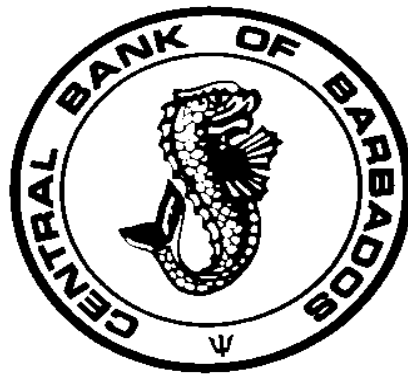


**AN EXPLORATORY STUDY OF FACTORS INFLUENCING
INVESTMENT DECISIONS OF POTENTIAL INVESTORS**

BY

PHILMORE ALLEYNE AND TRACEY BROOME



CENTRAL BANK OF BARBADOS
Research Department

**An exploratory study of factors influencing investment decisions of
potential investors**

Authors:

Philmore Alleyne and Tracey Broome*

Department of Management Studies, University of the West Indies

Cave Hill Campus, Barbados

* Email: tracey.broome@cavehill.uwi.edu

Tel: (246) 417-4306

An exploratory study of factors influencing investment decisions of potential investors

Abstract:

The purpose of this study is to determine individual factors that are likely to influence the investment decisions of potential investors. The study uses the dimensions of Ajzen's (1991) theory of planned behaviour (attitudes, subjective norms, and perceived behavioural control), and Sitkin and Weingart's (1995) risk propensity as predictors of investments intentions. The study used a self-administered questionnaire of a sample of business students in an undergraduate institution. It was found that attitudes, subjective norms, perceived behavioural control, and risk propensity were significant predictors of investment intentions. We also found that risk propensity did not moderate the relationship between the predictors (attitudes, subjective norms, and perceived behavioural control) and the dependent variable, intentions to invest. These findings are consistent with prior research and do show that education in business finance can help to influence investment decisions.

Keywords: Investment intentions, attitudes, subjective norms, perceived behavioural control, risk propensity

INTRODUCTION

Investment behaviour is critical to an individual's future and that decision may be contingent on many factors. It has been argued that attitudes among other variables can predict the investment decision process (East, 1993). Prior research has suggested that the improvement of education in financial management significantly correlates with decision-making on critical investment issues (Chen and Volpe, 1998). For example Chen and Volpe (1998) deduce that an individual's level of financial knowledge influences their opinions and impinge on their decisions. Lusardi and Mitchell (2006) argue that their review revealed that many persons did not have the adequate knowledge of basic economic concepts required to make investment decisions. Thus, there is a need to conduct research on factors, other than knowledge, that could influence investment decisions

The purpose of this paper is to look at factors influencing the investment intentions by applying Ajzen's 1991 theory of planned behaviour and Sitkin and Weingart's (1995) theory of risk propensity. This paper borrows from behavioural psychology and management theory to explore the investment decisions of future investors. We assume that the investor is desirous of constructing a portfolio of investments that best suits his/her return requirements and risk propensity. Investors can be either risk-averse, risk- neutral or risk-seeking. Thus, we seek to understand how risk affects investment decision making.

To the best of the authors' knowledge, there has been little research done on determining the factors influencing investment decisions in the Caribbean, and specifically, Barbados. Thus, this paper contributes to the paucity of research on the topic

of investing among students in the Caribbean. This paper makes a further contribution by measuring risk propensity to determine its influence or relationship to investment intentions.

The remainder of the paper is structured as follows. Following the introduction, Section 2 performs a selective review of the literature. Section 3 describes the research approach used to collect data and is followed by Section 4 which summarises the results. The final section concludes the study as well as makes implications, points out the limitations and offers suggestions for future research.

LITERATURE REVIEW

Prior research has shown that students are not receiving sound education on financial investments and as a result have inadequate knowledge on investing (e.g. HSR 1993). Mandell (1997) felt that students were leaving school unprepared to make important financial decisions. Volpe, Chen and Pavlicko (1996) found that university students scored on average 44% in their test on knowledge of investments, thus suggesting inadequate knowledge.

