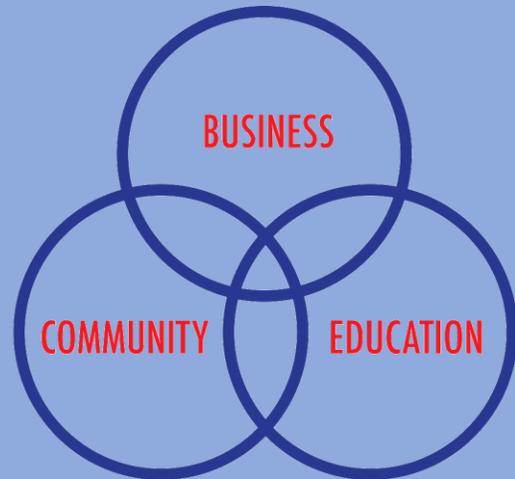


2021

Small
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45th Annual Academic Conference

February 25-26

"Merging history and innovation through small business"

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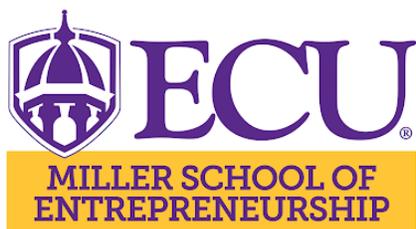
Innovative Pedagogies

SBI Best Practices

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February 25-26, 2021



From the *Proceedings* Editor

It is my pleasure to welcome you to the 45th Small Business Institute® Annual Academic Conference!

Each year, we are honored to receive a wonderful collection of submissions to the SBI Annual Conference. This year is no exception, as you will see in the Competitive Papers and Abstracts, Innovative Pedagogy presentations, SBI Best Practices, Roundtables, and Workshops being presented at this year's conference. You, our members, are the reason the 2021 volume of the Proceedings is such a high-quality publication. The time and effort you invest into research and other small business and entrepreneurial projects makes the SBI what it is and allows this conference to showcase the great work being done in our area. I hope you enjoy reading these Proceedings. I believe there are projects and pages that both explore under-researched areas and discuss new research and teaching approaches. I enjoyed reading them and I hope you will as well.

The publication of these Proceedings would be impossible without you, the SBI members. Your hard work and diligence cannot be applauded enough and is critical to the continued success of SBI. I would personally like to thank those who reviewed the many papers, abstracts, projects, and other submissions received this year. Your insightful feedback and thoughtful comments are highly valued by authors and help to create the friendly and supportive research culture that the SBI is famous for.

Finally, thank you to the SBI Board for the countless hours you all spend making our conference happen, and specifically for making the Proceedings successful. I would like to personally thank Michael Harris, Jeffrey Jones, and LeAnne Coder for their expertise and patience in guiding me through this process, and the rest of the Board for their efforts in supporting and developing this unique organization.

We are glad you're here!

A handwritten signature in black ink, appearing to read "Dennis Barber III".

Dennis Barber III
Vice President of Programs, Elect

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Competitive Papers

Strategies for Rural Small Startup Business Success

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Steve Roussas, Adjunct Faculty, Grand Canyon University

Abstract

Small business owners with unsuccessful startup strategies can negatively impact business sustainability. Small business owners are concerned about startup strategies because 50% of new, small business owners fail within the first 5 years of operation. Grounded in the systems theory, the purpose of this qualitative multiple case study was to explore the strategies of 4 rural, small startup business owners in Tennessee, who were able to prevent closure within the first 5 years of operation. The selected participants implemented strategies to avoid business closures successfully. Data were collected using semistructured face-to-face interviews and reports published by the Center for Rural Affairs, U.S. Economic Development Administration, U.S. Small Business Administration (SBA), and Service Corps of Retired Executives. The 3 themes that emerged from the thematic analysis were business owners' skills and knowledge of marketing, sales and inventory, and employee retention. A key recommendation for small business owners is to implement continuous marketing training, set sales metrics, create inventory goals, and provide employees a positive work environment to remain open beyond the first 5 years of operation. The implications for positive social change include the potential to create new jobs, increase employee job security, enhance living standards, and increase property value and government tax revenue to provide better services to the community.

Key Words: sustainability, small business, startup, strategies

Purpose

Some rural, small startup business owners in Tennessee lack strategies to prevent closure within the first 5 years of operation. As a result, the purpose of this qualitative study was to explore the strategies some rural, small startup business owners in Tennessee used to prevent closure within the first 5 years of operation. The target population consisted of rural, small startup business owners in the Tennessee region who used strategies to prevent closure successfully. The implications for positive change included the possibility to create new jobs, motivate investors, and increase property values and government tax revenue to provide better services. The research question that drove our research was, what successful strategies do rural, small startup business owners in Tennessee use to prevent closure within the first 5 years of operation?

Framework

The systems theory was used as the framework to explore strategies that some rural, small startup business owners in Tennessee used to prevent closure within the first 5 years of operation. In general, systems theory helps explain a phenomenon (Dominici & Levanti, 2011). Systems theory describes how the overlapping parts of a system function as a whole (von Bertalanffy, 1950). Researchers use the theory to identify interdependencies in a system instead of addressing only individual trends (Turner & Endres, 2017). Researchers also use the theory to

analyze the information when limited information is available (Rousseau, 2015). For business, researchers use systems theory to assess the interrelation, mutual influence, and dynamics of the relationship among a business's operations functions (Cross & Barnes, 2014). Systems theory provides the means to analyze the cause and effect by examining the principles, concepts, laws, regulations, and behaviors as complex interdependent parts of the business as a whole (Katina, 2015). Understanding the interrelated aspects of a business helped examine different strategies that rural, small startup business owners implemented to prevent closures.

