurs rate wealth attainment as more salient to their decision to found a venture than other decision dimensions.

H4: (Comparative salience) Entrepreneurs' salience ratings of wealth attainment are higher than those of non-entrepreneurs in the context of new venture decisions.

Satisfaction

The third value element is level of satisfaction. The decision to start a business should depend on whether the decision maker is currently experiencing a satisfactory level of attainment on the wealth dimension. In Herron and Sapienza's (1992) venture initiation model, dissatisfaction drives search, and the type and level of dissatisfaction matter. Thus the higher the level of dissatisfaction with current wealth attainment, the stronger would be the drive to change to a situation that promises a higher degree of wealth attainment, that is, starting one's own business.

Management positions in technology firms often pay well, sometimes providing generous stock option plans and/or small ownership stakes. These provide a satisfactory level of personal wealth for many people. But for those who would be satisfied only with very high levels of wealth, business ownership in high-growth technology industries affords opportunities for the creation of a great deal of personal wealth. If traditional economic models of entrepreneurship are correct, wealth maximization should explain most of the decision to found a high-growth venture. Our model considers satisfaction and dissatisfaction with wealth attainment as drivers of career decisions, leading to the following hypotheses:

H5: (Relative satisfaction) Entrepreneurs are less satisfied with wealth attainment in their previous positions than they are with their level of attainment in other decision dimensions.

H6: (Comparative satisfaction) Entrepreneurs are less satisfied with wealth attainment in their previous positions than are non-entrepreneurs.

Beliefs

For decisions made in an environment with no uncertainty about outcomes, one knows which alternatives lead to specific goals. Only the relative value to the decision maker of each goal need be considered. However, in an uncertain environment, as is obviously the case for entrepreneurs, a decision maker cannot be sure about the outcomes of various alternatives. Hence, in addition to value assessments, one needs to make belief assessments.

Decision makers cannot assess beliefs for all possible levels of wealth attainment. We assume that boundedly rational individuals are not able to assign probabilities for more than a few possible levels of wealth attainment. Consistent with this, and the principle of parsimony, we therefore focus on only one possible level of wealth attainment, the "most desired level." We assume that individuals can describe, visualize, and assign a probability for attaining this level.

Note that we are not examining "satisficing," as we are not asking respondents to indicate a "satisfactory" level of wealth. Rather, we ask about their most desired level of wealth and the probabilities of attaining that level for each alternative. Thus, by focusing on the "most desired level of wealth," we hold payoffs constant across alternatives,

leaving probabilities of realizing that level as the sole determining factor in the maximization.

We describe perceptions of the chances of acquiring some or all of the wealth one desires as probabilities expressed in percentage terms. For entrepreneurs, their beliefs about the probability of attaining the most desired level of wealth should be higher for the new venture alternative than for the non-venture alternatives. Thus, we examine the difference between the perceived chance of attaining the desired level of wealth (and other dimensions) for the new venture alternative and the higher of the believed percentage chances for either the previous position or the next best alternative. We label this measure “belief difference,” and predict the following:

H7: (Relative Belief Differences) Entrepreneurs have higher belief differences for wealth than for other dimensions, holding payoffs constant across alternatives.

H8: (Comparative Belief Differences) Entrepreneurs have higher belief differences for wealth than do non-entrepreneurs, holding payoffs constant across alternatives.

Decisions depend on the beliefs of the decision maker about the degree of goal attainment expected from each alternative. If wealth attainment is the only (or the primary) goal, would-be entrepreneurs will start ventures only if they believe venturing offers the highest possibility of attaining desired wealth goals. On the other hand, non-entrepreneurs may attend more to non-monetary goals.

H9: (Relative Beliefs) Entrepreneurs choose the alternative that they believe offers them the highest chance of attaining their most desired level of wealth.

H10: (Comparative Beliefs) Entrepreneurs are more likely to choose the alternative they believe offers them the highest chance of attaining their most desired level of wealth than are non-entrepreneurs.

In developing these hypotheses, we assume that the most desired level of wealth stated by our respondents truly corresponds to their most desired level and not to some satisficing level, and therefore conclude that choosing on the basis of probability would be wealth maximizing. It is possible that respondents could imagine that entrepreneurial ventures would lead to payoffs which *exceed* their most desired levels. In this case, maximizing expected wealth may mean choosing entrepreneurship, even though it has a lower probability for generating the most desired level of wealth, since the probability of attaining an even *greater* level of wealth may be higher for entrepreneurship than for employment. Our data do not allow us to address this issue as practical concerns prevented us from obtaining a full distribution of wealth payoffs and probabilities for all alternatives. We assume that the most desired level of wealth stated by our respondents truly corresponds to their most desired level and not to some satisficing level, and therefore conclude that choosing on the basis of probability would be wealth maximizing.

Another possible concern is that the stability of income and the risk aversion of respondents are not factored into our model which tests wealth as the only goal. We do measure respondents' stability beliefs as one of the other 10 decision dimensions, considering it separately from wealth. While the stability or pattern of payments may affect the desirability of wealth expectations, only the total wealth expectations from an option are relevant to the test of a money-only model. We did ask respondents to consider an income stream over a 5- to 10-year period, suggesting that some stability was built into the question. The riskiness of the total income stream is factored into

respondents' beliefs, since the probabilities of attaining a single wealth goal from two or more options directly captures a risk assessment. Also, we assume that employment is usually considered more stable and less risky than entrepreneurship. Thus if risk aversion and desire for stability are influencing the results, we would expect them to decrease the incidence of entrepreneurship. We will interpret our results in this light.

Third, our question did not specifically address the option value of choosing any of the alternatives. Ronstadt (1988) argued that starting a venture can lead down a corridor in which other venture options become available to the venturer. It is possible that respondents were factoring this option value into their decisions to venture or not venture, leading to choices that would appear to be suboptimal with respect to wealth in the short term. However, our questions did ask respondents to consider their income stream for a 5- to 10-year period if they selected each alternative. If they were considering option values, it is likely that at least some of those options would be realized during that time period, thereby being included in their probability assessments. Furthermore, employment also has option value in terms of promotions, stock options, exposure to other venture alternatives, etc., which is also likely to be included in respondents' decision-making. These issues cannot be teased out with our data, yet we suspect that their influence would be marginal for the above reasons.