Previous studies have shown that individual economic behaviour often focuses narrowly on specific areas such as risk attitudes (e.g. Wood and Zaichkowsky, 2004) or saving (Thaler and Benartzi, 2004). Other fields of research target investment in securities (Brennan, 1995; Keller and Siegrist, 2006). Specific financial issues or situations, however, are not indicative of an individual's behavioural and attitudinal disposition toward finance. Rather an interest in finances or having certain habits related

to managing one's financial means may indeed be a moderating factor to learn about behaviours and needs (Loix et al., 2005). We seek to measure the attitudes and behavioural intentions toward investing as one of the focal points in this paper.

Prior studies of private investors have used mainly behaviour-based criteria or attitudes and do not combine both aspects (e.g. Keller and Siegrist, 2006). This study is not product-linked but wider ranging in that it examines the self-stated financial attitudes and behaviour of individual investors. A significant body of literature has focused on the relationship of attitudes to behaviour. Whilst behaviour changes over time, there is a popular assertion that "past behaviour is the best predictor of future behaviour" (Janzen, 1991, p. 202).

The theory of reasoned action (Fishbone and Janzen, 1975) states that an individual's behavioural intention is a function of attitudes and subjective norms. Later, Ashen (1991) proposed the theory of planned behaviour by adding another factor, perceived behavioural control. The theory of planned behaviour posits that attitudes, subjective norms and perceived behavioural control are determinants of behavioural intention and actual behaviour. Intention is assumed to be a necessary condition for voluntary action, which may be triggered by perceived opportunities. Thus, there is a strong association between intention and action (Janzen, 1991).

An individual's attitudes towards a behaviour may be defined as the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. Subjective norm is the perceived social pressure to perform or not to perform the behaviour from ones' referent group or peers. Perceived behavioural control is the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past

experience as well as anticipated impediments and obstacles) on intentions and subsequent behaviour.

These intentions, together with subjective perceptions regarding the individual's ability to control the outcome of his/her behaviour, have been found to account for considerable share of variance in the actual behaviour. Beck and Ajzen (1991, p.286) state that "as a general, the more favourable the attitude and subjective norm with respect to behaviour, and the greater the perceived behavioural control, the stronger should be an individual's intention to perform the behaviour under consideration."

The framework has been successfully applied in a wide range of behaviours, such as ethics accounting and quitting the smoking habit (Buchan, 2005; Carpenter and Reimers, 2005; Godin et al., 1992). Empirically, the theory of planned behaviour significantly explains the relationship between growth intentions and growth achieved by new ventures (Wiklund, 2001). Related to the concept of perceived behavioural control, perceived self-efficacy has been shown to be related to entrepreneurial intent (Krueger et al., 2000) and entrepreneurial decision (Chen et al., 1998).

East (1993) applied the theory of planned behaviour to explaining investment decisions. He found that attitudes, subjective norm and perceived behavioural control were significantly related to investment decision, in this case, the application for shares. He also found that the influence of friends and relatives and importance of easy access to funds, profitability and security of the investment were influential in intentions to invest.

Investors usually make decisions and choices between different types of investment options (e.g. how much to invest) (Du and Budescu, 2005). However, financial experts may not be able to provide information on the exact probabilities for

future returns. Thus, investors' attitudes become quite important in terms of investment decisions. Prior research has shown the attitudes towards risk and vagueness is an important predictor of investment behaviour (Kuhn and Budescu, 1996). Investors may face investment opportunities with vague probabilities and vague outcomes (Du and Budescu, 2005).

An individual's sensitivity to risk may be a function of the fear regarding the type of investment (e.g. possible start-up behaviours) since these investments are typically considerably riskier than most other investment categories (Mason and Harrison, 2002b). Sitkin and Weingart (1995) developed a 5-item scale for measuring business risk propensity. MacCrimmon and Wehrung (1985, p.1) defines risk propensity as "the willingness of people to take risks." Sitkin and Weingart (1995) argued that risk propensity is a behaviour that evolves as part of experiential learning. Sitkin and Weingart's (1995) measure of risk propensity is that it measures global attitude or perceived return more than perceived risk. Sitkin and Weingart's measure is based on four dimensions: opportunity-threat, gain-loss, positive-negative and success-failure. In its prescriptive sense, a risky situation such as investments may involve opportunities and threats, potential for gains and losses, negative as well as positive elements, and possibilities for success or failure. Thus, this study seeks to explore whether the theory of planned behaviour and risk propensity can significantly predict intentions to invest among future investors. Based on the above review of literature, we now provide the following hypotheses:

H1: Attitudes will be positively related to intentions to invest.

