Values, Entrepreneurial Attitude, and Entrepreneurial Intentions as Antecedents of Nascent Entrepreneur Business Start-Up Behaviour in South Africa: A Longitudinal Study

by

Wendy A. Lindsay
MBA (Bond) MAppBusPrac (UniSA)

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Entrepreneurship, Commercialisation and Innovation Centre
The University of Adelaide

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Preliminaries

Glossary of Select Terms

Term	Description
AGFI	Adjusted Goodness-of-Fit Index (used in assessing model fit)
AMOS	The acronym AMOS stands for *Analysis of MOment Structures*. The first version of AMOS was developed by Jim Arbuckle in 1994. AMOS was the first program of its kind to use a graphics file of a path diagram to specify a model and to display parameter estimates on a path diagram. It is fitted with path diagram drawing tools that allow a user to specify a model by creating a graphics file for the path diagram.
Bollen-Stine p value	The Bollen-Stine bootstrap p is a bootstrapped modification of the model chi-square statistic used to evaluate model fit. It adjusts for the lack of multivariate normality in the data.
Bootstrapping	In a modeling context, statistical bootstrapping is a technique that samples data from within a data set and generates standard errors based on repeated estimates of sample parameters. In AMOS, bootstrapping is selected from the "Analysis Properties" Menu.
CFA	Confirmatory Factor Analysis – where the model is specified *a priori*
CFI	Comparative Fit Index (used in assessing model fit)
Chi-square statistic	The chi-squared test (χ^2) is a statistical test whose results are assessed by reference to the chi-squared distribution.
Congeneric Model	In a one-factor congeneric measurement model, all factor loadings and error variances are freely estimated. An underlying assumption is that items contribute in varying amounts to the latent variable (c.f., a parallel model)
Construct	A construct refers to a complex psychological concept.
Construct Validity	Construct validity is the degree of conformity between a theoretical concept and a particular measuring device or procedure.
Convergent Validity	This represents a measure of the extent of the direct structural relationship between an observed variable and a latent construct. Convergent validity is achieved when the correlation (that is, the factor loading) is significantly different from zero.
Discriminant Validity	Discriminant validity represents the degree to which the model constructs are dissimilar. Evaluating discriminant validity is important where the constructs are interrelated. Large correlations between the latent constructs (more than 0.80 or 0.90) suggest a lack of discriminant validity. In order to meet discriminant validity requirements, the average variance extracted for two constructs should be greater than the square of the correlation between the constructs.
Endogenous Variable	Sometimes referred to as a dependent variable. Endogenous variables are hypothesised to be *caused* by other variables in a model. This is indicated by arrows pointing to an endogenous variable from another variable. The variance of an endogenous variable can never be completely explained by other variables in a model and therefore have an associated error or residual term to represent the effects of unmeasured causes in the model (Cunningham, 2008) (c.f., and exogenous variable)