These 10 hypotheses state our predictions based on the single-attribute decision model described earlier. The next section describes the methods we used to test these hypotheses.

METHODS

Sample

This study tests the above hypotheses in the technology industries in British Columbia. We selected the high-technology sector because of its importance in both the local and global economies, and its characteristics of high career mobility and new venture initiation. We define a high-technology entrepreneur as someone who was a principal in the founding of a high-technology venture. All entrepreneurs have equity stakes in their businesses, and most spend their work days building their businesses. Because our theoretical framework is built on a choice model, we sought a control group of high-technology executives who considered founding a venture but decided not to.² These non-entrepreneurs are at the senior manager level positions in various British Columbia technology firms.

The first contact with potential participants in this study involved mailing a one-page questionnaire to members of the British Columbia Technology Industries Association (BCTIA). The questionnaire asked respondents about current employment status, whether participants had considered the decision to found a venture, and if so, how long ago. Of the 1,821 initial surveys sent, 630 were returned, for a response rate of 35%. Of these, almost 77% indicated that they had considered founding a venture (reported in Amit, MacCrimmon, and Oesch 1997).

We considered several criteria when selecting our sample. First, we wanted a group of people whose career decisions were reasonably recent. We also looked for people whose positions suggested that they were the principal force behind their ventures.

² We refer to these control group members as non-entrepreneurs throughout the paper.

From our initial list of over 600 people, we contacted individuals whose current position indicated that they were the top manager, owner, or founder of their firm. A periodic scan of local media alerted us to some entrepreneurs and non-entrepreneurs who were not members of the BCTIA, and we contacted these individuals by phone as well. A total of 54 entrepreneurs agreed to interviews. The non-entrepreneurs consisted of BCTIA members and others who considered founding a venture but decided either to stay in their job at that time, or to take another position at that time. These senior managers were also contacted by phone; 31 agreed to be interviewed.

Design

We shaped the interview content and protocol through pilot testing. Pilot participants helped us sharpen our focus and ensure that our questioning methods were reliable (procedures are described in Amit, MacCrimmon, and Oesch 1997). Participants were interviewed at or near their places of business; a small number of interviews took place in participants' homes. Over half of the entrepreneur interviews included the participant, one primary interviewer, and one observer. The role of the observer was to ensure that all topics and objectives were covered. Once the primary interviewers became comfortable with the content and flow of these in-depth sessions, the remainder of the interviews were completed by just one of the members of the research team, including all of the non-entrepreneur interviews.

Each interview consisted of three main sections, although the structure of the interview was somewhat loosely enforced, as opportunities to delve into particular aspects of decision making presented themselves. First, participants were encouraged to give summary descriptions of their career paths to date, and to tell the story of the businesses that they founded, or the companies for which they worked. From this semi-structured portion of the interview, we hoped to gather information about who was involved in founding the venture, how the decision was made, in what personal context the decision was made, and who else affected the decision. Throughout the interviews, we reminded participants that we were asking about their values and beliefs about alternatives at the time of their decision.

The second part of the interview was highly structured. For each of the eleven decision dimensions identified in the earlier research, beginning in each case with wealth, we asked for detailed information according to the form provided in the Appendix A. This form indicates how we operationalized values and beliefs for our decision-making model. The focal decision was the choice among the participant's position at the time of the decision (called "previous position"), the founding of a new business venture (called "new venture"), and another alternative position that the participant considered at that time (called "next best alternative"). Not all participants made a choice from among three alternatives. For 3 of the 51 entrepreneurs, the prior position had been eliminated. For 25 of the entrepreneurs and 11 of the non-entrepreneurs, no next best alternative was actively considered at the time of the decision, and these participants therefore made a choice from two alternatives. Obviously, we could not record beliefs about alternatives that decision makers did not consider seriously at the time of the decision, but value measurements (salience, importance, and satisfaction) for decision dimensions do not depend on the number of alternatives that decision makers consider. The primary interviewer led each participant through all of the questions for each of

the decision dimensions, as well as a relative importance rating exercise, and trade-offs between wealth and other dimensions. The 11 dimensions are listed in Appendix B.

After precisely describing our definitions of a decision dimension, we asked participants to rate importance, salience and satisfaction on a 7-point scale. As an introduction to the belief judgments, we asked participants to recollect what their most desired level of that dimension was at the time of the decision, and also their least desired level. Then we asked them to indicate what they believed their chances were of obtaining all of their desired level of that dimension. A typical response on the wealth dimension might be that an individual thought that by staying in the previous position there was a 20% chance of attaining all of the desired money they wanted, the next best alternative presented a 30% chance, and the new venture offered a 70% chance. The figure of relevance to our analysis is the difference between the belief level for the new venture and the maximum belief level of the other two alternatives. The following equation demonstrates our calculation of “belief difference”:

$$\text{Belief Difference} = \text{Percent chance of achieving most desired level with New Venture} - \text{MAX} [\text{Percent chance with Previous Position}, \text{Percent chance with Next Best Alternative.}]$$

Thus in our numerical example, the belief difference is 40%.

In the importance rating exercise, participants gave a relative importance weighting to each dimension when all dimensions were considered simultaneously, based on an anchor weighting of 100 for wealth. For example, if another dimension were half as important as wealth, an individual would provide a rating of 50 for that dimension. If it were three times more important, it would get a rating of 300. We also asked participants to identify a minimum belief level that would still lead to a decision in favor of that alternative when the wealth expectations for their other alternatives were held constant.

The third part of each interview was less structured and less uniform than the first two sections. Several follow up questions allowed the primary researcher to ask about special circumstances, for further interpretations of the participant’s story, and if there was anything else that the participant wanted to add. This part of the interview presented an opportunity for clarifications of any apparent inconsistencies between quantitative measures and qualitative accounts. The interviews averaged over 2 hours with a range of 1 to 4 hours.

RESULTS

We interviewed a total of 54 entrepreneurs and 31 technology industry managers. Data from three of the entrepreneurs and three non-entrepreneurs were excluded from analysis because their responses were incomplete. All analyses therefore include 51 entrepreneurs and 28 non-entrepreneurs. Table 1 presents means, standard deviations, and correlations among the salient measures from the interviews with entrepreneurs.