H2: Subjective norms will be positively related to intentions to invest.

H3: Perceived behavioural control will be positively related to intentions to invest.

H4: Risk propensity will be positively related to intentions to invest.

The proposed model is shown in figure 1 below.

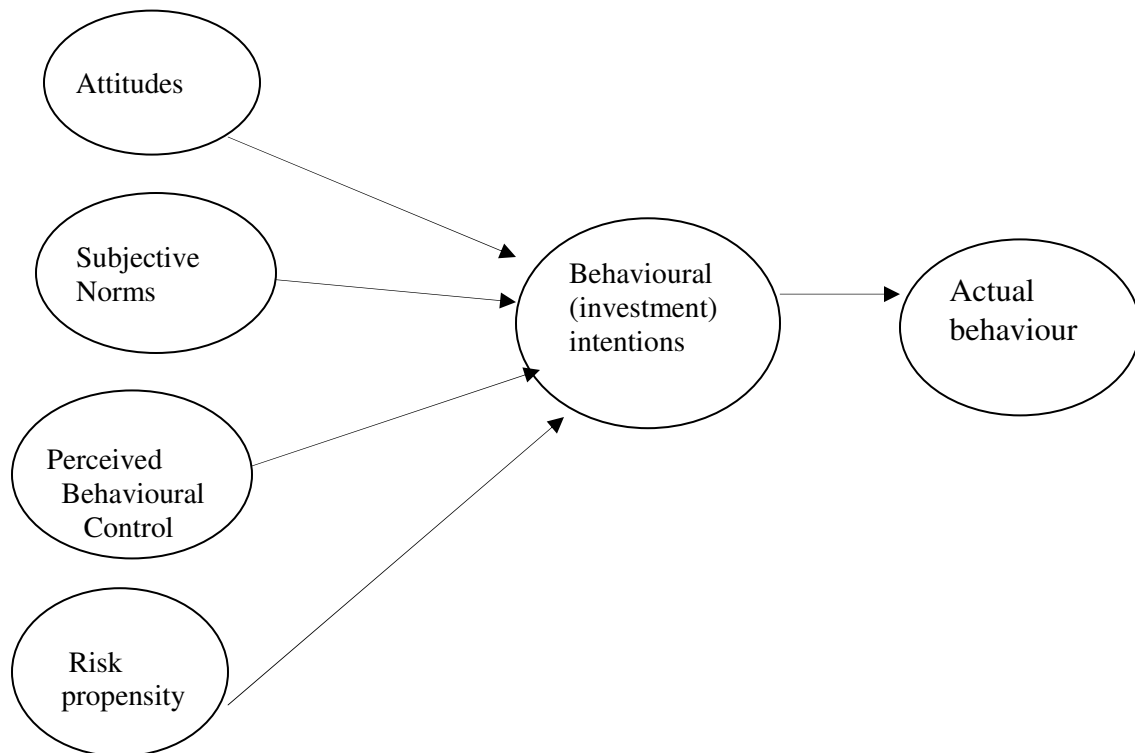


Figure 1. The Proposed model:

Attitudes, subjective norms, perceived behavioural control, behavioural intentions and actual behaviour were adapted from The Theory of Planned Behaviour (Ajzen, 1991). Risk propensity was adapted from Sitkin and Weingart (1995).

RESEARCH METHODOLOGY

This study used a cross-sectional design using a survey questionnaire. The sample was chosen from undergraduate university students in a final year business course during 2010. The target population for use of the scale is business decision makers. Students at this public university served as surrogates for those decision makers in the study. Prior studies have used students as surrogates in decision making (Ashton and Kramer, 1980; Hughes and Gibson, 1989) and risk propensity (Krueger and Dickson, 1994) research. All participants were volunteers and received no class credit for participation.