Researchers also use systems theory to explain how the environmental aspect affects business profitability (Schneider, Wickert, & Marti, 2016), as administrators manage different internal and external environmental circumstances. Business owners/leaders need to gain knowledge of the organizational resources and dynamic resources to develop successful strategies (Del Giudice, 2017). With systems theory, small, rural business leaders can better understand how to assess external and internal factors affecting businesses from long-term commerce (Del Giudice, 2017). Considering all the aspects of a company, such as understanding stakeholders, could contribute effective strategies to help rural, small startup business owners prevent closure.

Literature Review

Small business startup owners face many challenges at the time to enter the highly competitive marketplace, leading to a failed startup within a short period (Turner & Endres, 2017). Fifty percent of new, small business owners fail within the first 5 years of operation (U.S. SBA, 2019). The systems theory was used as the framework to explore the strategies. In general, systems theory helps explain a phenomenon (Dominici & Levanti, 2011). For business, researchers use systems theory to assess the interrelation, mutual influence, and dynamics of the relationship among the operations functions of a company (Cross & Barnes, 2014). Systems theory provides the means to analyze the cause and effect by exploring the principles, concepts, laws, regulations, and behaviors as complex interdependent parts of the business as a whole (Katina, 2015). Understanding the interrelated components of business helped examine different strategies that rural, small startup business owners implemented to prevent closures.

Sustainability development theory is a theory to address the needs and wants of generations without taking into consideration how the needs and wants will affect future generations (Desjardins, 2016). Sustainability development theory differs from systems theory because researchers use sustainability development theory to concentrate on isolated elements of the systems instead of the system as a whole. Business managers use sustainability development theory to develop the primary characteristics of the business to attain sustainability (Darcy, Hill, McCabe, & McGovern, 2014). Small business owners use the sustainability development theory to improve performance (Mcphee, 2014).

Complexity theory is a theory in which scholars focus on different parts of many systems (Axelrod, 1999). Applying complex systems models to strategic management leads to efficient sustainability solutions, and complexity theory integrated with small businesses improves business trust and promoted accountability (Hand & Mckelvey, 2016). Creating a culture of confidence with organizations' stakeholders becomes an indicator of the business owners' capability to operate effectively, efficiently, and prepare for sustainability (Hand & Mckelvey,

2016). In the same manner of systems theory, complexity theory can assist researchers in understanding how the systems work and the importance of understanding each part of the business's capabilities.

Lorenz (1963), who is considered the founder of chaos theory, explained the important effects of small changes input in productivity. Researchers use chaos theory's mathematical capability to evaluate trends and systems under complex situations (Lorenz, 1963). Yas, Ali Termizi, Talif, and Kaur (2017) also noted how chaos theory uses the butterfly effect to illustrate the phenomenon. The butterfly effect is a representation that demonstrates how minor parts of a system spread evenly can cause a significant impact within an organization (Yas et al., 2017). Small business owners may use chaos theory to make organizational decisions for internal and external situations affecting the organization.

According to the U.S. SBA (2019), owners of a firm who employs from one up to 500 employees have a small business. However, there is not one singular definition for the small business owner. Additionally, the population size of a region determines the status of rural, micropolitan, and metropolitan cities (Brown, Goodin, & Talbert, 2017).

In rural areas, managers need to recognize the lifestyle characteristics of communities to understand business and to recruit suitably talented staff (Oluwatayo & Rachoene, 2017). Rural community residents' primary market identification characteristic is the lack of educational opportunities and the low-income population (Sadler, Akister, & Burch, 2014). Businesspersons should understand purchasing power and the possibilities to identify needs affordable for rural consumers' regions (Sarkar et al., 2016). Small business administrators' marketing knowledge deficiency affects the opportunity to develop advertising to encourage consumers within the community and address consumers' desires (Alford & Page, 2015).

Population and Sampling

We used purposeful sampling to select the population for this study to attain the knowledge from a subset of rural, small startup business owners in Tennessee, who used strategies to prevent closure within the first 5 years of operation successfully. The sample size of the study included four rural, small startup businesses in Tennessee from one rural area. The criteria we used to select the participants included individuals with direct experiences in implementing the strategies. We contacted the participants via telephone to determine if the owners met the criteria to share successful strategies to prevent closures within the first 5 years of operation. Each interview site was in a relaxed, convenient place at a beneficial time, so participants were free to answer the semistructured questions below.

Interview Questions

1. What strategies did you use to prevent closure within the first 5 years of operation?
2. What strategies did you use to overcome the difficulties you encountered to prevent closure?
3. What strategies did you use to attract and retain customers to prevent closure?
4. How did you use strategies to improve your relationship with your customers?

5. How did you use strategies to align your main business services?
6. How did you use strategies to anticipate and address market changes?
7. How did you use strategies to retain employees?
8. How did you assess the effectiveness of your strategies to prevent closure?
9. What additional information can you provide to help me better comprehend the strategies you use to prevent closure within the first 5 years of operation?

Data Collection

Conversely, the participants selected a suitable location for the interview. We asked all participants the same questions in the same order, providing detailed explanations to questions if needed. Microsoft Surface Pro and cellphone were used to record and create an audio record of the interview to facilitate the transcription. We provided detailed explanations to questions if needed. We also requested documentation, such as financial statements, employment training certification, technology certification, and strategic planning information. Once the interview concluded, we shared the interpreted data with the participants for the participants to validate the interpretation. Following the interview meeting, we shared the final interpretation with the participants via email, asking that they read and verify that the information is a clear representation of their responses. We also collected secondary data, retrieving data from the reports published by prominent organizations like the CFRA, EDA, U.S. SBA and SCORE using the World Wide Web.