Because “importance” ratings allowed participants to provide their own maximum and minimum ratings, for better comparability, we calculated z-scores for each participant across all decision dimensions. These z-scores were used in all subsequent analyses.

The “salience of wealth” to the particular decision to found the venture in question was correlated to the “importance of wealth” to any career decision at $r = 0.47$. This correlation is predictable as those who rate wealth as very important will likely consider it in most career decisions. “Wealth importance” was not correlated with any of the

TABLE 1 Bivariate Correlations for Entrepreneurs (N = 51)

	Mean	S.D.	1	2	3	4	5	6	7
1. Wealth Importance (z-scored)	-0.60	0.84	—						
2. Wealth Salience (7-point scale)	3.67	1.71	0.47**	—					
3. Wealth Satisfaction (7-point scale)	4.12	1.75	-0.01	-0.21	—				
4. Other Salience	4.77	0.78	-0.27	0.29*	-0.12	—			
5. Other Satisfaction	4.01	1.17	0.02	-0.39***	0.34*	-0.44**	—		
6. Wealth Belief Differences	24.50	43.90	0.22	0.48**	-0.41**	0.24	-0.39**	—	
7. Other Belief Differences	27.07	22.95	0.08	0.34*	-0.25	0.23	-0.53**	0.39**	—

*** $p < 0.01$ (2-tailed); * $p < 0.05$ (2-tailed).

belief difference measures, but “wealth salience” was correlated to all of them (at $r = 0.48$ for Wealth belief differences, and $r = 0.34$ for other belief differences). This supports our claim that “importance” and “salience” are distinct, and must be considered separately. “Wealth salience” did not correlate significantly with “satisfaction” ($r = -0.21$), indicating that entrepreneurs did not consider wealth solely because of prior dissatisfaction when deciding to found a new venture. Satisfaction with wealth was negatively correlated with wealth belief differences ($r = -0.41$), suggesting that most entrepreneurs truly believed in their chances for improving their personal wealth.

Table 2 presents similar results for the control group of non-entrepreneurs. Correlation patterns differ from the entrepreneur group. “Wealth salience” did not correlate significantly with any other variable for non-entrepreneurs. For those who rated wealth as “important,” other decision dimensions were less salient to their decision against founding a venture ($r = -0.52$). Belief differences for non-entrepreneurs correlated only with other belief differences, in contrast to the entrepreneurs ($r = 0.68$). These two tables suggest that non-entrepreneurs were somewhat more satisfied with current wealth attainment, and also with attainment in the other decision dimensions.

The remainder of the results section of this paper is structured around the two types of hypotheses, relative and comparative. Table 3 presents results for both relative hypotheses (reading across row 1 in each panel) and comparative hypotheses (reading down column 1 in each panel). *T*-test values and two-tailed significance results are presented in row and column 2, between the scores they are comparing.

The Importance of Money

The results for importance are reported in Panel A of Table 3. We contrast entrepreneur’s importance score for wealth attainment (column 1 in row 1), with that of their score for other decision dimensions (column 3 in row 1), finding that entrepreneurs gave a lower importance rating to personal wealth attainment (-0.60) than to an aggregate of the other 10 decision dimensions used in this study (0.06). We therefore reject Hypothesis 1. The findings indicate a significant difference in the opposite direction to what we expected ($t = 5.09, p < 0.001$). Money was less important to this group of high-technology entrepreneurs than were the other decision dimensions.

A comparison of entrepreneurs’ importance ratings (row 1 in column 1, $\mu = -0.60$) with non-entrepreneurs’ importance ratings (row 3 in column 1, $\mu = -0.30$) indicates that there is no statistical difference between the importance rating of entrepreneurs and the importance rating of senior managers who decided against founding a business ($t = -1.42$). Hypothesis 2 was therefore not supported. Again, the results are opposite to what we predicted. Non-entrepreneurs did not rate money as significantly more or less important than an aggregate of the other 10 dimensions ($t = 1.6$). These findings are bolstered by examining how “wealth” ranked in importance for the entrepreneurs. As Table 4 indicates, out of eleven decision dimensions, wealth ranked last in importance. All other decision dimensions were rated above 100 on average, with the 10th ranked dimension (stability) rated at 150. The most important dimension (innovation) was rated at 317, or over three times as important as wealth attainment. For the non-entrepreneurs, wealth also ranked as least important, but the most important dimension (challenge) was rated at only 193 and the 10th rated dimension (stability) at only 113.

TABLE 2 Bivariate Correlations for Non-Entrepreneurs (N = 28)

	Mean	S.D.	1	2	3	4	5	6	7
1. Wealth Importance (z-scored)	-0.30	0.97	—						
2. Wealth Salience (7-point scale)	4.96	1.14	0.24	—					
3. Wealth Satisfaction	4.66	1.53	-0.19	-0.23	—				
4. Other Salience	5.01	0.96	-0.52**	0.03	0.21	—			
5. Other Satisfaction	4.14	1.14	0.18	-0.02	0.49**	0.18	—		
6. Wealth Belief Differences	-4.64	41.83	0.23	-0.09	-0.07	-0.28	-0.03	—	
7. Other Belief Differences	13.70	21.13	0.16	0.14	-0.25	-0.31	-0.35	0.68**	—

** $p < 0.01$ (2-tailed); * $p < 0.05$ (2-tailed).

TABLE 3 Comparison of Entrepreneurs' and Non-Entrepreneurs' Value and Belief Measures for Wealth and an Aggregate of Other Decision Dimensions