Development of instrument

To evaluate the relationship between planned behaviour and investment decisions, we formulated a study (questionnaire), based on the literature (e.g. East, 1993). The initial questionnaire was piloted to clarify all ambiguities and badly worded questions, as well as to choose applicable scenarios that meet the focus of the study. The remainder of this section describes the structure of the questionnaire. Firstly, the questionnaire requested the demographics of respondents with respect to age, gender, financial knowledge and the number of finance courses undertaken. Secondly, while some of the items were adapted from East (1993) study, we extended the research to include two aspects of risk, namely two scenarios (highly risky and less risky) and the Sitkin and Weingart (1995) risk propensity scale. Thus, we measured attitudes, subjective norms, and perceived behavioural control, using two scenarios of different level of risk: *applying for shares in an established public limited company (less risky)* and *investing in a new*

business (venture) (highly risky).¹ Thus, questions were posed asking their perceptions about each of these different levels of risky situations.

Dependent variable

Intention to invest was measured using a 3-item scale. A sample question was “I plan to invest in a new business (venture) in the future”. All items were measured using a 7-point likert scale, ranging from 1 = extremely unlikely to 7 = extremely likely. The items were combined to form an average score. Higher scores on this scale represent higher intentions to invest.

Independent variables

Attitudes to investing were measured using five 7-point fully anchored semantic differential scales. Respondents were asked to state their attitudes in applying for shares in an established public company or investing in a new business or venture, and asked whether the decision was: “bad-good”, “foolish-wise”, “punishing-rewarding”, “unpleasant-pleasant”, “unbeneficial-beneficial.” These scales were adapted from East (1993) and Buchan (2005). The items were combined to form an average score. Higher scores on this scale represent positive attitudes.

Subjective norms were measured using a 3-item scale, adapted from East (1993) and Buchan (2005). A sample question was “Most people who are important to me would think that I should apply for shares in a public company”. All items were measured using a 7-point likert scale, ranging from 1=extremely unlikely to 7 = extremely likely. The

¹ Based on the responses from the pilot stage of this questionnaire, it was felt that the choice of these two scenarios posed the two extreme points of the level of risk associated with investing in this environment.

items were combined to form an average score. Higher scores on this scale represent higher attachment to referent groups.

Perceived behavioural control was measured using three items adapted from East (1993). A sample question was “If I want to apply for shares in a public company I can easily do so”. All three measures were 7-point likert scale, ranging from 1=extremely unlikely to 7 = extremely likely. The items were combined to form an average score. Higher scores on this scale represent higher perceived control over the behaviour.

Risk propensity was measured using a 5-item scale developed by Sitkin-Weingart Business Risk Propensity scale, modified to address a generic business situation. A sample question was “How likely are you to choose more or less risky alternatives based on the assessment of others on whom you must rely?” All items were measured using a 7-point likert scale, ranging from 1=extremely unlikely to 7 = extremely likely. The items were combined to form an average score. Higher scores on this scale represent positive attitudes to risk.

Data collection procedures

The questionnaires were distributed in class and the completed questionnaire was collected one week later. To preserve anonymity and confidentiality, respondents were told that they should not put their names or any identifiers on the completed questionnaire.

RESULTS

Characteristics of the sample

The questionnaires are administered to students registered for the financial management class at the Cave Hill Campus. One hundred and four (104) students participated in the survey, representing a response rate of 52%. The sample was predominantly female (83.5%), and 46.8% of the students are in the “20 to 29 years” age group. 62% of the sample indicated that they had little knowledge of investing. The average number of courses done with some element of finance was two.

Reliability of measures and Descriptive statistics

Table 1 shows the descriptive statistics, correlations and Cronbach alpha reliabilities for the independent and dependent variables. Cronbach alphas reliability coefficients were computed for each scale. The results show acceptable reliability levels for all constructs in the study with coefficients ranging from .72 to .94. Nunnally (1967) argues that Cronbach alphas greater than 0.7 are desirable.

In general for both scenarios, applying for shares in an established public limited company and investing in a new business, the mean scores for intention, attitude, and subjective norm were slightly above the mid-point on the 7-point scale. It was also observed that risk propensity with a mean of 3.65 was slightly below the mid-point, thus indicating the respondent’s tendency to be between slightly risk-averse and risk-neutral.

