

## **A Dyadic Test of Trait Impact on Nascent Venture Performance: Where Owner Characteristics are in Cahoots with Organizational Characteristics in a Longitudinal Study.**

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### **Abstract**

This comprehensive study aimed to test the combined impact of individual entrepreneur and organizational traits on Nascent Venture Performance. The study focused on a panel of business cohorts founded in the United States of America in 2004, a context particularly relevant to entrepreneurship and business management. The study found that while Founding Owner-Operator characteristics and Business Demographics impacted Nascent Venture's Performance in two of the four years under study, the combined effect of the two traits on Nascent Venture's Performance lasted longer. This suggests that when individual and organizational characteristics are aligned, they could sustain nascent venture survival and performance for a relatively more extended period. The study's findings have significant implications for both trait theory and the resource-based view. Personal and organizational traits constitute a mix of unique resources that can ensure the survival and competitiveness of nascent ventures, providing valuable insights for entrepreneurs and business managers. These insights can be directly applied to improve the performance and survival of nascent ventures, making the study's findings highly relevant to the reader's interests.

**Keywords:** Owner-Characteristics, Business-Demographics, Venture Performance, Trait Theory, Resource-Based View.

### **1. Introduction and Identification of Gap**

Previous studies have consistently shown that individual characteristics of entrepreneurs can influence nascent venture performance (Delmar & Shane, 2006; Schaper et al., 2007). Similarly, there is evidence in the literature that organizational characteristics play a role in nascent venture performance (Delmar & Shane, 2006; Kauermann et al., 2005). However, this study takes a unique approach by examining the impact of traits on nascent venture performance from two combined dimensions: the individual entrepreneur traits and the organizational traits dimensions. This novel perspective on trait theory, a first in the literature, significantly contributes to the field by addressing the research gap in understanding the combined impact of individual and organizational traits on nascent venture performance. This study's unique approach and its significant contribution to the field make it a must-read for our readers. In this study, the individual level of trait is captured by Founding Owner Operator Characteristics, and at the organizational level, by Business Demographics (Aldrich & Waldinger, 1990; Carter, 2002; Delmar & Shane, 2006; Kuratko, 2005; Psaltopoulos et al., 2005; Robb, 2002; Shane & Cable, 2002; Verheul & Thurik, 2001).

Aldrich (2000), Frank, Lueger, and Karunka (2007), and Sandberg and Hofer (1987) have pointed out that entrepreneur personality factors by themselves hardly consistently impact nascent enterprise performance. Hence, this research examines the combined impact of individual and organizational characteristics on nascent venture performance in a longitudinal study to gauge consistency over time and the degree of significance of their combined impact on nascent venture performance compared to their individualized effects.

#### **1.1. Conceptual Model**

The framework of analysis in this study is to test the impact of individual entrepreneur traits (in the form of Founding Owner Operator Characteristics) and organizational traits separately (in the form of Business Demographics) on nascent venture performance within the first four years of business existence, and then

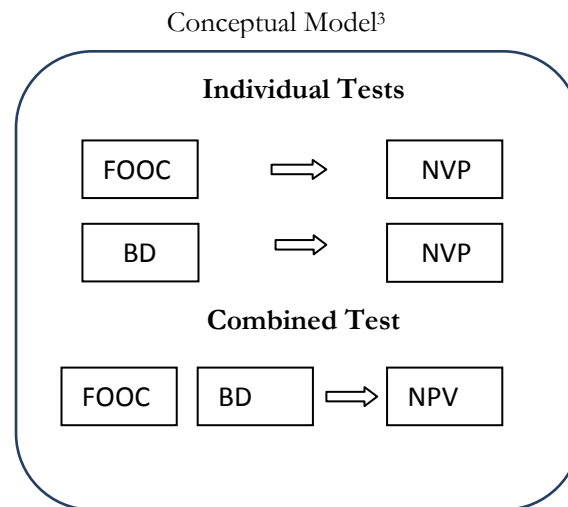
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juxtapose the results with the result of a combined test of the impact of Founding Owner Operator Characteristics and Business Demographics on Nascent Venture Performance.