	Wealth	<i>t</i> -value (2-tailed significance)	Other Decision Dimensions
PANEL A: IMPORTANCE (Z-score)			
Entrepreneurs	-0.60	5.09 (<0.001)	0.06
<i>t</i> -value (2-tailed significance)	-1.42 (ns)		1.42 (ns)
Non-Entrepreneurs	-0.30	1.60 (ns)	0.03
PANEL B: SALIENCE			
Entrepreneurs	3.67	4.74 (<0.001)	4.77
<i>t</i> -value (2-tailed significance)	-3.60 (<0.001)		-1.20 (ns)
Non-Entrepreneurs	4.96	0.15 (ns)	5.01
PANEL C: SATISFACTION			
Entrepreneurs	4.11	0.43 (ns)	4.01
<i>t</i> -value (2-tailed significance)	-1.38 (ns)		-0.50 (ns)
Non-Entrepreneurs	4.66	1.96 (ns: 0.06)	4.15
PANEL D: BELIEF DIFFERENCE			
Entrepreneurs	24.50	0.45 (ns)	27.10
<i>t</i> -value (2-tailed significance)	2.87 (<0.005)		2.55 (<0.01)
Non-Entrepreneurs	-4.64	3.08 (<0.005)	13.70

The Salience of Money

Results for salience are reported in Panel B of Table 3. Hypothesis 3 was not supported. Not only did entrepreneurs rate “wealth attainment” as no more salient than other dimensions, the direction of the pattern is opposite to our predictions. Wealth was significantly less salient to entrepreneurs ($\mu = 3.67$) than an aggregate of the other decision dimensions used in this study ($\mu = 4.77$, $t = 4.74$, $p < 0.001$). Non-entrepreneurs rated wealth as significantly more salient than did entrepreneurs ($t = -3.6$, $p < 0.001$), but rated an aggregate of the other dimensions similarly to entrepreneurs ($t = -1.2$). Again, we did not find evidence in favor of Hypothesis 4, and the finding indicates an effect in the opposite direction of our prediction. Entrepreneurs considered “wealth attainment” to be significantly less salient to their venturing decision than did non-entrepreneurs. Rankings of the salience of the eleven decision dimensions again bolster these findings (Table 4). Wealth ranks 10th of 11 in salience for entrepreneurs, but ranks 5th for non-entrepreneurs. This finding indicates that these latter managers were thinking much more about wealth attainment than were the entrepreneurs at the time their respective career decisions were being made. Only the dimension called “stability” was rated as less salient for entrepreneurs, and stability was added as a dimension only because of the potential importance to non-entrepreneurs as indicated in our pilot study.

Satisfaction with Wealth Attainment

We predicted that entrepreneurs would be less satisfied with their wealth attainment at the time of the decision than with their attainment in other decision dimensions. As Panel C of Table 3 indicates, our findings suggest no difference in levels of satisfaction between the wealth rating and the aggregated satisfaction rating of the other dimensions ($t = 0.43$), thus providing no support for Hypothesis 5. Non-entrepreneurs rated satisfac-

TABLE 4 Summary of Importance, Salience, and Satisfaction Ratings

Dimension	Entrepreneurs			Non-Entrepreneurs		
	Importance (Wealth = 100)	Salience (1-7)	Satisfaction (1-7)	Importance (Wealth = 100)	Salience (1-7)	Satisfaction (1-7)
Wealth	100	3.67	4.12	100	4.96	4.66
Vision	309	5.58	3.49	143	5.02	3.48
Stability	150	2.78	4.39	113	4.28	4.17
Power	208	5.04	3.76	157	5.07	3.68
Lifestyle	229	5.00	4.44	186	5.93	4.75
Leadership	242	4.29	3.99	169	4.71	4.46
Innovation	317	5.74	3.89	144	4.75	4.18
Independence	315	5.18	4.08	161	5.11	4.36
Ego	160	4.53	4.18	130	4.54	4.18
Contribution	221	4.60	3.91	171	4.79	4.16
Challenge	305	4.94	3.98	193	5.88	4.04

tion with wealth attainment as slightly but not significantly higher than satisfaction with other dimensions at the time of their decision ($t = 1.96$).

When comparing the two groups of participants, we find no significant difference between satisfaction levels of entrepreneurs and non-entrepreneurs ($t = -1.38$). We therefore have no support for Hypothesis 6. Both groups of participants were reasonably satisfied with wealth attainment at the time they made their decisions. As noted in Table 4, only three dimensions received a higher satisfaction rating than did wealth for entrepreneurs, and only one (lifestyle) for non-entrepreneurs.

In summary, our findings indicate that money is not valued as highly in the decision to found a venture as we predicted. In fact, “wealth attainment” was ranked at or near the bottom of all three of our value measures, especially by entrepreneurs.

Beliefs About Wealth Attainment

Relative Belief Differences

The scores listed in Panel D of Table 3 as “belief differences” are average differences between the percentage chance that participants believed they had of getting all the money they wanted with the new venture and the percentage chance they believed they had of getting all the money they wanted if they selected the higher of the previous position or next best alternative. On average, the entrepreneurs in our sample believed that they had a chance that was 24.5% better of getting all the money they wanted by venturing than by staying where they were or finding another job, whereas they thought that the belief difference aggregated over the other decision dimensions was 27.1% better, a non-significant difference ($t = 0.45$). We predicted that entrepreneurs would state that the difference between what they believed their chances were with the new venture alternative and what they believed their chances were with the better of the other two alternatives would be greater for the wealth dimension than for an aggregate of the other dimensions. Therefore, Hypothesis 7 was not supported.

Entrepreneurs did not have higher belief differences between a new venture and other alternatives for wealth than for the other dimensions. This finding indicates that, contrary to predictions of a single attribute model of utility, these entrepreneurs believed that their chances for attaining desired levels of dimensions such as innovation,

vision, and independence were just as high or higher than their chances for attaining desired levels of wealth. Assessments of probabilities for attaining wealth *did not* drive the decision to *found* a high-technology venture. But assessments of probabilities for attaining wealth *did* drive the decision *not to found* a high-technology venture. Non-entrepreneurs revealed beliefs about significantly lower chances for attaining their most desired level of wealth than the other decision dimensions (-4.64% vs. 13.7% , $t = 3.08$, $p < 0.005$). This information, combined with non-entrepreneurs' ratings of importance and salience of wealth attainment, helps explain why this group did not decide to found a venture.