Exogenous Variable	Sometimes referred to as an independent variable. Exogenous variables have no hypothesised origin in a model and therefore no direct causal arrows point toward them (c.f. an endogenous variable).
Formative Latent Variable	A formative latent variable has arrows going from the indicator items to the latent variable (c.f., a reflective latent variable)
GFI	Goodness-of-Fit Index (used in assessing model fit)
Indigenous	Originating in and characteristic of a particular region or country; native (often followed by the word "*to")*: *... the indigenous peoples of southern Africa*. (From www.dictionary.com … http://dictionary.reference.com/browse/indigenous)
Latent Variable	A latent variable represents a variable that cannot be directly observed. It can be loosely interpreted as a "factor". In this thesis, a latent variable represents a theoretical construct about the underlying characteristics of an individual in terms of his/her values and entrepreneurial attitude (Kline, 2005). Because a latent variable cannot be observed directly, it cannot be measured directly; thus it must be operationally defined and measured in terms of behaviour believed to represent the particular latent variable (Byrne, 2001). In terms of a latent variable, the measured scores can be produced in terms of responses to particular questions on a survey. These responses which provide "measured scores" are sometimes referred to as observed variables or indicator items (or items).
LISREL	The term, LISREL, is the acronym for an SEM package. LISREL stands for *LInear Structural RELationships*.
Nascent entrepreneur	An individual who does not currently own a business and who intends starting a business in the short term (within the next three years) (see, for example, McGee, Peterson, Mueller, and Sequeira, 2009). They also engaged in the following activities which reinforced their nascent entrepreneur status (McGee, Peterson, Mueller, and Sequeira, 2009): • Were attending a "start your own business planning" program (p. 977) • Participated in workshops that included how to write a business plan and were required to write a business plan, and • Actively engaged in "developing a product or service" (p.977). Further, nascent entrepreneurs were designated as those who had participated in at least two of the following six behaviours currently or in the past: (1) attending a "start your own business planning" seminar or conference, (2) writing a business plan or participating in seminars that focus on writing a business plan, (3) putting together a start-up team, (4) looking for a building or equipment for the business, (5) saving money to invest in the business, and (6) developing a product or service.
Measurement Error	Measurement error is the extent to which observed values are *not* representative of the "true" values of a variable. An observed variable is assumed to contain the "true" level of what is being measured as well as "noise" (see, also, "reliability").
Mplus	Mplus is a statistical modeling program developed by Linda and Bengt Muthen..
Non-Entrepreneur	An individual who has stated that he/she has no intention of starting a business in the immediate future.
Observed Variable	A variable that can be observed directly (and therefore measured directly) such as whether an individual starts a business or not.
PASW	Previously called *SPSS – Statistical Package for the Social Sciences*. In 2009, Version 18 of *SPSS* was renamed *PASW Statistics* (PASW stands for *Predictive Analytics Software*). In 2010, *PASW Statistics* was changed again to *IBM SPSS*.

Parallel Model	A parallel model is a model where all the factor loadings are equal and, thus, each item contributes in an equal way to the latent variable. It is also assumed that the measurement error variances are also equal (c.f., a congeneric model).
Reflective Latent Variable	A reflective latent variable has arrows going from the indicator items to the latent variable (c.f., a formative latent variable).
Reliability	Reliability is the level to which an observed variable measures the "true" value of a variable and the extent to which it is "error free" ("reliability" is the opposite of "measurement error"). It refers to the consistency of measurement and can be conceptualised as that part of a measure that is free of purely random error. In this research, reliability is measured using Cronbach alpha and Coefficient H. Strictly speaking, Cronbach alpha is more appropriate for parallel measurement models. A reliability measure such as Coefficient H is more appropriate for congeneric measurement models.
RMSEA	Root Mean-Square Error of Approximation (used in assessing model fit)
SEM	Structural Equation Modeling (SEM) is a general name for the statistical analysis of Structural Equation Models. Structural Equation Models are models that identify relationships among sets of variables. These can be identified by means of path diagrams. Structural Equation Modeling adopts a confirmatory approach to analysing a specific structural theory associated with a particular phenomenon (Byrne, 2001). Unlike more traditional statistical data analyses, SEM can incorporate both observed and latent variables in an analysis.
SRMR	Standardised Root Mean-square Residual (used in assessing model fit)
Structural Theory	"A *structural theory* is a conceptual representation of the relationship between constructs. It can be expressed in terms of a *structural model* that represents the theory with a set of structural equations and is usually depicted with a visual diagram." (Hair, Black, Babin, Anderson, and Tatham, 2005, p. 845)
Structural Model	"Structural models are referred to by several terms, including a theoretical model or occasionally a causal model. A *causal model* infers that the relationships meet the conditions necessary for causation. … The structural model applies the structural theory by specifying which constructs are related to each other and the nature of each relationship." (Hair, Black, Babin, Anderson, and Tatham, 2005, p. 845)
TLI	Tucker-Lewis Index - somewhat equivalent to the Non-Normed Fit Index (NNFI) (used in assessing model fit).
Validity	Validity refers to the accuracy of a measure. It exists when a measure is a perfect representation of the variable being measured.