See Figure 1 below



## 2. Literature Review and Hypotheses Development

### 2.1 Founding Owner Operator Characteristics

Founding Owner Operator Characteristics are captured in the study by the nascent entrepreneur's highest level of education (Romijn & Albaladejo, 2002), prior industry experience (Romijn & Albaladejo, 2002), conscientiousness (indicated by the average number of hours a founding-owner operator invests in the business per week) (Erikson, 2002; Loscocco & Leitch, 1993); reputation (surrogated by use of credit card for business) (Marsh, 1994; Podolny, 1994); age (Rai, 2008); gender (Minniti et al., 2005; Wagner, 2007) and ethnicity (Aldrich & Waldinger, 1990; Lee & Peterson, 2000).

The nascent entrepreneur's levels of education (Romijn & Albaladejo, 2002) and prior industry experience (Duchesneau & Gartner, 1990; Audia & Rider, 2005) tend to impact the nascent entrepreneur's skills, attitude, access to social capital and finance (Bates, 1990). Age affects the entrepreneur's risk-taking propensity (Rai, 2008; Cowling & Taylor, 2001; Fairlie, 2004; Reynolds et al., 2003), while industry experience and emotional stability influence the general competence of a nascent entrepreneur. The existence of positive strands of these personal factors in the fabric of a nascent entrepreneur's characteristics is likely to result in successful business founding.

Furthermore, the hours that a nascent entrepreneur pumps into a new venture (Burch, 1986) shows the entrepreneur's commitment level (Erikson, 2002), diligence (Schein, 1987; Marcati et al., 2008) and propensity to innovate (Marcati et al., 2008). The gender of an entrepreneur tends to affect the entrepreneur's risk-taking tendency (Minniti et al., 2005; Wagner, 2007), and risk and return are positive correlates. However, the literature suggests that men are more risk-takers than women (Eckel & Grossman, 2003). Ethnicity does influence the ability to set up a business and raise capital through ethnic social networks (Aldrich & Waldinger, 1990; Lee & Peterson, 2000). A review of the literature on owner characteristics suggests that the selected indicators of the Founding Owner Operator Characteristics construct are apt and adequate to capture a novel profile of the nascent 'entrepreneurial man.' Relying on the above-reviewed literature, we hypothesize that:

*Hypothesis H<sub>1</sub>: Founding owner-operator Characteristics do impact nascent venture performance.*

### 2.2. Business Demographics

Business demographics are the other dimension of this study. It is captured by the nature of product offering (Brentani, 1991), business location (Folta et al., 2006; Schutjens & Wever, 2000); number of active owners involved in running a nascent business's operation (Harper, 2008; Sethi et al., 2002); business legal form (Berger & Udell, 1995; Kauermann et al., 2005) and technological orientation (Schutjens & Wever, 2000; Wagner, 1984). The theory of population ecology (Hannan & Freeman, 1986) suggests that the distinguishing demographics of businesses in an organizational eco-system are symptomatic of organizational traits (Brush et al., 2008; Delmar &

<sup>3</sup> FOOC: Founding Owner Operator Characteristics  
NVP: Nascent Venture Performance  
BD: Business Demographics

Shane, 2006; Kauermann et al., 2005) and could impact nascent venture performance just as individual characteristics impact nascent venture performance.

Product classification is an important trait that affects nascent venture business strategy. Product-nature can be classified as either services or goods, durable or non-durable products, and industrial or consumer products. These classifications have implications for capital requirements, the ability to standardize products, patentability, inventory management, and location strategy. The differences between the attributes of services and goods pose challenges to the performance of nascent ventures and mature firms (Brentani, 1991).

The resource-based view has emphasized the importance of the choice of location in influencing the performance of gestating firms (Schutjens & Wever, 2000). It implies visibility, brand image, customer convenience, accessibility, and capacity. The geographical location of businesses is known to affect a firm's competitive position (Folta et al., 2006). The number of active owners involved in a nascent venture's day-to-day operations could impact its performance. The individual entrepreneur paradigm suggests that a sole owner-manager is critical in ensuring a new venture's success. According to this perspective, the individual's aptitude and attitude drive opportunity recognition, evaluation, and exploitation (Harper, 2008) and the ability to innovate (Casson, 1982).