Comparative Belief Differences

We also predicted that the belief difference for "wealth attainment" would be greater for entrepreneurs than for non-entrepreneurs who did not start a high-technology business. Indeed, entrepreneurs were more optimistic about their chances of attaining their most desired level of wealth. Therefore, we did find support for Hypothesis 8 ($t = 2.87$, $p < 0.005$). But entrepreneurs were also more optimistic about their chances of attaining desired levels of other dimensions by founding a new venture. Entrepreneurs' beliefs about chances of attaining wealth are no more significant to the decision to start a new high-technology venture than are their beliefs about other important career decision dimensions; both are quite high. This indicates that entrepreneurs are much more optimistic about their chances for attaining desired levels of all dimensions through a new venture than either a previous position or a next best alternative. Thus, although we find support for Hypothesis 8, wealth alone does not discriminate entrepreneurs from non-entrepreneurs. Rather, it is optimistic beliefs in general that discriminate. Therefore, beliefs about chances for wealth attainment may or may not have affected entrepreneurial decisions in this case, but beliefs about wealth attainment seemed to have some effect on the decisions made by people who decided against founding a venture.

Absolute Beliefs

When we examined absolute beliefs about chances for wealth attainment for each alternative, we found that 13 of 51 entrepreneurs, or 25.5%, selected an alternative for which they did not state beliefs in the highest chances for desired wealth attainment [$Z = 17.58$; $p < 0.0001$]. Therefore, Hypothesis 9 is rejected. Six of 28 non-entrepreneurs, or 21.4%, selected an alternative for which they did not state beliefs in the highest chances for desired wealth attainment. Thus, the findings were in the opposite direction to that predicted by Hypothesis 10 (though not significant), allowing us to reject Hypothesis 10. Entrepreneurs do not seem to choose the alternatives that they believe have the highest chances for wealth attainment more often than do non-entrepreneurs.

We further asked entrepreneurs about the minimum probability level for attaining the most desired level of wealth for which they would still be willing to start a venture, holding the probabilities for their other alternatives constant. Data for two of these entrepreneurs are incomplete and we excluded them from analyses. Of the remainder, 39.6% (or 19 of 49) indicated that they would still be willing to start a business even when the probability for obtaining the most desired level of wealth was lower than that of the highest other alternative. This finding is significantly different from zero [$Z = 27.14$; $p < .0001$], suggesting that a significant number of entrepreneurs were willing

to compromise their wealth expectations for the privilege of starting a venture. This finding also suggests that other dimensions will compensate for a lower expected wealth effect.

Concern for Money as a Discriminator Between Entrepreneurs and Others

We predicted that we could distinguish entrepreneurs and non-entrepreneurs based on the entrepreneurs' concern for money. This concern for money would be demonstrated through values and beliefs. In terms of the three value measures that we investigated, the hypotheses regarding importance, salience, and satisfaction were rejected. In terms of our belief measure, although we found that entrepreneurs believed they had much better prospects of attaining wealth through founding a new venture, they also believed that they had better prospects on other dimensions. Not surprisingly, non-entrepreneurs were less optimistic.

We were still left wondering if it would be possible to distinguish between entrepreneurs and non-entrepreneurs based on their beliefs and values about wealth. To answer this question, we conducted a discriminant function analysis, using our data to generate variables for the discriminant function.

The major differences between the entrepreneurs and non-entrepreneurs were revealed in a linear combination of variables, the discriminant function. A function of belief differences alone (at both 100% and 50% of most desired level) correctly classified 59 of 79 participants as either entrepreneurs or non-entrepreneurs. Because the salience of wealth attainment to the particular decision to found or not to found a venture proved to be significantly different, the salience variable was added. Including "wealth salience," the discriminant function correctly classified 65 of 79 participants. We used a stepwise calculation to determine whether beliefs at the 50% level or 100% level of most desired wealth were better at discriminating, and found we could exclude the belief difference at the 100% of most desired level of wealth. Standardized canonical discriminant function coefficients for the two remaining variables were: wealth salience -0.90, and belief difference at the 50% of most desired wealth level 0.86. Note that wealth salience results were opposite to our hypotheses, yet still prove to be one of the variables that best distinguishes entrepreneurs from non-entrepreneurs. These findings suggest that we can distinguish a group of people who successfully start new ventures by their regard for wealth as a less salient factor, and their beliefs in higher chances of a new venture producing the most desired wealth level.³

DISCUSSION

Our findings do not support the common perception that money is the only, or even the most important, motive for entrepreneurs' decisions to start new high-technology ventures. For the group of technology entrepreneurs surveyed during this study, personal wealth attainment is significantly less important and less salient than an aggregate of other dimensions. It also has a lower salience and importance for non-entrepreneurs considering the decision to found a new venture. Entrepreneurs did not always choose the career alternative that they believed had the highest chance of providing them with

³ We collected data on the 'most desired' levels for wealth and for all other decision dimensions, and these values served as the focal point for the belief estimates across all alternatives. So reference here to the 'most desired' level of wealth does not imply that it was either more salient or important.

their most desired level of wealth. Wealth salience results were opposite to our hypotheses, yet still prove to be one of the variables that best distinguishes entrepreneurs from non-entrepreneurs.⁴ Our findings suggest that we can distinguish people who start new ventures from those who don't by their beliefs in higher chances of a new venture producing monetary returns and surprisingly, by their regard for wealth as a less salient factor to their decisions.

It may be possible that, although entrepreneurs did not have a high salience for wealth, their much higher beliefs for wealth still motivated the founding decision. The difference in beliefs, however, was not significantly greater than entrepreneurs' optimistic beliefs about chances of attaining desired levels of other dimensions (indeed, it was generally lower), although it was significantly higher than the non-entrepreneurs' belief difference measures for wealth. Here too, the entrepreneurs' stated beliefs regarding the chances of attaining their desired levels of the aggregate of other dimensions were higher than those of non-entrepreneurs. The entrepreneurs were simply more optimistic at the time of their decision than the non-entrepreneurs. This finding is consistent with other studies' findings of overconfidence among entrepreneurs (e.g., Busenitz and Barney 1997; Cooper, Woo, and Dunkelberg 1988). The finding that entrepreneurs' salience of wealth was lower than both their salience of other dimensions and the salience of wealth for non-entrepreneurs suggests that these optimistic wealth beliefs alone did not drive the founding decision.