Pearson’s bivariate correlation was conducted to determine the hypothesized relationships (H1 to H4). Attitudes ($r = .45, p < .01$), subjective norms ($r = .55, p < .01$), perceived behavioural control ($r = .49, p < .01$) and risk propensity ($r = .39, p < .01$) were

positively and significantly related to intentions to invest by applying for shares in an established public company. In addition, attitudes ($r = .62, p < .01$), subjective norms ($r = .69, p < .01$), perceived behavioural control ($r = .73, p < .01$) and risk propensity ($r = .34, p < .01$) were positively and significantly related to intentions to invest in a new business or venture. Thus H1 to H4 were supported.

Table 1: Correlations and Descriptive Statistics

	Mean	SD	INT	ATT	SN	PBC	RP
Applying for shares							
Intention (INT)	4.52	1.55	(.81)				
Attitude (ATT)	4.98	0.81	.45**	(.90)			
Subjective norm (SN)	4.49	1.36	.55**	.43**	(.90)		
Perceived behavioural control (PBC)	4.23	1.27	.49**	.27*	.41**	(.75)	
Risk propensity (RP)	3.65	1.04	.39**	.19	.32**	.23*	(.72)
Investing in a new business							
Intention (INT)	4.52	1.52	(.82)				
Attitude (ATT)	4.88	1.15	.62**	(.94)			
Subjective norm (SN)	4.52	1.55	.69**	.71**	(.91)		
Perceived behavioural control (PBC)	3.94	1.31	.73**	.52**	.57**	(.75)	
Risk propensity (RP)	3.65	1.04	.34**	.19	.22	.47**	(.72)

Notes: * $p < .05$; ** $p < .01$; SD = Standard deviation; alpha reliabilities shown on the diagonal.

Hierarchical regression analysis

To examine the extent of the theory of planned behaviour being able to predict the intentions to invest, hierarchical regression analyses were conducted, using intentions to invest as the dependent variable. The components of the theory of reasoned action (attitudes and subjective norms) were entered in Step 1. Perceived behavioural control (to form the theory of planned behaviour) was added in step 2. Step 3 added risk propensity. The results are shown in table 2.

Table 2: Hierarchical regression analyses for intentions

	Applying for shares in a public company			Investing in a new business		
	r	b	R	r	b	R
Step 1: Theory of reasoned action						
Attitudes	.45**	.27**		.62**	.25*	
Subjective norms	.55**	.43**	.60	.69**	.51**	.71
Step 2: Theory of planned behaviour						
Attitudes	.45**	.24*		.62**	.14	
Subjective norms	.55**	.33**		.69**	.31**	
Perceived behavioural control	.49**	.29**	.65	.73**	.48**	.81
Step 3: Risk propensity						
Attitude	.45**	.22*		.62**	.14	
Subjective norms	.55**	.27**		.69**	.32**	
Perceived behavioural control	.49**	.27**		.73**	.47**	
Risk propensity	.39**	.20*	.68	.34**	.02	.81

Note: r = correlation coefficient; b = standardized regression coefficient; R = multiple correlation; * p < .05; ** p < .01.

It was found that the theory of reasoned action (Step 1) performed well, and explained the investment intentions on both scenarios. This explained between 36% and 51% of the variance in investment intentions (R^2). Majority of the predictive accuracy was shown by subjective norms rather than attitudes. This indicates that subjective norms (referent others) is an important predictor of investment intentions.

The results for Step 2 show that the addition of perceived behavioural control (to reflect the theory of planned behaviour result in significant improvements of prediction ($p < .05$). At step 2, both perceived behavioural control and subjective norms had significant regression coefficient across all two investment intentions. It was noticeable

that attitudes were only significant with respect to applying for shares in an established public company. The proportion of variance explained range from 43% to 66% representing increments (changes in R^2) of 7% to 15% in comparison to Step 1. These results show that the theory of planned behaviour can be determined to be a better than the theory of reasoned action. This indicates that investment intentions may be strongly affected by beliefs about obstacles and opportunities.

In Step 3, risk propensity was added to explore the possibility that risk may contribute to the intention to invest and thus extend Ajzen's (1991) theory of planned behaviour. The result shows that risk propensity did obtain a significant regression coefficient, but the added predictive accuracy was quite small ranging from 3% for applying for shares and 0% for investing in a new business. These results show that the variables in this study influenced the intentions to invest.