The Findings

Emergent Theme 1: Business owners' Skills and Knowledge

All participants denoted the importance of business skills and knowledge to prevent closure. The business owners improved their skills and knowledge by earning a college degree, participating in conferences, and on the job experiences. All participants also denoted the strategy of enhancing skills and knowledge by taking on different business functions within the company. Small business owners' knowledge and abilities assisted in identifying and adjusting future issues to maintain profitability. The participants' responses provided valuable information about the difficulties and benefits derived from owning a small business. Rural, small business owners can prevent closure by incorporating strategies to improve their knowledge and skills.

The secondary data analysis led to the conclusion that management knowledge and skills provide the ability to identify and prevent future business problems. Furthermore, understanding resources, organizational cultures, organizational systems, innovative capabilities, and strategies necessary to make positive changes in an organization and promote adaptability to future changes are critical factors for the sustainability of the organization.

In alignment with these findings, Davis (2017), as well as Bereznoi (2014), concluded on the importance of business skills and understanding of the business. The findings also align with Inan and Bitici (2015), Laaksonen and Peltoniemi (2016), and Ceptureanu et al. (2017) on how the management knowledge and skills provide the ability to identify and prevent future business problems.

Furthermore, these findings align with the conceptual framework of the systems theory. Business owners' skills and knowledge of the interrelation, mutual influence, and dynamic of the relationship among the operations' functions of a business are consistent with von Bertalanffy (1950) general systems theory, in which the author denotes how the parts of the system affect the entire system. Furthermore, Inan and Bititci (2015) explained how business owners' skills and knowledge of the business improve owners' abilities to position business resources, tangible or intangible, to accomplish a job or action.

Emergent Theme 2: Marketing, Sales, and Inventory

Business owners use marketing as a tool to inform and convince consumers about the value proposition of products and services. Management makes use of sales and inventory to analyze customers' purchasing behaviors and identify patterns. Marketing refers to the action management incur to promote and sell products or services. All participants noted how marketing contributes to business success. In contrast to using new media, some participants make use of the traditional forms of communication to reach out to their customers, as business owners may use a marketing strategy that best fits their targeted population. All participants also discussed direct personal interaction with customers to understand consumers and market their products. In small businesses, business owners can talk directly to customers and enhance customers' experiences.

The participants' responses provided greater insight into how rural, small business owners enhance marketing, sales, and inventory. By assessing marketing, sales, and inventory, small business owners may identify profitable markets, keep a variety of fresh products, provide new services, and determine the financial strength of the business. If business owners want to grow and achieve success, the business owners should adopt marketing strategies, maximize sales, and efficiently use the inventory.

The secondary data analysis is also in alignment with the information the participants shared. Small business owners obtain competitive advantages by understating marketing, sales, and inventory. Rural, small businesses rely on direct contact with customers and social media to conduct marketing strategies Rural, small business owners build marketing plans to reach, connect, and displays goods and services to customers.

The above findings align with the conceptual framework of the systems theory. von Bertalanffy (1950) introduced the systems theory concept to explain how the overlapping parts of a system function as a whole. Cross and Barnes (2014) described how researchers apply systems theory to assess the interrelation, mutual influence, and dynamics of the relationship among the operations functions of a business. Owner's capability to evaluate the interrelation among marketing, sales, and inventory assists in maintaining the product value proposition throughout different periods, which in turn, prevents closures (Richmond et al., 2017).

The findings resonate with the statements of Chen and Uzelac (2015), Chepurenko (2018), Davila et al. 2015, Dyllick and Muff (2016), Jones et al. (2015), and Mehra et al. (2017) over the importance of marketing, sales, and inventory for small businesses. Additionally,

business owners obtain competitive advantages by understating marketing, sales, and inventory. Rural, small businesses rely on direct contact with customers and social media to conduct marketing strategies (Gummesson, 2019).

These results also align with the conceptual framework of the systems theory. von Bertalanffy (1950) introduced the systems theory concept to explain how the overlapping parts of a system function as a whole. Cross and Barnes (2014) described how researchers apply systems theory to assess the interrelation, mutual influence, and dynamics of the relationship among the operations functions of a business. Owners' capability to evaluate the interrelation among marketing, sales, and inventory assists in maintaining the product value proposition throughout different periods, which in turn prevent closures (Richmond et al., 2017).

Emergent Theme 3: Employee Retention

Business owners focus on employee retention to minimize employee turnover. Management makes use of employee retention as the skills to keep employees. All the participants indicated how employee retention is a vital part of business success. Responses for all the participants noted the significance of employee retention to prevent closure. To increase success, rural, small business owners should incorporate strategies to maximize employee retention.

The secondary data analysis substantiated the claims of the participants on how small, rural startup business owners need to understand the location of the business and the population area, as well as the need to identify positions, write job descriptions, and identify qualified employees to enhance employee retention.

These findings align with the statement of Joubert et al. (2017) about high employee retention and high employee performance. Zubanov et al. (2017) denoted how employees who do work effectively and efficiently for the organization enhance organizational success. Also, the results from Theme 3 resonate with the statement of Katina (2015), which explains how systems theory analyzes the cause and effect by evaluating the principles, concepts, laws, regulations, and behaviors as complex interdependent parts of the business.

Recommendations for Action

The findings of this study may help rural, small business owners to prevent closure by conducting specific strategies. We recommend the rural startup business owners to use strategies to improve business owners' skills and knowledge, marketing, sales and inventory, and employee retention. Small business owners from different regions could also pay attention to those strategies implemented to minimize the risk of failures.

The first recommendation stemmed from this study is to participate in seminars, conventions, business debates, and to take college courses to improve business owners' skills and knowledge. Second, we would recommend researching webinars, enterprise systems, and artificial intelligence tools to improve marketing, sales, and inventory strategies. Dyer, Godfrey, Jensen, & Bryce (2016) denoted the value of adopting current marketing, sales, and inventory

strategies to identify markets in which business owners may be profitable. The local Chambers of Commerce, CFRA, U.S. EDA, U.S. U.S. SBA, and SCORE provide a variety of information to enhance business capability strategies. The third recommendation is to evaluate employee satisfaction to improve employee retention, which includes assessments in engagement, job motivation, job satisfaction, empowerment, social relationship, leadership, and organizational commitment to business goals.