Abstract

Various studies have embarked on identifying differences between existing entrepreneurs and non-entrepreneurs. Many of these studies used personality characteristics and demographics to explore these differences but to no avail. The use of attitude theory, however, has shown promise in predicting behavioural tendency differences between existing and non-entrepreneurs. Various questions, however, remain unanswered including ... Whether entrepreneurial attitudes are inherent in nascent entrepreneurs or whether they develop through exposure to business? To what extent do entrepreneurial attitudes develop over time and how are they related to business start-up? To what extent is it possible to develop entrepreneurial attitudes in non-entrepreneurs? If this is possible, are these attitudes sustainable over time that will lead to business start-up behaviours?

In dealing with these unanswered questions, a potentially problematic issue that has been identified with the attitude construct in the psychological literature is that attitudes may not be stable. Thus, attitude toward an object may change. Validated entrepreneurial attitude scales have been developed and deployed; however, most key studies have been cross-sectional and so have not been able to measure whether temporal changes occur.

This research adopts a repeated measures longitudinal approach to measuring entrepreneurial attitude so as to be able to address this issue. In addition, because values are regarded as a relatively stable construct and because values and attitudes are related, this research also examines the values - entrepreneurial attitude - entrepreneurial intentions relationship over time and examines to what extent these contribute toward business start-up behaviour.

The research design employs two groups: one group whose members identified themselves as intending to start a business (referred to as nascent entrepreneurs) and another group whose members stated that they had no intentions of starting a business (referred to as non-entrepreneurs). These two groups were tracked over a four and a half year period with repeated measures taken at T_1 (Baseline), T_2 (one year later after they participated in a one year entrepreneurship training and mentoring intervention), and at T_3 (end-of-study) – which was three and a half years after T_2. There were 329 nascent and 107 non-entrepreneurs at T_1 and 287 nascent and 106 non-entrepreneurs participating in the research at T_3.

All participants were black South Africans, chronically unemployed, and were socially and economically disadvantaged. Thus, a major motivation for starting a business for the

nascent entrepreneur group was out of necessity – they needed to generate a revenue stream to improve their quality of life and/or survive.

Using structural equation modeling, both differences and similarities were detected over time between the nascent entrepreneur and non-entrepreneur group results. Entrepreneurial attitudes and intentions fluctuated while values remained relatively stable. Because attitudes are unstable, the use of entrepreneurial attitudes alone to differentiate between the nascent and non-entrepreneur groups would have been effective at T_1 and T_3 but would have produced spurious results at T_2.

The research contributes to theory by building upon and extending prior research that has mainly been undertaken in a Westernised context so that there is a better understanding of the research constructs and their inter-relationships in a socio-economic disadvantaged context within a developing country,. The research also contributes toward practice in terms of the insights gleaned from the behavioural outcomes identified from immersing nascent and non-entrepreneurs in an intensive entrepreneurship training and mentoring program intervention.

Thesis Declaration

I, Wendy Lindsay, certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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_____26 July, 2012

Wendy A. Lindsay

Acknowledgements

My parents bore five children across three African countries. From an early age both parents instilled in us a sense of adventure, self-belief, and independence. I was taught that anything is possible if you believe in yourself sufficiently and maintain focus through to fulfilment. My sister and three brothers can also claim a share in reinforcing this adventurous and committed spirit in me. I have the fondest memories of family road trips to various Southern African locations to experience and observe the wildlife at first hand, instilling in me a lifelong appreciation for nature. Contrasting these vacations with trips to Europe provided a stark disparity when comparing European and Southern African culture, customs, and the extremes in wealth and poverty observed. These experiences provided a context to implant a sense of enquiry within me that generated the motivations behind the research questions addressed in this research.

It was these cherished, childhood experiences and influences that played a significant role in shaping my character and guiding the chosen paths of my life. These foundations have been catalytic in providing the dream and drive for completing my PhD. Of course, others have provided substance and counsel along the way. Professor Fredric Kropp and Professor Vernon Ireland, my supervisors, are two such people. I thank them for sharing their eclectic perspectives which enhanced my appreciation that there are multiple perspectives on how to view the world – none of which alone can be thought of as "the" way. In mentioning supervisors, I would also like to make a special reference to the late Dr Dennis List, my initial supervisor who commenced the doctoral journey with me, but sadly was unable to see me cross the finish line.

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