Although consideration of individual hypotheses does not allow us to conclude with confidence that money does not matter to decisions to found new ventures, the pattern of results is quite persuasive. For example, entrepreneurs' ratings of value elements allow us to conclude that, relative to other decision dimensions and compared to non-entrepreneurs, entrepreneurs do not consider wealth to be overly important or salient to their venturing decisions. Yet if entrepreneurs believed their outcomes on other decision dimensions would not change across alternatives, it would still be possible that money was driving the decision. However, our findings on belief differences suggest that entrepreneurs did believe that they could substantially better their outcomes on other dimensions by venturing—in fact, they believed they would achieve the same or higher gains in other dimensions as they would with money. Furthermore, the finding that entrepreneurs were willing to compromise their wealth expectations to venture suggests that other factors were indeed driving the decision.

We argued that testing a single attribute decision model before testing a multiple attribute model was logical based on concerns for parsimony. If a single attribute could explain decision behavior, then no future inquiry would be required. Our findings here that wealth is not the answer motivate further study into how dimensions such as independence, challenge, contribution, and ego did affect the decision to found a new high-technology venture.

Limitations

There are several possible limitations to this research. First, one might argue that entrepreneurs or non-entrepreneurs would hesitate to indicate how wealth attainment fits

⁴ We did not attempt to discriminate using dimensions other than wealth. It is possible that beliefs and values for other dimensions, singly or aggregated, could in fact discriminate better than wealth beliefs and salience.

into their value scheme for reasons of social desirability. Anticipating this criticism, we included a decision dimension, ego, that is arguably even less socially desirable than wealth attainment. In a business context, it would seem less appropriate to strive toward ego maximization rather than wealth maximization. However, when asked about “ego,” the entrepreneurs, as well as the non-entrepreneurs, did not hesitate in claiming its importance to their decisions, though many of them grimaced while doing so. “Ego” was rated ahead of other dimensions, including wealth, even though prevalent stereotypes and meanings of ego are certainly no better than those of “wealth attainment.”

Second, the interviews collected retrospective data that, by their nature, are prone to bias (Fischhoff and Beyth 1975; Golden 1992). One of the reasons that we selected the high-technology sector was to minimize the time lag between career decisions and the interviews for this research. Managers and entrepreneurs in this sector observe rapid change in the industrial landscape and in their career opportunities. Initially, we hoped to limit the interviews to individuals who had either considered starting a new venture or who had done so within the last 5 years so as to minimize error from retrospection. This limit proved to be impractical. Some high-technology businesses do not achieve measurable success until they have been in existence for more than 5 years. Ideally, we would be able to interview nascent entrepreneurs about their decision making, and then track their progress. This is a possible future project, but for the purposes of creating and testing the viability of our model, we needed founders of established businesses.

Perhaps entrepreneurs forgot how much wealth attainment concerned them at the time of their decision. However, since we asked about many dimensions, there is no reason to expect that their memories about wealth attainment would be any worse than those concerning other dimensions. Bias in these memories remains a valid criticism (Golden 1997), and as interviewers, we attempted to remind participants repeatedly that we needed them to rate the variables in accordance with the way they considered them at the time the decision was made. Because interviewees began the interview by telling us detailed stories about their founding decision (including information about their personal lives and circumstances), we felt they would be more able to mentally return to their cognitions at the time of the decision.

Alternatively, non-entrepreneurs may have retrospectively biased their beliefs about the wealth-producing prospects of ventures downward to avoid cognitive dissonance (Festinger 1957) since they did not start ventures. However, this does not explain why the non-entrepreneurs gave a higher salience and importance to wealth than did entrepreneurs.

As interviewers, we were very pleased with the attention to task, and forthright manner that the majority of participants displayed during our sessions. All seemed very interested in our research and results, as well as the opportunity to explore their own decision making from the perspective of our model. Thus, we take these data at face value, and based on this research, we conclude that these decisions to found high-technology ventures were not driven by prospects of wealth attainment. Rather, wealth is a welcome by-product that most entrepreneurs believed they would achieve if they pursued their goals regarding other decision dimensions.

The third limitation relates to three concerns we mentioned with respect to respondents' beliefs. Our data did not include a full distribution of payoffs and associated probabilities for the decision dimensions for reasons of practicality. Instead, we asked respondents to identify their most desired level of wealth and consider that figure when calculating probabilities across alternatives. While we cannot rule out that an expected

value calculation based on a full distribution of payoffs and probabilities might lead to a different choice, we do feel that respondents told us their “most desired level” of wealth, and not some satisficing level.

Our analysis of beliefs also did not address the risk aversion of respondents or their desires for a stable pattern of payments. However, if our assumption that entrepreneurship is both riskier and less stable than employment is accurate, we would expect the incidence of entrepreneurship choice to be decreased. Our findings, then, are conservative: a significant number of entrepreneurs chose entrepreneurship even when they had lower wealth beliefs for that option, despite its less attractive stability and risk characteristics.

Our analysis of beliefs also did not address the option value of either employment or entrepreneurship. However, since we asked respondents to consider their income stream for a 5- to 10-year period if they chose each of the alternatives, we can expect they implicitly considered option value when stating their beliefs, at least to the extent that they considered their option value when they were actually making the decision to venture.

A final limitation relates to the generalizability of our data. Our sample consisted of high-technology managers and entrepreneurs in British Columbia. It is likely that high-technology entrepreneurs differ in substantial ways from other entrepreneurs. Our sample indicated high salience and importance of such factors as innovation, vision, and challenge. A group of entrepreneurs in another sector is less likely to rate these findings as high. To the extent that stereotypes about “techies” are true, it may be that high-technology entrepreneurs are more excited about getting their new innovation into the marketplace than they are about making major economic gains from it. To the extent this is true, investigations of entrepreneurs outside of high-technology industries might yield a different set of findings.

The British Columbia milieu might create some additional generalizability issues. Some of our participants (both entrepreneurs and non-entrepreneurs) discussed desirability of living in British Columbia because of climate and lifestyle advantages, despite facing more limited job market prospects for high-technology employees. This may have diminished the importance of money for both entrepreneurs and non-entrepreneurs, as they willingly sacrificed wealth for lifestyle.

However, both groups would presumably be affected the same way by the atmosphere, leaving unexplained differences between the groups in their rated importance and salience for wealth. It is also possible that Canadian entrepreneurs are less focused on wealth attainment than entrepreneurs in other countries, and so studies in other locations might yield a different pattern of findings. Further research is required.