On the other hand, the team view advocates that joint effort is more productive (Chowdhury, 2005; Harper, 2008) than individual effort and is more likely to result in a more successful founding and management of a business start-up (Weinzimmer, 1997). Groupthink, dysfunctional conflict, and shifting responsibility by individual team members could diminish team commitment and the effectiveness of a nascent enterprise (Chowdhury, 2005).

Legal status is another business demographic impacting innovation (Lee, 2003). Lee (2003) found that private and publicly listed limited liability companies tended to innovate more than sole proprietorship and partnership firms. Many scholars might think that technological orientation, as a business demographic, would catapult nascent venture performance. However, studies have found this trait can be a double-edged sword (Schutjens & Wever, 2000). There is a weak linear relationship between technological orientation and nascent venture performance (Wagner, 1984). High technology can amplify the performance of a business through enhanced innovation, leading to revenue growth (Thornhill, 2006), but can simultaneously increase business risk, potentially leading to failure. Kakati (2003) found that the performance of low-technology businesses is primarily dictated by entrepreneur quality, multiplicity of resource-based capability, and competitive strategy. Thus, depending on other factors, technology orientation impacts venture performance. With compelling evidence in the literature, we hypothesized that:

H<sub>2</sub>: Business Demographics do impact nascent venture performance.

Though previous studies have demonstrated that Founding Owner Operator characteristics (Dzathor et al., 2013) and Business Demographics (Dzathor, 2013) do have some impact on Nascent Venture Performance over time, there is no evidence found in the literature of studies that have sought to examine the combined impact of Founding Owner Operator Characteristics and Business Demographics on Nascent Venture Performance; scrutinizing the robustness and consistency of their combined impact over time. With this question in mind, we hypothesized that:

*H<sub>3a</sub>: The combined effect of Founding Owner Operator Characteristics and Business Demographics on Nascent Venture Performance will be more significantly robust than the impact of Founding Owner Operator Characteristics and Business Demographics on Nascent Venture Performance.*

*H<sub>3b</sub>: The combined effect of Founding Owner Operator Characteristics and Business Demographics on Nascent Venture Performance will be more consistent over time than the separate impact of founding owner-operator Characteristics and Business Demographics on nascent venture performance over the same period of years.*

### 3. Methodology

The study is not only longitudinal but also employs a passive nomothetic and a general approach (Luthans & Davis, 1982), focusing on a panel of business cohorts founded in the United States of America in 2004. Analysis was done at the individual firm level. The general approach permitted us to collect data repeatedly on a group of entities without attempting to manipulate other potential extraneous variables. Thus, the researchers could test theories about causal relationships (Dwyer, 1983) when it was impossible to experiment. The nomothetic dimension injected more scientific objectivity into the study by emphasizing general, group-centeredness and facilitated quantitative techniques (Luthans & Davis, 1982; Scandura & Williams, 2000).

Data was sourced from the first four years of the Kauffman Firm Survey (KFS) panel dataset. The KFS is a high-quality panel data collected, cleaned, and organized by a reputable professional research firm, Mathematica Policy Research Inc. (MPR), at the behest of the Kauffman Foundation to support more robust scholarly inquiry into business evolution in the United States of America. Some of the variables and data used in the current research were directly adopted from the original (KFS) dataset. In contrast, others were distilled from existing variables in the KFS dataset by either computing or summing up relevant fragmented variables.

### 3.1 Variables

Table 1 lists the variables used in the study by category. The study involves two latent predictor variables and one latent outcome variable. The predictor latent variables are Founding Owner Operator Characteristics and Business Demographics. Each latent variable has its indicator variables listed under it. Apart from Owners' years of experience, founders' average age, the average number of hours owners spend running their businesses, and the average number of founders actively running nascent businesses, the remaining eight indicator predictor variables are categorical. All the categorical variables have been converted into dichotomous dummy variables to facilitate meaningful statistical analysis.