Conclusion

The purpose of this qualitative multiple case study was to explore the strategies some rural, small startup business owners in Tennessee used to prevent closures within the first 5 years of operation. The systems theory was the framework that drove this study. The research method and design determined the research scope and guided the data collection and analysis. We interviewed four rural, small business owners of Southern, middle Tennessee. Moreover, we collected data from archival documents, sought the literature related to the research topic on the World Wide Web, and triangulated the data to validate the evidence that emerged from the different sources. From the data analysis, three themes emerged: (a) business owners' skills and knowledge, (b) marketing, sales and inventory, and (c) employee retention.

To prevent closures, rural, small business owners must implement strategies to enhance business owners' and employees' skills and knowledge. Small business owners should develop strategic plans in marketing, sales, and inventory to identify customers' likes and dislikes and increase profitability. Conversely, business owners should positively enhance employees' job experiences to improve employee retention. We encourage those current and future business owners to use these findings, conclusions, and recommendations to prevent closure within the first 5 years of operation.

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Military Veterans “Sign Up” for Franchising: Another Route to Entrepreneurship

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ABSTRACT

The franchise business model has proven particularly attractive to veterans. This study explores the practitioner and academic literature to identify why franchising is attractive to veterans, as well as how the franchise sector encourages those with prior military experience to enlist. The study also examines whether veterans are satisfied with their decision to become franchisees, and identifies which franchise systems are rated “best” for veterans. Finally, the paper offers thoughts about future research that is needed to help franchise systems be a gateway for veterans to pursue the dream of business ownership.

Keywords: Veterans, Franchising, VetFran, Vetpreneurs, Franchisor, Franchisee

Military Veterans “Sign Up” for Franchising Another Route to Entrepreneurship

Franchising, a multi-faceted form of entrepreneurship, has two types of entrepreneurs, the franchisor and the franchisee (Hoy & Shane, 1998). The founder of the franchise system (the franchisor) fits the traditional dictionary definition of an entrepreneur, the person who organizes, manages, and assumes the risk of a business (Baucus, Baucus, & Human, 1996). Franchisors also recruit individuals to purchase into their franchise system. Those who buy a franchise enter into a contractual relationship with the franchisor to operate the business and become the system’s franchisees. While franchisees are not the inventors of the concept, they are entrepreneurs as they commit a certain amount of risk-taking and proactiveness to help ensure their business succeeds (DiPietro, Severt, Welsh, & Raven, 2008). After all, it is the franchisee’s capital that is invested in opening their own unit or operation. Hence, the franchise business model creates opportunities on both sides of the relationship and is, in effect, an entrepreneurial partnership (Baucus, Baucus, & Human, 1996; Combs, Ketchen, Shook, & Short, 2011; Rosado-Serrano, Paul, & Dikova, 2018). This may explain why franchisors actively recruit franchisees with an entrepreneurial spirit (Dada, Watson, & Kirby, 2012) and encourage franchisees to consider the business a personal venture (Gassenheimer, Baucus, & Baucus, 1996).

In the United States, there are over 745,000 business format franchised establishments (International Franchise Association [IFA], 2018), whereby franchisees pay fees for the right to offer, sell, or distribute goods or services under the brand name of the franchisor (Combs, Ketchen, Shook, & Short, 2011). According to data from the International Franchise Association (IFA), franchising accounts for \$425.5 billion of the United States (U.S.) Gross Domestic Product (GDP) (IFA, 2018). Franchising is not, however, a sector confined to the U.S. On the

international front, franchising has become a popular format for conducting business in numerous industries (Rosado-Serrano, Paul, & Dikova, 2018). Whether it is new franchisees entering established systems, small businesses and entrepreneurs turning to franchising as a growth platform, or the practice of conversion franchising, whereby independent businesses are rebranded to create a franchise system, the franchise business model is an attractive option for entrepreneurs.

Given the growth of franchising, it is not surprising that this type of entrepreneurial endeavor has sparked notice among those with prior military service. While numbers will vary by country, in the U.S., veterans account for 8% of the population (Bureau of Labor Statistics, 2020), and the IFA reports that one in every seven franchisees in the U.S. is owned and operated by a veteran (IFA, 2018). Eric Stites, CEO of Franchise Business Review, a research and consulting organization that works in the franchising sector, reports that some 9% of U.S. franchisees have prior military service (personal communication). These veteran-owned franchise businesses employ millions and are integral to the economic vitality of their communities. Hence, as franchising continues to expand globally, transitioning military and former armed service members will be an attractive talent pool for franchisors to enlist.

The appeal of veterans as a viable pool of prospective franchisees surfaced as far back as the early 1990s. In 1991, the IFA launched the VetFran Program to support ex-military members interested in pursuing a franchise opportunity. There are now over 600 member companies participating in VetFran, representing every sector of the franchise community. The stated mission of VetFran is to “to educate both veterans and franchisors about the unique match between the skills and aptitude of entrepreneurial veterans and the demands and opportunities of being a franchisee” (The VetFran Program, n.d.). Furthermore, to facilitate the transition of veterans into franchising, franchisors wishing to be a member of VetFran must offer a discount on the initial franchise fee to service members who were honorably discharged. This literature review will examine the academic and practitioner sources to:

- Identify why franchising is attractive to veterans
- Explain franchisor interest in recruiting veterans
- Identify recruitment efforts used by franchisor firms to attract veterans to purchase a franchise business
- Determine veterans’ satisfaction levels after becoming franchisees
- Review the franchise systems rated ‘Best for Veterans’ and those dedicated exclusively to veterans
- Recommend avenues for future research

Throughout the paper, the terms *military veterans*, *ex-military*, and *former service members* will be used interchangeably to refer to any person who served in a qualified military branch. Transitioning military are those persons who are in the process of exiting the military and returning to civilian life.