Implications and Directions for Future Research

Wealth was more important and more salient to those who did not start a technology venture, and we believe that this finding calls into question the stereotypical role of money in new venture creation. One might also wonder if concerns about wealth attainment actually hinder venturing behavior. If a segment of nascent entrepreneurs believes that greed, or at worst, a prominent concern for wealth attainment, is a requirement for successful venturing, this segment would be demotivated by conventional wisdom. Our findings suggest that as teachers of entrepreneurship, we should communicate the

value of a balanced set of decision dimensions, and encourage the segment of entrepreneurs who value this balance.

Our findings also suggest that venture capitalists who are looking for a strong money motivation from entrepreneurs may benefit from rethinking their perspective. Two of our subjects volunteered information that they had problems obtaining financing because the venture capitalists felt they were not focused enough on potential monetary gains from the venture. Once they adopted a money-focused posture in interviews, they did in fact obtain venture capital financing. If successful growth-oriented entrepreneurs are not money-focused in venturing decisions, it may be that venture capitalists are turning down worthwhile projects that will generate desired returns, perhaps as a by-product.

Our initial interpretation of these results answers the main question posed in this paper. Wealth attainment does not matter much, relatively speaking, to our entrepreneurs' decisions to found a high-technology venture. Our hypotheses, based on classical economic theory, were soundly rejected. The entrepreneurs in our study did not found a business simply to get all the money they wanted. They believed that founding a business provided a good chance to achieve their desired level of wealth, but wealth attainment was not the motivating factor. Money is not why they became entrepreneurs. The only hypothesis to receive empirical support involved differences between the beliefs of entrepreneurs and non-entrepreneurs at the time of the decision to found or not to found a technology venture. Most entrepreneurs identified that they had almost no chance of attaining their most desired level of wealth as a wage earner, but that this was not an important or salient consideration. Truly, the entrepreneurs believed they would attain more personal wealth by venturing, but they also believed they would attain more of the other dimensions that they indicated were more important and more salient. The other decision dimensions that we use in our model simply matter as much or more than did money in the decision to found a venture.

These findings have substantial implications for research in entrepreneurship. Classical models, which assume money as the primary motive for entrepreneurial activity, require reexamination.

Future research in entrepreneurship would benefit from focusing less on wealth attainment and more on belief differences and on other motives for venturing. Our finding that entrepreneurs' beliefs were higher than those of non-entrepreneurs for all of the decision dimensions suggests that venturing decisions are driven by optimism more than by financial motives. We should note, however, that "optimism" implies beliefs that are more favorable than they should be. Because we do not have, and it would be very difficult (if not impossible) to specify, the "true" beliefs, it is possible that the ventures did indeed offer the better prospects for goal attainment that our entrepreneurs expected. The basis for using the term "optimism" is the general observation that a high proportion of new ventures are unsuccessful, although the entrepreneurs surveyed for this study had, in most cases, already established successful ventures. Busenitz and Barney (1997) did find that entrepreneurs tended to be more overconfident than managers of large corporations in a laboratory study, and suggested a positive role for overconfidence in timely decision making under uncertainty. Similarly, Kahneman and Lovallo (1993) argue that unjustified optimism biases often compensate for unreasonable risk aversion biases (though not perfectly). It may be that overconfidence is a necessary prerequisite to entrepreneurial risk-taking. However as Russo and Schoemaker (1983) point out, "the ideal business person is a *realist* when making a decision, but an *optimist*

when implementing it” (p. 79). Further research is necessary to identify the effect of overconfidence on venturing.

Our preliminary analysis suggests that other decision dimensions matter more to entrepreneurs than wealth. This is consistent with the findings of Roberts (1991). We extend his work by considering a broader set of motives, and by comparing the motives of entrepreneurs with those of non-entrepreneurs. Our analysis prompts the question, “If money doesn’t matter, what does?” Because our focus in this paper was to examine the role of money in venturing decisions, we have little to say here about this question. Our preliminary findings indicate that entrepreneurs and non-entrepreneurs differed significantly in the dimensions they valued (see Table 4). Specifically, entrepreneurs rated innovation as significantly more salient to their venture decisions than did non-entrepreneurs, and they rate wealth, stability and lifestyle as significantly less salient. Entrepreneurs rated all decision dimensions other than stability as more salient than wealth attainment to venture decisions. They also rated vision, innovation and independence as significantly more important than did non-entrepreneurs, but rated stability and lifestyle as significantly less important. Interestingly, our results indicate no significant differences in ratings of satisfaction with prior positions between entrepreneurs and non-entrepreneurs. We therefore conclude that dissatisfaction did not drive these decisions.

More thorough analysis is beyond the scope of this paper, but would be a productive area for further research. Future analyses will involve the construction of a multi-attribute utility model to see if we can better explain entrepreneurs’ and non-entrepreneurs’ motives for their founding decisions. If we can identify the ways in which multiple attributes, or decision dimensions as we refer to them in this paper, are considered by those making venturing decisions, and identify values and beliefs that can discriminate between entrepreneurs and non-entrepreneurs, we may be better able to explain decisions to found new ventures.

Further, if such a model proves to be a good explanatory mechanism, we may be able to extend it to predictions of who will persist in venturing based on the decision making of the entrepreneurs involved. To date, psychological profiles of entrepreneurs, while very common, have not been successful at distinguishing entrepreneurs. This issue is of interest not only to researchers, but also to potential entrepreneurs, venture capitalists and those who work to foster entrepreneurship. A multiple attribute decision model provides promise of successful prediction, and is therefore worthy of future investigation.