Table 1

Variables

Constructs	Latent Variable		
	Predictor Variables		Criterion Variable
	FOOC <sup>4</sup>	BD <sup>5</sup>	NVP <sup>6</sup>
Indicator Variables	Highest Level of Education	Product classification	Return on Capital Employed,
	Years of Experience	Business Location	Profit Margin,
	Commitment (Number of hours spent in running the business per week)	Number of active Owners	Return on assets
	Reputation	Business Legal Form	Sales to Expenses ratio
	Age	Technological Orientation	
	Gender		
	Ethnicity		

### 3.2 Sampling

The targeted size for the baseline Kauffman Firm Survey was 5000 new businesses established in 2004. This was to be composed of 3,000 high and medium-technology businesses and 2,000 non-technology businesses. The achieved sample size was 4,928 new firms. This amounted to a 99% achieved response rate. According to Dun & Bradstreet records, the sample frame constitutes 2% of all businesses started in the USA in 2004. This is a reasonably representative sample frame. Many sample units contained missing data, so we cleaned the KFS data by eliminating participant firms with missing data and finally arrived at 862 sample units without missing data (Hair et al., 2010). Nevertheless, this number is reasonably adequate to allow meaningful inferential statistical analysis. The remaining cleaned data was subsampled proportionally to retain the original sample's stratification to arrive at the analysis sample and to utilize nearly all the remaining sample units that do not have missing data in the analysis sample as much as possible.

<sup>4</sup> FOOC: Founding Owner Operator Characteristics (individual traits)

<sup>5</sup> BD: Business Demographics (organizational traits)

<sup>6</sup> NVP: Nascent Venture Performance

To maintain the original sample stratification, all 17 women-founded high-technology firms, all 40 women-founded medium-technology firms, and 80 women-founded low-technology firms that remained without missing data after the data cleaning exercise were retained in the analysis sample. Random sampling was then employed to select 92 out of the remaining 131 male-founded high-technology businesses, 162 out of the remaining 205 men-founded medium-technology businesses, and 362 out of the remaining 390 men-founded low-technology businesses that respectively contained no missing data. This resulted in 754 (88%) of the sample units without missing data being included in the final analysis sample (See Table 2 below).

#### Maintenance of Original Sample Structure in Sub-Sample for Analysis

Original Sample Stratification			Number of sample units remaining after cleaning	Post-Cleaning Subsample Stratification	
Original code	Sample stratum	Percentage of the original sample		Number of firms selected for analysis	The percentage each selected stratum constitutes of the analysis sample
101	Hi-tech women	2.01	17	17	2.2
102	Hi-tech men	12.2	131	92	12.2
201	Medium-tech women	5.5	40	40	5.3
202	Medium-tech men	21.5	205	162	21.5
301	Low tech women	10.5	80	80	10.6
302	Low-tech men	48.3	390	362	48
Total		100	862	754	100

### 3.3 Data Analysis

All the metric variables in the analysis sample were tested to ensure they satisfied assumptions underlying multivariate data analysis techniques. These assumptions are data distribution normality, homoskedasticity, linearity of the data, and absence of co-linearity among variables in the study (Hair et al., 2010; Mendenhall & Sincich, 2003). All the assumptions were pretty met. Histograms of the metric variables were fitted with bell curves, and they showed normal distribution with skewness within  $\pm 1$  and kurtosis within  $\pm 3$ . Test of homoskedasticity and linearity was conducted by plotting the standardized residuals (ZRESID) as the dependent variable against the standardized predicted values (ZPRED) as the independent variable for all four years, and they generally clustered within  $\pm 3$  standard scores from the zero mean with a few outliers (Hair et al., 2010; Mendenhall & Sincich, 2003). Thus, the data exhibited a fairly robust homoskedasticity and linearity.

Multiple regression analysis was conducted in line with the conceptual model presented above by first independently testing the significance of the Founding Owner Operator Characteristics and Business Demographics. This was followed by a combined test of Founding Owner Operator Characteristics and Business Demographics to measure their impact on Nascent Venture Performance. The results are presented below.

## 4. Results

Tables 3, 4, and 5 summarize the impact of FOOC (Table 3), BD (Table 4), and the combined effects of FOOC and BD (Table 5) on NVP, respectively.

### 4.1 Results of Test of Hypothesis H<sub>1</sub>

Hypothesis H<sub>1</sub> was supported in the first and the fourth year of existence of the cohort of nascent businesses that started operating in the United States of America in 2004 but not in the intervening two years in between. This means FOOC significantly influenced NVP in only Year 1 and Year 4. In the two periods, we had

significant F-statistics, respectively. In year 1, the F-statistic was 2.856 ( $p = .006$ ) and stood at 5.481 ( $p = .000$ ) in year 4 (see Table 3 below).

