



The Relationship of Entrepreneurial Success and Entrepreneurial Resilience: the Philippine Context

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Abstract: The present study investigated the relationship between entrepreneurial resilience, as measured by the Connor-Davidson Resilience Scale (CD-RISC), and entrepreneurial success in the Philippine context. The study likewise validated the factorial structure of the CD-RISC in the context of Filipino entrepreneurs. The results of the study show that the original 25-item and 5-factor framework of the CD-RISC does not hold in the case of Filipino entrepreneurs. Instead, a 1-factor solution was observed. Moreover, after eliminating the items with low factor loadings, the 25-item CD-RISC was reduced to 22 variables. This is primarily because the revised 22-item CD-RISC demonstrated better internal stability and predictability than the original 25-item index – Cronbach alpha is 0.919 in the 22-item index, while cumulative variance is at 37%. By comparison, the Cronbach alpha and cumulative variance in the original framework are only 0.913 and 33.1% respectively. After conducting statistical tests, entrepreneurial resilience, as measured by the 22-item CD-RISC, was found to be strongly and positively associated with entrepreneurial success. The same was found to be statistically significant at 99% confidence level. All other control variables such as age, sex, and status as head of family were found to be statistically insignificant.

Key Words: CD-RISC; entrepreneurial resilience; entrepreneurial success

1. INTRODUCTION

That entrepreneurial resilience leads to entrepreneurial success has been established. London (1993), for example, found that resilient entrepreneurs demonstrate higher threshold for ambiguity, openness to change, and hardiness, which, in turn, equip them with the tools and skills necessary in the success of their companies. Franco et al. (2019), on the other hand, discovered that resilient entrepreneurs are able to use their resources more efficiently in the face of seemingly insurmountable uncertainties; while Manzano and Ayala (2013) noted that resilient entrepreneurs are able to transform their mistakes better from threats to opportunities.

Although primarily a clinical concept, researchers in

business studies have attempted to link the psychological aspects of resilience with entrepreneurship to explain entrepreneurial success. As emphasized by Duchek (2017), to be successful, an entrepreneur must have the ability to overcome critical business-related situations, such as financial crises, market competition, and/or technological innovations. Cannon and Edmondson (2005), meanwhile, argued that since resilient entrepreneurs have learned from previous setbacks, experimented, and made mistakes, they are more likely to be stronger and more likely to be able to adapt to new (and often challenging) circumstances.

Franco et al. (2019), on the other hand, discussed resiliency as a dynamic process. He emphasized that resiliency is a learning process through which

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entrepreneurs gain skills and knowledge to trust their own resources. Franco et al. (2019) noted that entrepreneurs, when they have developed resiliency, are able to mobilize their resources in face of seemingly insurmountable uncertainties. This enables them to impede, decrease, or overcome the difficulties brought about by adversities (Manzano and Ayala, 2013). Manzano and Ayala (2013) further stressed that resiliency enhances an entrepreneur's willingness to learn, which, in turn, allows him to change mindsets so that the same mistakes are not repeated.

Despite these, however, little is known as to what constitutes entrepreneurial resilience. This is a major source of concern considering that majority of the businesses in the country are either sole-proprietorships or SMEs, who rely on a single person, often the entrepreneur, to manage the affairs of their business. Unfortunately, the resulting measures are either reliant on self-reporting and/or have not been extensively validated (Manzano and Ayala, 2013). Nevertheless, from these measures, one instrument has garnered considerable acceptance – the Connor-Davidson Resilience Scale (CD-RISC).

The CD-RISC is a scale which seeks to measure the psychological dimension of an individual's resilience (Connor and Davidson, 2003). It consists of 25 items categorized into five factors. As a scale, the CD-RISC has been tested on clinical and non-clinical studies and has been generally accepted as consistent, predictive, and reliable. Across these studies, however, the factorial framework of the CD-RISC is inconsistent and is heavily influenced by the profile of the subjects. In the study of Franco et al. (2019), for instance, from the original 25-item and 5-factor framework, the CD-RISC was collapsed to only 15 items and three factors.

It is, thus, in consideration of the foregoing that the structure, reliability, and predictive validity of the CD-RISC must be tested from context to context. To the best of knowledge of the Researcher, the CD-RISC is yet to be validated in a study involving Filipino entrepreneurs.

The present paper aims to investigate the relationship between entrepreneurial resilience and entrepreneurial success in the Philippine context.

Specifically, the Researcher seeks to answer this question: "Is there a significant association between entrepreneurial success and entrepreneurial resilience?"

Ancillary thereto, the present study likewise aims to validate the structure of the Connor-Davidson Resilience Scale in the context of Filipino entrepreneurs.

2. METHODOLOGY

2.1 Conceptual Framework

The proposed framework shows the hypothesized relationship between entrepreneurial resilience and entrepreneurial success.