REFERENCES

- Amit, R., MacCrimmon, K.R., and Oesch, J. 1997. The decision to start a new venture: Values, beliefs, and alternatives. Working paper, University of British Columbia, Vancouver, B.C.
- Busenitz, L.W., and Barney, J.B. 1997. Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing* 12(1):9–30.
- Campbell, C.A. 1992. A decision theory model for entrepreneurial acts. *Entrepreneurship Theory and Practice* 17(1):21–27.
- Cooper, A., Woo, C., and Dunkelberg, W. 1988. Entrepreneurs’ perceived chances for success. *Journal of Business Venturing* 3:97–108.
- Day, R.H., and Sunder, S. 1996. Review: Ideas and work of Richard M. Cyert. *Journal of Economic Behavior and Organization* 31:139–148.
- Douglas, E.J., and Shepherd, D.A. 1996. An economic theory of entrepreneurial attitudes and

- intentions. In P.D. Reynolds, S. Birley, J.E. Butler, W.D. Bygrave, P. Davidsson, W.B. Gartner, and P.P. McDougall, eds., *Frontiers of entrepreneurship research*, p. 97. Wellesley, MA: Babson College.
- Festinger, L. 1957. *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Fischhoff, B., and Beyth, R. 1975. I knew it would happen: Remembered probabilities of once-future things. *Organizational Behavior and Human Performance* 13:1–16.
- Golden, B.R. 1992. The past is the past—or is it? The use of retrospective accounts as indicators of past strategy. *Academy of Management Journal* 35:848–860.
- Golden, B.R. 1997. Further remarks on retrospective accounts in organizational and strategic management research. *Academy of Management Journal* 40:1243–1252.
- Herron, L., and Sapienza, H.J. 1992. The entrepreneur and the initiation of new venture launch activities. *Entrepreneurship Theory and Practice* 17(1):49–55.
- Jensen, M.C., and Meckling, W.H. 1976. Theory of the firm: Managerial behavior, agency cost and ownership structure. *Journal of Financial Economics* 3:305–360.
- Jensen, M.C., and Murphy, K.J. 1990. Performance pay and top-management incentives. *Journal of Political Economy* 98:225–265.
- Kahneman, D., and Lovallo, D. 1993. Timid choices and bold forecasts: A cognitive perspective on risk taking. *Management Science* 39(1):17–31.
- Kahneman, D., and Tversky, A. 1979. Prospect theory: An analysis of decisions under risk. *Econometrica* 47:263–291.
- Kuratko, D.F., Hornsby, J.S., and Naffziger, D.W. 1997. An examination of owner's goals in sustaining entrepreneurship. *Journal of Small Business Management* 37(1):24–33.
- MacCrimmon, K.R. 1990. Expected utility theory as benchmark and guide to research: Discussion of papers by Amos Tversky, Ward Edwards and Tom Wallstein. In R. Hogarth, ed., *Insights in Decision making: A tribute to Hillel J. Einhorn*. Chicago, IL: University of Chicago Press.
- Monroy, T., and Folger, R. 1993. A typology of entrepreneurial paradigm. *Journal of Private Enterprise* 9(2):64–79.
- Ronstadt, R. 1988. The corridor principle. *Journal of Business Venturing* 3(1):31–40.
- Russo, J.E., and Schoemaker, P.J.H. 1983. *Decision traps*. New York: Doubleday.
- Simon, H. 1957. *Models of man*. New York: Wiley.

APPENDIX A: WEALTH

Our Meaning

Becoming wealthy, making a lot of money, meeting all your financial needs and wants.

Most Desired Level

What was your most desired level of wealth at the time of decision (i.e., best case scenario)? Assume a time horizon of about 10 years.

Least Desired Level

What was the least desired level that might have arisen under any circumstance (i.e., worst case scenario)?

Constraints

Were there any minimum wealth requirements that played a major role in determining the decision?

SALIENCE: How important was wealth in this particular decision?

1	2	3	4	5	6	7
Of no importance	Low importance	Medium- low importance	Medium- importance	Medium- high importance	High importance	Utmost importance

SATISFACTION: How satisfied/dissatisfied were you with your wealth attainment in your previous position, that is, just prior to starting the venture

1	2	3	4	5	6	7
Extremely dissatisfied	Very dissatisfied	Somewhat dissatisfied	Neutral	Somewhat satisfied	Very satisfied	Extremely satisfied

BELIEFS: In the following table, for each alternative, specify your beliefs about the level of wealth attainment for the indicated scenarios

Percentage of the desired level	State the chances of attaining the indicated level if stay in PREVIOUS POSITION	State the chances of attaining the indicated level if start NEW VENTURE	State the chances of attaining the indicated level if take NEXT BEST ALTERNATIVE
100%			
At least 75%			
At least 50%			
At least 25%			

Valuation of Risky Prospects

Now we would like to ask some hypothetical questions but want you to keep in mind your situation at the time of the decision. We will hypothesize various levels of attainment of your desired level and for each, would like you to consider whether you would take this assured amount or a venture with the corresponding chances. Indicate whether you would prefer the assured amount or the risky venture for each line of the following table

ASSURED AMOUNT		RISKY VENTURE		
Assume that you can assure yourself of attaining the following % of the desired level	Prefer assured amount	Chance of getting your desired level	Chances of getting the worst level	Prefer risky venture
75%	or	75%	25%	
50%	or	50%	50%	
25%	or	25%	75%	

REASSESSMENT: If you had the decision to make over, would wealth have been more or less significant?

1	2	3	4	5	6	7
Of no significance	Considerably less significant	Slightly less significant	Same	Slightly more significant	Considerably more significant	Highest possible significance

APPENDIX B Summary List of Decision Dimensions (from Amit, MacCrimmon & Oesch, 1997)

Wealth:	becoming wealthy, making money, meeting financial needs and goals
Vision:	realizing your own ideas about how the organization should evolve; determining goals and capabilities that the organization should pursue
Stability:	feeling certain about political, social, and personal situation; very little chance of unforeseen shocks; feeling comfortable knowing how your near future will unfold
Power:	influencing outcomes; making things happen; having an impact; exerting control; having it your way; being involved in crucial decisions; being in charge
Lifestyle:	accommodating dual career situations; spending time with family, in recreational opportunities; living where you want; having fun, being healthy
Leadership:	motivating and influencing others
Innovation:	doing something new or different; introducing original ideas about products or processes
Independence:	having flexibility; being your own boss; working when, where, and with whom you want
Ego:	standing out from the crowd; winning; creating a legacy; making a name; outdoing others
Contribution:	helping others; making a difference to your organization, community, industry; creating opportunities
Challenge:	using your full range of talents; self-actualization; assuming more responsibility; dealing with a wider range of issues