Table 3  
Impact of Owner Characteristics on Nascent Venture Performance

	Model Summary		F- Test	
	R-Squared	Adjusted R-Squared	F	Significance
Year -1	.026	.017	<b>2.856</b>	<b>.006</b>
Year-2	.006	-.003	.638	.724
Year-3	.011	.000	1.076	.437
Year-4	.049	.040	<b>5.481</b>	<b>.000</b>

#### 4.2 Results of Test of Hypothesis H<sub>2</sub>

Hypothesis Ha<sub>2</sub> was supported in years two and four but not in years one and three. Thus, BD generally influenced NVP in years two and four but not in years one and three. This is presented in Table 4 below. The F-statistic of the impact of BD on NVP was respectively 3.483 ( $p = .004$ ) in year 2 and 2.295 ( $p = .044$ ) in year 4.

Table 4.  
Impact of Business Demographics on Nascent Venture Performance

	Model Summary		F- Test	
	R-Squared	Adjusted R-Squared	F	Significance
Year -1	.009	.002	1.296	.263
Year-2	.023	.016	<b>3.483</b>	<b>.004</b>
Year-3	.009	.002	1.356	.239
Year-4	.015	.009	<b>2.295</b>	<b>.044</b>

#### 4.3 Results of Test of Hypothesis H<sub>3a</sub>

Hypothesis Ha<sub>3a</sub> was not supported. Even though the combined test was significant in three out of the four years under consideration, the significance level was less robust than the respective significant tests of FOOC and BD tests in the first two years alternatively. In year 4, all three tests were significant, and the Combined Test was more significant than the BD Test but less significant than the FOOC Test. See Table 5.

Table 5:  
Comparative F Tests

Year	Comparative F tests					
	FOOC Test		BD Test		Combined Test	
	F	Significance	F	Significance	F	Significance
Year -1	<b>2.856</b>	<b>.006</b>	1.296	.263	<b>1.936</b>	<b>.027</b>
Year-2	.638	.724	<b>3.483</b>	<b>.004</b>	<b>1.791</b>	<b>.046</b>
Year-3	1.076	.437	1.356	.239	1.050	.400
Year-4	<b>5.481</b>	<b>.000</b>	<b>2.295</b>	<b>.044</b>	<b>3.824</b>	<b>.000</b>

#### 4.4 Results of Test of Hypothesis H<sub>3b</sub>

Ha<sub>3b</sub> was supported in that the Combined Test was more significant for a more extended period than the individualized tests of the predictor constructs. Thus, FOOC and BD simultaneously influenced NVP in years 1,

2, and 4 but not in year 3. The F-statistic for year 1 was 1.936 ( $p = .027$ ). It stood at 1.791 ( $p = .046$ ) in year 2 and was 3.824 ( $p = .000$ ) in year 4 (see Table 5 above and Table 6 below).

Table 6  
Combined Impact of FOOC and BD on NVP

	Model Summary		F- Test	
	R-Squared	Adjusted R-Squared	F	Significance
Year -1	.031	.015	<b>1.936</b>	<b>.027</b>
Year-2	.028	.013	<b>1.791</b>	<b>.046</b>
Year-3	.017	.001	1.050	.400
Year-4	.059	.043	<b>3.824</b>	<b>.000</b>

## 5. Discussion

Founding Owner Operator Characteristics alone, on its own, appear to influence Nascent Venture Performance, but inconsistently over time. It positively affected Nascent Venture's Performance in year 1 but did not have any effect again till year 4. Among its indicator variables, owner industry experience (Audia & Rider, 2005; Cooper & Dunkelberg, 1986; Duchesneau & Gartner, 1990) and level of owner educational attainment (Evans & Leighton, 1989; Romijn & Albaladejo, 2002) appeared to be the only critically important influential personal factors that positively influenced Nascent Venture Performance (Colombo & Delmastro, 2001) in the first year of existence as per their t-tests. Industry experience seems to be a crucial success factor in year 1, even though the owner's level of education also played an influential role in nascent venture performance in year 1 (Dzathor et al., 2013).