Literature Review

Why Is Franchising Attractive to Veterans?

Transitioning service members report one of their greatest stressors is securing employment when they enter the civilian ecosystem (Minnis, 2014). Over the past decade, as more military veterans have transitioned back into civilian life, researchers have begun to investigate what influences, as well as what factors help facilitate transitioning military and veterans in their entrepreneurial quests (e.g., Bressler, Bressler, & Bressler, 2013; Chamberland, 2015; Hope Christman & Mackin, 2019; Polin & Ehrman, 2018). Some of this interest has been led or financed by the Office of Veteran Business Development, part of the U.S. Small Business Administration (Craig, 2015). The scholarly literature has even introduced nomenclature for this group, designating former military veteran entrepreneurs as "vetrepreneurs."

With respect to franchising, however, there is a more limited pool of empirical studies that have examined the motivators explaining why former military personnel pursue franchise ventures. In their phenomenological study of seven military veterans who became franchisees, McDermott and Jackson (2020) found the primary motivator was veterans' desire to be in control of their own destiny. Furthermore, these veterans were confident in their ability to lead others and believed that the military had prepared them for handling difficult situations. There was also a sense of comfort in pursuing business ownership under a franchise system, which relies on checklists, networking, and a hierarchical structure, all very familiar norms. The high confidence level of ex-military confirms the Kerrick, Cumberland, and Choi's (2014) study, which found that veterans reported high entrepreneurial self-efficacy (ESE) scores both at the beginning and upon completion of an entrepreneurial training program. Hence, those who have served their country in the armed forces bring a high level of confidence that they can achieve their entrepreneurial goals.

Only one other study was located that examined why military veterans pursue the franchising business model. Using the Critical Incident Technique (CIT), Mires, Cumberland, and Berry (2020) interviewed eight veterans who had become franchisees in the last five years. These scholars found a distinct decision order was used during the decision-making process to become an entrepreneur. All eight veterans first decided to become entrepreneurs without knowing that they would eventually embrace franchising as their form of entrepreneurship. The decision to pursue self-employment was based on their desire for control, a willingness to serve, and concern about their ability to fit into the corporate world. This confirms McDermott and Jackson's (2020) finding that former service members wish to control their own destiny. It reinforces Short, Zachary, and Ketchen's (2018) suggestion that for those who served, values transcend their tenure as a soldier and become part of their ethos. Finally, the concern these veterans expressed about their "fit into corporate culture" supports Davis and Minnis' (2017) argument that veterans have "difficulties working in companies with less hierarchical structures or organizations that lack a clearly defined career path for them" (p. 10).

Mires, Cumberland, and Berry (2020) also found from their research that, unlike the emotional decision to pursue self-employment, the decision to become a franchisee was one of practicality. These ex-military members reported that they knew they did not have the idea, business model, or the resources to start a new business venture independently. Hence, they selected the franchise business model as their path to entrepreneurship as it offered a business

ready to go. Finally, the study indicated that for these veterans, the criteria for selection of a franchise system was based on the values of the franchisor, the culture in the organization, and the type of training that would be provided.

The number of studies to date on why military veterans sign up for franchising is limited, primarily qualitative, and U.S centric. This suggests the need for further research to confirm the findings that emotional reasons lead veterans towards entrepreneurship, while practical reasons encourage them to sign up for franchising.

Why Do Franchisors Pursue Veterans?

Companies offer numerous reasons for hiring veterans. While these reasons range from a sense of social responsibility to a desire to cultivate positive public sentiment, a study of 87 U.S. employers across 67 firms found that most were in pursuit of talented employees who could bring a broad range of technical skills and highly valued personal attributes to the organization (Harrell & Berglass, 2012). In the franchising sector, the IFA reports that 97% of franchisors believe veterans make excellent franchisees (Schenck, 2019). Much like the military, franchise operations depend on systems. Franchisors, like military commanders, expect their franchisees to follow procedures with precision to accomplish the mission, and to do so with loyalty and respect for the unit. Ex-military members have the discipline, ability to lead, risk tolerance, and ability to survive rigid system specifications that make them ideal franchisee candidates (McDermott, 2010). Hence, it comes as no surprise that articles in both the popular and trade press often suggest that military personnel are uniquely qualified to become successful franchisees (Mires, Cumberland, & Berry, 2020), another avenue for entrepreneurship.

One critical franchisor decision is the determination of which prospective franchisees to allow into their system (Ramirez-Hurtado, Rondan-Cataluna, Guerrero-Casas, & Berbel-Pineda, 2011). Good selection criteria can bring about positive results for the brand, while poor choices can result in lawsuits, encourage opportunistic behavior, diminish the brand, and negatively impact the franchise system’s performance (Jambulingam & Nevin, 1999). Several practitioner and media sources offer advice on what traits and skills successful franchisees need (see Table 1).