Test for moderating effects of risk propensity

We explained the moderating effect of risk propensity on the relationship between the independent variables (attitudes, subjective norm and perceived behavioural control) and the dependent variable (intention to invest)². Hierarchical moderated multiple regression was used to test for the interaction between risk propensity and each of the three independent variables. For each interaction, we entered the independent variable in step 1, the moderator variable (risk propensity) in step 2, and the interaction term in step 3. The predictors are centered to reduce multicollinearity, as prescribed by Aiken and

² We took on board the suggestion of a colleague that we test for the moderating effect of risk, given that investors are more likely to assess the levels of risk when making important decisions.

West (1991). It was found that there were no significant moderating effects for risk propensity on the relationship between the independent variables and dependent variables. This indicates that the level of risk (high or low) did not impact the relationship between the predictors and investment intentions. Furthermore, risk propensity did not influence the different types of investment.

Further Analyses

We further explored the relationship between the number of courses and the knowledge in investing and found that there was a positive correlation between these two variables ($R = .492, p < .01$). While this finding is obvious, it is heartening as it suggests that education has a significant influence on improving the knowledge of investments. We also tested for the relationship between the knowledge of investing and the intention to invest and found a positive and significant relationship ($p < .05$). We also found that there was a marginally significant relationship between the knowledge of investing and the propensity for risk ($p < .10$).

CONCLUSION

Summary of the findings

Factors influencing the investment decision establish the overall running of the marketplace. There has been little research concerning what motivates a consumer to partake in an investment transaction and is quite relevant today with the upheaval in the markets, focusing on future investment participants. The current study examines investment decisions using the theory of planned behaviour and risk propensity among future investors. The study found that the theory of planned behaviour was a significant predictor of investment intentions, thus lending support to the usefulness of Ajzen (1991)

theory. These findings further show that attitudes and referent groups (peers, family and significant others) and beliefs about potential obstacles and opportunities significantly predicted intentions to invest. The results were quite consistent with those of East (1993), who found that the influence of friends and relatives and easy access to funds were significant predictors of investment intentions among students.

Implications of the findings

The findings of this study show that education in financial management can influence ones attitudes to risk. We see that respondents held less than favourable attitudes to risk and consequently more education needs to be undertaken in terms of understanding and accepting of risk in investments. Drawing on a study done by Richards et al (1996), Huff et al (1997, p. 40), stated that “ as individuals’ knowledge of a task increased, their willingness to accept higher levels of risk associated with the task also increased”. Our results also show that subjective norm is the most important predictor of investment intentions. Social influence theory would suggest that peers and other important referents are essential in the investment decision-making. Potential investors look to others for acceptance of the decision however risky.

Limitations and suggestions for future research

The study has several limitations. Firstly, the study used a small sample, which restricts the generalization of the findings to the whole population. In addition, the sample was obtained from students. Future research should consider using larger samples as well as respondents from the working adult class. Secondly, the study used a survey

questionnaire, which would have forced respondents to answer specific questions. The research method used would not have allowed the respondents to state their beliefs, opinions and views on the issue of investing. Future research should consider conducting qualitative methods such as interviews and focus groups to explore the phenomenon of investing among these future investors. In this study, we only utilized these four variables and indeed future research can focus on other variables like personality traits, prior experiences and financial literacy to give some examples. Finally, this study measured intentions rather than actual behaviour, which could be different.