Business Demographics influenced Nascent Venture Performance in only years 2 and 4. Among the Business Demographics indicator variables, technological orientation was positively significant in Year 1, while it tested negatively significant in Year 2. This seems to support the assertion by Schutjens and Wever (2000) that it could be a double-edged sword. In the same model, business legal status was positively significant in only year 2, while the nature of product offerings tested positive in year two and year 4 (Dzathor, A.Y. (2013).

Combining Founding Owner Operator Characteristics and Business Demographics in a single model improved their longitudinal impact on Nascent Venture Performance. While Founding Owner Operator characteristics and Business Demographics respectively impacted Nascent Venture's Performance in two years each out of the four years under study, their combined effect on Nascent Venture's Performance was in three out of the four years. This implies that when individual and organizational characteristics are aligned, they could sustain nascent venture survival and performance for a relatively extended period. Surprisingly, none of the three tests were significant in year 3, whether an individual predictor construct test or the combined test. Year 3 can be considered an outlier year, as it marked the beginning of the recession that hit the United States in 2008 and spread to the rest of the world.

The United States National Bureau of Economic Research (NBER) determined that the 2008 recession (Blundell-Wignall & Atkinson, 2008) officially commenced in December 2007 (Greenlaw et al., 2008; Wall Street Journal, 2008). Therefore, if year three is expunged out of the temporal order of the study, then it can be surmised that the Combined Test virtually was significant throughout the study period and, therefore, emphasizes the importance of the alignment of owner and organizational characteristics in ensuring the longevity of an infant business.

### 5.1 Contributions of the Study

The study has significantly added to the relatively scanty knowledge in the literature on nascent entrepreneurship (Davidsson & Honig, 2003; Ripsas, 1998; Wennekers & Thurik, 1999) by highlighting the combined longitudinal effect of owner and organizational characteristics on nascent venture performance. It also draws scholars' attention to the fact that trait theory can be perceived at the individual and organizational characteristics levels and that both sets of traits complement each other. The study also points out the theoretical and managerial implications of the findings.

### 5.2 Theoretical Implications

The study has contributed to theory building and testing in the management literature. The study findings have exciting implications for both trait theory and the resource-based view. The results reinforced the literature

that personal traits (Aldrich & Waldinger, 1990; Delmar & Shane, 2006; Kuratko, 2005; Kim & Kim, 2000; Marcati et al., 2008; Psaltopoulos et al., 2005) and organizational traits (Brush et al., 2008; Delmar & Shane, 2006; Kauermann et al., 2005) do influence nascent venture performance. The results also confirmed earlier findings under the trait stream that individual traits do not consistently influence venture performance (Begley & Boyd, 1987; Davidsson & Honig, 2003; Kim et al., 2003; Reynolds, 1997; Wagner, 2004) on their own alone, except in combination with other factors. The same applies to organizational traits as well. Individual traits and organizational characteristics can be placed under the resource-based view. This is because a unique blend of entrepreneur and organizational characteristics that are valuable, rare, inimitable, and non-substitutable can potentially give a nascent venture a comparative advantage (Wernerfelt, 1984).

### 5.3 Managerial implications

The key managerial implication of this study is that would-be entrepreneurs devising a business strategy for a startup enterprise must choose a model of organization that is in sync with their attributes to enhance the chance of the sustainability and growth of the business over time.

### 6. Limitations of the Study

As usual in social sciences research, the results could have been tinged to some extent by sampling and non-sampling errors. However, the sizeable final analysis sample size of 754, coupled with the effort to retain the original stratification proportions and the use of randomization in filling sample strata containing more extensive clean data, mitigated the potential adverse effect of convenience sampling.

### 7. Future Research Direction

The study has several implications for nascent venture performance and trait theory research streams. The study can be replicated using other indicator variables for owner and organizational characteristics. Individual and organizational traits can be combined with other constructs, such as innovation or financial structure, to gauge the moderating effect of additional variables or their combined effects on nascent venture performance. This is particularly relevant when Aldrich (2000), Frank, Lueger, and Karunka (2007), and Sandberg and Hofer (1987) have argued that individual traits do not, on their own, consistently influence venture performance.

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