Table 1
Practitioner and media sources: Top traits for franchisees

Franchise Direct <i>Top 10 Traits of a Good Franchisee</i>	Franchise Gator <i>Top 10 Traits of Successful Franchisees</i>	Entrepreneur Magazine <i>8 Traits of a Successful Franchisee</i>
Reliable Leadership Good Judgment Learner	Leadership Risk-Taker Learner Adaptable	Motivated Big Thinker Chief Cheerleader Optimist

Hard Worker	Takes Direction	People Person
Communicator	Team Player	Takes Direction
Networker	Financial Aptitude	Resilient
Financial Aptitude	Patient	Cool and Collected
Ability to Delegate	Results Driven	
Willing to Ask for Help	Passionate	

Sources: (Franchise Direct, 2019, Franchise Gator, 2016, and Entrepreneur Magazine, 2012)

Scholars have also attempted to identify the characteristics and backgrounds that franchisors should seek when recruiting franchisees. Mohd and Ishan (2017) conducted a meta-analysis of the academic literature identifying the personal and business characteristics that have been found associated with successful franchisees. These scholars offered a high-level view, encapsulating broad attributes, including 1) entrepreneurial capacity, 2) professional experience, 3) motivation, and 4) financial capacity. Ramirez-Hurtado, Rondan-Cataluna, Guerrero-Casas, & Berbel-Pineda (2011) provided a more nuanced overview of what the scholarly literature has found as the ideal characteristics franchisees need. Table 2 provides this more granular overview of personal traits ideal franchisees bring to the business, based on prior research.

Table 2
Scholarly research: Traits of ideal franchisees

Managerial Experience / Skills	Maturity Level / Demographics	Working Habits	Other
Management ability	Emotional stability	Willingness to work hard	Faithfulness to franchisor
Human relations ability	Self-esteem	Need to achieve	Support from family
Previous Experience operating any business	Personal relations	Entrepreneurial	Personality
Previous Experience operating a connected business	Age	Ability to adapt to changes	
Shrewdness	Education level	Creative	
Intelligence and practical skills	Financial status	Perseverance	
	Marital status	Ethical behavior	

Source: (Ramirez-Hurtado, Rondan-Cataluna, Guerrero-Casas, & Berbel-Pineda, 2011)

Ramirez-Hurtado, Paul, and Ditkova's (2011) empirical research of Spanish franchisors highlighted that, out of all of the above attributes, loyalty to the franchisor was the most important. Many of the traits listed in the tables above, and especially loyalty and the willingness to work hard, would be characteristics aptly used to describe those who have served their country.

In their study of recruitment advertising targeting veterans, Short, Zachary, and Ketchen (2018) suggest that ex-military "possess a unique configuration of characteristics and skills that allow them to balance entrepreneurial characteristics with a commitment to a higher mission" p. 7. In their study of Fortune 500 franchisors websites, these scholars examined the franchise recruitment sections and measured franchisors' level of entrepreneurial orientation (EO) rhetoric using a computer-aided content analysis. Characteristics associated with EO include innovativeness, risk-taking, and proactiveness (Wiklund and Shepherd, 2005). Short, Zachary, and Ketchen found that those franchisors targeting veterans with messages that encourages entrepreneurial behavior, including innovativeness and risk-taking, have more franchises than those franchisors who do not target veterans on their websites. This study highlights how franchise systems that focus on characteristics associated with veterans find a higher level of recruitment success.

Beyond personality characteristics and training, franchisors' interest in recruiting former service members could also stem from knowledge of governmental training and support programming available to transitioning soldiers, favorable lending programs from banking institutions, and the vast cadre of soldiers and former soldiers who function as a support system. Given veterans listen and trust other veterans, this extensive tight-knit network may facilitate customer acquisition and provide a future pool of franchisees. Additionally, in specific countries beyond the U.S. (e.g., Australia, Finland, and Malaysia), franchising is hindered by a shortage of suitable franchisees, thereby suggesting the need for recruitment of groups such as those with a military background. Finally, franchisors may focus on recruiting former service members because they simply wish to capitalize on the successful track record military veterans have shown with respect to entrepreneurial endeavors (Hope, Oh, & Mackin, 2011; Moutray, 2007).

How Does the Franchise Industry Recruit Veterans?

A pivotal point in the effort to recruit U.S. military personnel occurred when Don Dwyer, the franchisor of the Dwyer Group, founded a Veteran transition initiative after the Gulf War to educate veterans about entrepreneurship (Dragomaca, 2019). When the International Franchise Association (IFA) and Dwyer rolled out the VetFran Program in 1991, the goal was not only to educate veterans on how to investigate and become franchisees, but also encourage franchisors to offer discounts and incentives to attract those service members exiting the military. The VetFran website provides the following rationale for franchisors to join VetFran:

Competition for entrepreneurial vets is heating up, and companies that aren't actively incentivizing and prioritizing veteran recruitment are missing out. Veteran franchisee

recruitment is an important part of modern franchise growth and development strategies, and VetFran is your gateway to unlocking that potential (The VetFran Program, n.d.).

Franchisors must apply to become members of VetFran. There are two membership levels with different annual fees. The “premium tier” offers the franchise system more access to promotions and events. When a franchise system signs up to be a member of VetFran, their “star” rating is determined using the following criteria:

- *1-Star Franchisor Members:* Must offer a minimum 10% discount on the initial franchise fee; have operated as a franchise three or more years, and; have a clean audit report.
- *2-Star Franchisor Members:* Must offer a minimum 15% discount on the initial franchise fee; have operated as a franchise for four or more years; have a clean audit report; have data in Item 19 of the Franchise Disclose Document, and; have at least 25 units in the franchise system.
- *3-Star Franchisor Members:* Must offer a minimum 20% discount on the initial franchise fee; have operated as a franchise for five or more years; have a clean audit report; have data in Item 19 of the Franchise Disclose Document; have at least 50 units in the franchise system; have at least an 80% continuity rate over the past three years, and have at least one executive on staff who completed the IFA’s Certified Franchise Executive training program. (Source: The VetFran Program, n.d.)

While franchisors vary in the type of incentives they offer to former service members, the recruitment tools they employ are similar. The most prominent marketing effort occurs on the franchise system’s own website, where membership in VetFran is highlighted or other wording is used that suggests the franchise is “military friendly.” Some franchisors place advertising on websites focused on military issues. For example, four franchise systems (Signal 88 Security, JDog Carpet Cleaning and Junk Removal and Hauling, Cruise One: Dream Vacations, and Cruise Planners) are “sponsored advertisers” on *GI Jobs*. Web search engines that employ certain search words are common marketing tools, particularly in geographic areas where military bases are located (R. Dragomaca, personal communication, April 21, 2020).