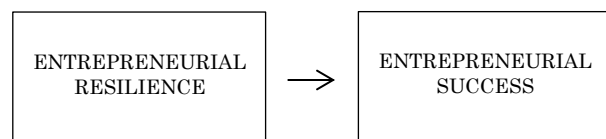


Fig. 1. Conceptual framework

The framework is based on the findings of London (1993) that resilient entrepreneurs demonstrate higher threshold for ambiguity, openness to change, and hardiness. The framework also refers to the findings of Franco et al. (2019), who found that resilient entrepreneurs are able to use their resources more efficiently in times of crises, and of Manzano and Ayala (2013), who noted that resilient entrepreneurs are able to transform their mistakes better from threats to opportunities. It is in this context that the Researcher hypothesizes that entrepreneurial resilience is significantly associated with entrepreneurial success.

The dependent variable in this study is entrepreneurial success. The same was measured following the scale developed by Fisher et al. (2014). The Entrepreneurial Success Index (ESI) scale is comprised of four items on a Likert-type scale. These items consist of "I am successful because – (1) I am personally satisfied with my life and business; (2) I do only that which I want to do in life and business; (3) I continually grow my business; and (4) I achieve the

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business goals I set out to achieve in founding my business. These items were then rated by the respondents on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree). Thereafter, the resulting scores were then averaged to form the ESI.

The independent variable, on the other hand, is entrepreneurial resilience. As discussed, the same was measured using the 25-item Connor-Davidson Resilience Scale.

2.3 Sample

In view of the community quarantine restrictions, the Researcher employed convenience and snowball method in selecting the sample. Specifically, the Researcher sourced the initial respondents from his professional network and thereafter asked the subjects for potential referrals.

In total, the Researcher was able to compile a cross-sectional dataset spanning 60 Filipino entrepreneurs and six indicators to wit – entrepreneurial success, entrepreneurial resilience, age, sex, education, and status as head of family. The latter four indicators served as the control variables.

3. RESULTS AND DISCUSSION

3.1 Exploratory Factor Analysis

Prior to conducting exploratory factor analysis (EFA), the Researcher conducted sphericity and sampling adequacy assumption tests to validate the appropriateness of using EFA. These tests were performed using the statistical software Jamovi.

To test for the sphericity assumption, the Researcher used the Bartlett's Test. Said test compares the observed correlation matrix from the current sample to an identity matrix (where all variables are perfectly uncorrelated with each other). The null hypothesis in the Bartlett's Test is that the observed correlation matrix does not significantly diverge from the identity matrix. In this study, the Bartlett's Test was found to be statistically significant at 99% confidence interval

(see Table 1), indicating that the variables are not orthogonal and, therefore, proper for EFA.

Table 1
Bartlett's Test of Sphericity

χ^2	df	p
762	300	< .001

For sampling adequacy, the Researcher used the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) test. The KMO-MSA is a statistic that measures the proportion of the variance in the variables attributable to one- or a number of underlying factor/s. Generally, values close to one indicate that a factor analysis would be useful. In this study, the overall KMO-MSA is 0.726, indicating that EFA would be proper.

After testing for sphericity and sampling adequacy, the Researcher conducted exploratory factor analysis. EFA is a statistical technique used to reveal any latent factor that may and can be inferred from a specific set of data. In essence, EFA measures to what extent a set of variables can be represented as indicators of an underlying hidden factor.

In determining the number of factors to be extracted, the Researcher employed three methods (1) selecting all components with an eigenvalue greater than one; (2) examining the scree plot; and (3) using the parallel analysis technique.

As regards the first method, an eigenvalue measures how much of the variance in an observed variable is attributable to a latent factor/s. Thus, a factor with an eigenvalue greater than one necessarily accounts for variance from more than one observed variable. In the present sample, only two factors have an eigenvalue greater than one. The EFA, therefore, must be conducted forcing a two-factor solution.

Examining the scree plot, on the other hand, reveals a one-factor solution. In the scree plot method, the number of factors is determined by counting all the components to the left of the "elbow" of the graph. As seen in Figure 2, the slope of the graph started to decrease at factor 2.

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A one-factor solution is likewise supported by the parallel analysis method. In this method, the number of the factors is determined by counting the number of actual eigenvalues that are greater than the eigenvalues of the random data. As seen in Figure 2, only the eigenvalue of factor 1 exceeded the simulated eigenvalue of their corresponding factor. Thus, the EFA must be conducted forcing a one-factor solution.

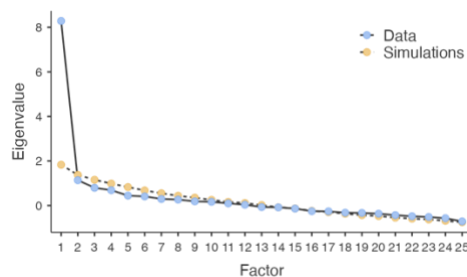


Fig. 2. Scree plot

Withal, the determination of the factor-solution is left to the discretion of the researcher (Fabrigar et al., 1999). Considering that both the scree plot and parallel analysis methods support a one-factor solution, the Researcher deemed it reasonable to adopt the same. This solution is supported by the findings of Burns and Antsey (2010), who, likewise, after running parallel analyses, found a one-factor solution.