REFERENCES

- Aiken, L. & West, S. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50 (2), 179-211.
- Ashton, R. & Kramer, S. (1980). Students as surrogates in behavioural accounting research: some evidence. *Journal of Accounting Research*, 18 (1), 1-15.
- Beck, L. & Ajzen, I. (1991). Predicting dishonest actions using the theory of planned behaviour. *Journal of Research in Personality*, 25 (3), 285-301.
- Brennan, M.J. (1995). The individual investor. *The Journal of Financial Research*, 18 (1), 59-74.
- Buchan, H. (2005). Ethical decision-making in the public accounting profession: An extension of Ajzen's theory of planned behaviour. *Journal of Business Ethics*, 61 (2), 165-181.
- Carpenter, T. & Reimers, J. (2005). Unethical and fraudulent financial reporting: Applying the theory of planned behaviour. *Journal of Business Ethics*, 60 (2), 115-129.
- Chen, C., Greene, P. & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers. *Journal of Business Venturing*, 13 (4), 295-316.
- Chen, H. & Volpe, R. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, 7 (2), 107-128.
- Du, N. & Budescu, D. (2005). The effects of imprecise probabilities and outcomes in evaluating investment options. *Management Science*, 51 (12), 1791-1803.
- East, R. (1993). Investment decisions and the theory of planned behaviour. *Journal of Economic Psychology*, 14 (2), 337-375.
- Godin, G., Valois, P., Lepage, L. & Desharnais, R. (1992). Predictors of smoking behaviour: an application of Ajzen's theory of planned behaviour. *British Journal of Addiction*, 87 (9), 1335-1343.
- Harris/Scholastic Research (HSR) (1993). *Liberty financial young investor survey*. New York, NY.

- Huff, R., Keil, M., Kappelman, L. & Prybutok, V. (1997). Validation of the Sitkin-Weingart business risk propensity scale. *Management Research News*, 20 (12), 39-48
- Keller, C. & Siegrist, M. (2004). *Money attitudes, demographics, and money behaviours: development of a new money attitude scale*. Working paper, University of Zurich, Zurich.
- Keller, C. & Siegrist, M. (2006). Money attitude typology and stock investment. *The Journal of Behavioural Finance*, 7 (2), 88-96.
- Krueger, N. & Dickson, P. (1994). How believing in ourselves increases risk-taking: perceived self-efficacy and opportunity recognition. *Decision Sciences*, 25 (3), 385-400.
- Krueger, N., Reilly, M. & Carsrud, A. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15 (5), 411-432.
- Kuhn, K. & Budescu, D (1996). The relative importance of probabilities, outcomes and vagueness in hazard risks decisions. *Organization Behaviour Human Decision Processes* 68, 301-317
- Loix, E., Pepermans, R., Mentens, C., Goedee, M. & Jegers, M. (2005). Orientation toward finances: development of a measurement scale. *The Journal of Behavioural Finance*, 6 (4), 192-201.
- Lusardi, A. & Mitchell, O. (2006). *Financial literacy and retirement preparedness: Evidence and implications for financial education programs*. Working Paper WP 2006-144, University of Michigan Retirement Research Center. Available from <http://ssrn.com/abstract=957796>
- Mandell, L. (1997). *Personal financial survey of high school seniors*. Jump Start coalition for personal Financial Literacy, March/April. Washington, D.C.
- Mason, C. M. & R. T. Harrison, 2002b. Is it Worth It? The Rates of Return From Informal Venture Capital Investments. *Journal of Business Venturing*, 17 (3), 211-236.
- MacCrimmon, K. & Wehrung, D. (1985). A portfolio of risk measures. *Theory and Decision*, 19 (1), 1-29.
- Nunnally, J. C. (1967). *Psychometric Theory*. New York, NY: McGraw-Hill Book.

- Richards, R., Prybutok, V., & Kappelman, L. (1996). Influence of computer user training on decision-making risk preferences. *Management Research News*, 19 (11), 26-41.
- Sitkin, S. and Weingart, L. (1995). Determinants of risky decision-making behaviour: A test of the mediating role of risk perceptions and propensity. *Academy of Management Journal*, 38 (6), 1573-1592.
- Thaler, R.H. and Benartzi, S. (2004). Save More Tomorrow: using behavioural economics to increase employee saving. *Journal of Political Economy*, 112 (1), S164-S187.
- Volpe, R.P., Chen, H. & Pavlicko, J. (1996). Personal investment literacy among college students: A survey. *Financial Practice and Education*, 6 (2), 86-94.
- Wiklund, J., (2001), Growth motivation and its influence on subsequent growth. In W. D. Bygrave, E. Autio, C. G. Brush, P. Davidsson, P. G. Green, P. D. Reynolds and H. J. Sapienza (Eds.), *Frontiers of entrepreneurship research 2001*. Wellesley, MA: Babson College.
- Wood, R. & Zaichkowsky, J.L. (2004). Attitudes and trading behaviour of stock market investors: a segmentation approach. *The Journal of Behavioural Finance*, 5 (3), 170-179.