Are Veterans Satisfied with the Decision to Be Franchisees?

The franchise business model is an inter-organizational relationship in which conflict is inherent. The franchisor and franchisee are both economically dependent and contractually committed to each other, thereby creating conditions ripe for conflict to arise (Winsor, Manolis, Kaufmann, & Kashyap, 2012). The use of contracts to govern a relationship can also encourage opportunistic behavior, which is why partner trust is highlighted in the franchising literature as a critical factor to franchise success (Grace, Frazer, Weaven, & Dant, 2016; Ishak, Chuah, & Romle, 2016). Because of the potential for relationship issues to arise in the franchise system, scholars have spent significant time investigating franchisee satisfaction.

Morrison’s seminal study on franchisee satisfaction (1997) found that satisfied franchisees are more likely to remain in the system, have stronger performance, express positive commitment, and have a good relationship with the franchisor. Research with respect to whether

veterans are more likely to be satisfied or dissatisfied with being a franchisee, however, is more limited, and results are mixed. In a survey of 3,177 franchisees in the U.S. food sector, Kalargyrou, Aliouche, and Schlenrich (2018) found franchisee satisfaction is not impacted by veteran status. Rather, in their study of 58 restaurant franchise systems, the only demographic variable associated with franchisee satisfaction was education. Those franchisees with higher levels of education were less likely to be satisfied. Kalargyrou, Aliouche, and Schlenrich's (2018) study, however, did not specifically target veterans. Rather, military status was one of numerous control variables. Franchisee satisfaction studies conducted for Franchise Business Review's clients revealed similar results. According to the CEO (Eric Stites), "from a satisfaction perspective, vets are equally satisfied as non-vets. There is no data from our pool across 258 franchise brands that vets are happier in franchising, or that they perform any better or worse than non-vets" (E. Stites, personal communication, April 22, 2020).

Only one study could be located that specifically focused on veterans' satisfaction with being franchisees compared to non-veterans. McDermott, Boyd, and Weaver (2015) hypothesized that franchise business owners who had served in the military were more likely to be satisfied than franchise business owners who had not served in the military. The study examined four U.S. franchise brands, randomly selected from three categories with high appeal to veterans: business and services, maintenance and cleaning, and home repair and improvement. All four brands were participants in the VetFran program, and all were mature franchise systems that had operated for 11+ years. A total of 249 franchisees responded to the survey about their satisfaction with their decision to become a franchisee. The survey measured life satisfaction, career satisfaction, job satisfaction, and total overall satisfaction. While these scholars found no significant differences in life, career, and overall satisfaction, they found franchisees who served in the military had a significantly higher level of job satisfaction [being a franchisee] compared to franchisees who had not served in the military. But, among the three business categories studied, it was only the home repair and improvement category where those with prior military service were significantly more satisfied than those who had not served.

The discrepancy in the findings of the two empirical studies that examined satisfaction of veterans to nonveterans could be attributed to the selection of franchise sector examined. Kalargyrou, Aliouche, and Schlenrich's (2018) study was concentrated in the restaurant category and included a total of 58 franchise systems. Meanwhile, McDermott, Boyd, and Weaver's (2015) study focused on categories with high appeal to veterans and included only four franchise systems. Since the focus of these two studies was a comparison between those who served in the military and those who did not, the question still remains: In general, are veterans satisfied with their decision to become franchisees? Practitioner data from *Franchise Business Review's 2019 Special Report on Veterans in Franchising* reports that 88% of ex-military franchisees indicated that they enjoy operating their business, and 87% enjoy being part of their franchise system. Furthermore, across the 258 brands surveyed, most veterans indicated that buying a franchise was a good business decision for them, with 8 out of 10 of these veteran franchise owners indicating they respect and trust their franchisor and would recommend this franchise to another franchisee candidate.

McDermott and Jackson (2015) conducted a qualitative study to better understand how prior military experience influences franchisees' satisfaction. Leadership training in the military surfaced as a key theme providing these ex-military franchisees with the confidence to pursue a second career as a franchisee. Additionally, these veterans indicated pre-defined systems as a strength for franchising over other business models and "connected their ability to work well within a system to their prior military experience" (McDermott & Jackson, 2015, p. 777).

The only other veteran-specific study on franchising (Mires, Cumberland, & Barry) did not specifically investigate satisfaction, but did ask veterans about the advice they would offer other veterans considering this venture into entrepreneurship. Only one of the eight interviewed indicated they would have selected a different franchise. All of those interviewed, however, recommended that any veteran considering this investment speak with veteran franchisee owners before making a final decision.

Media articles in franchise and business journals frequently highlight successful and satisfied veteran franchisee owners. To date, however, the empirical literature examining veterans' satisfaction has yet to be fully explored. Since maximizing franchisee satisfaction and minimizing conflict is a goal of franchisors, a greater understanding of whether veterans are satisfied after signing up, as well as what factors influence the satisfaction level of veterans, would help franchisors understand how to manage this relationship.

What Franchise Brands are Rated Best for Veterans?

Kirchner and Minnis (2018) define "military friendly" as "a process of providing transition support to military veterans through four pillars: (a) recruitment and hiring; (b) personal, professional and career development; (c) community outreach; and (d) promotion of veteran hiring practices" (p. 103). The IFA fits this definition in that executive leadership of the IFA has actively encouraged franchisors to become members of VetFran, a unique program with clearly defined criteria for encouraging military veteran hiring initiatives. Furthermore, the IFA has been involved in veteran outreach programs, as well as lobbying efforts that promote veteran hiring.