Following these analyses, the Researcher conducted EFA by forcing the 25-item CD-RISC into a one-factor solution. The results show that Q3.1, Q3.10, and Q3.20, which correspond to “I am able to adapt to change”, “I give my best effort no matter what”, and “I have to act on a hunch”, have factor loadings less than 0.30. Thus, following the parameters set by Fabrigar et al. (1999) and Manzano and Ayala (2013), Q3.1, Q3.10, and Q3.20 must be excluded in further analyses since they do not load significantly with Factor 1. Factor loading measures the strength of the relationship between an item and a putative factor.

It likewise bears stressing that 0.935, 0.986, and 0.933 of the variances of Q3.1, Q3.10, and Q3.20 are “unique” to them. Nevertheless, a significant portion of the cumulative variance of all items, 33.1%, is explained by Factor 1. This further improves to 37%

once Q3.10, Q3.10, and Q3.20 are excluded. This cumulative variance is comparable to that of the two factor solutions of Faria Anjos et al. (2019), which were computed at 37% and 31%.

When tested using the reliability test, the internal stability of the 22-item index was computed at 0.919 Cronbach alpha (vs. 0.913 if all the 25 items were included). This is significantly higher than the 0.70 threshold generally regarded as acceptable in the literature (Yu and Zhang, 2007; Churchill, 1979) and the 0.89 Cronbach value recorded by Connor and Davidson (2003) in their study. Reliability, in essence, measures the strength of the association of each item with the overall scale.

All things considered, the results of the foregoing tests show that the five-factor structure resilience scale observed by Connor and Davidson (2003) in their pioneer study does not hold in the context of Filipino entrepreneurs. The 25 items categorized into five factors to wit – (1) the notion of personal competence, high standards, and tenacity; (2) positive acceptance of change and secure relationship with others; (3) control; (4) spiritual influences; and (5) trust in one’s instincts, tolerance of negative effect and the strengthening effects of stress – were not observed in the present study. Instead, restructuring the 25-item CD-RISC into 22 items and one factor was considered more ideal.

3.1 Pearson’s Correlation Test

Based on the Pearson’s Correlation Test conducted by the Researcher, sex, education, status as head of family, and entrepreneurial resilience are all positively associated with entrepreneurial success. Of the four variables, however, only entrepreneurial resilience exhibited strong association with entrepreneurial success, while age, sex, education, and status as head of family exhibited weak associations. It bears stressing that only the association between entrepreneurial success and entrepreneurial resilience is significant at 99% confidence level. Education, likewise, is significant but only at 95% confidence level. With respect to the associations between sex, age, and status as head of family, on one hand, and entrepreneurial success on the other, since said associations were found to be

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statistically insignificant, no inference can be made about the population from the current sample.

Noteworthy, age was found to be negatively associated with status as head of family. The association is significant at 99% confidence level.

4. CONCLUSIONS

Through the course of this research, the following were established:

First, the original 25-item and 5-factor framework of the CD-RISC does not hold in the context of Filipino entrepreneurs. Instead, a 22-item and 1-factor framework was observed. In particular, items Q3.1, Q3.10, and Q3.20 were removed due to low factor loadings. These items correspond to “I am able to adapt to change”, “I give my best effort no matter what”, and “I have to act on a hunch” respectively. After removing said items, the internal stability of the index improved from 0.913 to 0.919 and cumulative variance from 33.1% to 37%.

Second, as established through the Pearson Correlation Test, entrepreneurial resilience is strongly and positively associated with entrepreneurial success ($r = 0.848$). Said association was found to be significant at 99% confidence level. In addition, education was likewise found to be positively associated with entrepreneurial success at 95% confidence level. These findings support the postulation of Franco et al. (2021) and Manzano and Ayala (2003) that resilient entrepreneurs demonstrate higher threshold for ambiguity, openness to change, and hardiness, which, in turn, equip them with the tools, skills, and dexterity necessary in pursuing entrepreneurial success.

Although the findings of the instant research may be considered reliable, there are certain undertakings that may be done to further strengthen its reliability. Two of such undertakings are increasing the sample size (with the end view of further improving the sample adequacy score) and shifting to a more random sampling method. The Researcher likewise recommends exploring other indicators and measures for entrepreneurial success and entrepreneurial

resilience.

As regards the CD-RISC, the Researcher recommends diversifying the survey questions to remove/decrease response bias. Noteworthy, all the questions in CD-RISC are couched in positive terms, which may induce the respondents to answer in a certain way. The lack of negative questions also precludes the Researcher from ascertaining whether the respondents answered the survey truthfully or merely did the same randomly. As applied in the Philippine context, the Researcher likewise recommends including items in the CD-RISC which are considered to be distinctively Filipino.

5. ACKNOWLEDGMENTS

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