With respect to how franchise systems serve veteran franchisees, the U.S. business and trade press, as well as U.S. military publications and websites, have provided rankings of "best franchises for veterans," including *Entrepreneur Magazine*, *Franchise Business Review*, *GI Jobs* and, *Military Times*. Because *GI Jobs* did not include the methodology for their ranking of the "15 Hottest Franchises for Veterans," their list was not reviewed for commonalities. Of the other three rankings, only *Military Times* included the total number of veteran-owned franchise units. Out of the Top 53 systems making the cut on *Military Times* list, there are six systems that report 20% or more of their franchisees have prior military service:

- Dream Vacations (32%)
- Ground Guys (28%)
- Pillar to Post Home Inspections (25%)
- Matco Tools (21%)
- Mr. Appliance (20%)

- Tailored Living (20%)

A comparison across the lists of the three rankings from *Entrepreneur Magazine* (“2019 top franchises for veterans ranking”, 2019), *Franchise Business Reviews* (“Top Franchises for Veterans,” 2019), and *Military Times* (Gross, 2018) to identify best franchises for veterans, reveals there are five brands that appear across all three sources. These franchise systems include the following:

- Budget Blinds
- Dream Vacations
- FastSigns
- Sport Clips Haircuts
- Two Men and a Truck

In the U.S., two franchise systems also market themselves exclusively to veterans:

1. JDog Junk Removal and Hauling and JDog Carpet Cleaning position their brand as “veteran and military family-owned and operated.” Franchisees must be a veteran or military family member.
2. G Force is a franchise company that offers parking lot striping, pavement marketing, and sign installation. The franchise indicates their mission is to provide business ownership and employment opportunities to veterans.

Given that franchising can serve as a gateway for veterans to pursue entrepreneurial ventures, it is not surprising that U.S. franchise brands seek to enlist ex-military to the rank of franchisee. As veterans investigate these options, understanding what franchise organizations offer in terms of support after signing up is also critical. In her study to provide a guideline for the franchise industry in Malaysia, Khairatun’s (2019) proposed framework includes financial incentives as a key recruitment tool. She also suggests corporate support and corporate training be part of any veteran recruitment efforts undertaken by franchisors.

Future Research Directions

Scholarly research regarding veterans in franchising is still in its infancy. Given the concentrated effort by the franchise sector to recruit veterans to become franchisees, several research avenues could be pursued. First, additional research is needed to understand why veterans sign up to be franchisees. Mires, Cumberland, and Berry (2020), using a qualitative lens, studied motivators citing Gilad and Levine’s (1986) ‘push’ and ‘pull’ theory of entrepreneurial pursuit as a plausible explanation for why veterans sign up to be franchisees. These scholars call for more studies using a larger sample size to isolate which of the motivators most heavily influence veterans’ decision making and to confirm or dis-confirm the decision-order process. They also call for more theory development to fully understand the phenomenon.

Second, there remain unanswered questions as to whether the military prepares individuals to successfully own and operate franchises. Since the literature has identified some of the commonalities of successful franchisees, future research could investigate the presence of these characteristics among veterans. Furthermore, research could follow the line of Avrahami

and Lerner's (2003) study and attempt to understand whether specific types of military service influence the decision to become a franchisee. This information could be valuable from a recruitment standpoint as franchisors could tailor their message and possibly more narrowly target their efforts among the veteran population.

Third, while practitioner research does suggest veterans are highly satisfied with their decision to become franchisees, empirical studies are needed that control for selection of franchise systems as well as enable comparisons by franchise system size, sector, and number of veteran franchisees versus nonveterans. This type of research would address McDermott, Boyd, and Weaver's (2015) call to better understand which franchise system categories are the best fit for military veterans. It is also possible that brands with higher percentages of veteran franchisees differ from franchise systems with average to below-average percentages of ex-military. Qualitative research could be conducted to illuminate how those brands with high percentages of veteran franchisees operate and help franchisors understand what factors contribute to veteran franchisee satisfaction or dissatisfaction.

Finally, empirical research that identifies which recruitment incentives have the most appeal to transitioning military and veterans would be valuable. Franchisors would benefit from knowing which financial incentive packages to embrace, what types of training veterans prefer, and whether other types of corporate support, such as mentoring programs, would encourage ex-military to sign up.

Conclusion

Based on this literature review, franchising appears to be a viable entrepreneurial path for military veterans. Veterans who become franchisees contribute to their respective economies, both as taxpayers and job creators. Furthermore, being an entrepreneur can create a sense of belonging, help veterans reintegrate, and provide a way to be part of something bigger than oneself (Harrell & Berglass, 2012). As this paper details, the franchise sector has shown significant interest with respect to recruiting military veterans, but the research on ex-military franchisees remains limited (Heinz, Freeman, Harpaz-Rotem, & Pietzak, 2017). Beyond the ability to provide franchise organizations with important data on attracting and meeting the needs of those with prior military service, research could help inform governmental and educational institutions on how to support veterans' entry into entrepreneurship via the franchising route.

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Corporate Social Responsibility and Small- and Medium-Sized Enterprise Debt Covenants

Abstract

The impact of corporate social responsibility (CSR) on equity and debt capital costs has been researched for large public companies, but little research has been conducted for small- to medium-size enterprises (SMEs). This article helps fill the gap in the literature by investigating the cost of debt for SMEs that report high CSR activity. Loan officers participated in a quasi-experiment comparing perceived risk of SMEs who violated loan covenants due to CSR or normal business activities. Consistent with social capital theory, the results suggest that loan officers view community involvement as beneficial to SME firm value.

Keywords: CSR, lending, SME, banking, debt costs

Introduction

Corporate Social Responsibility (CSR) is an increasingly prevalent topic for academic researchers and corporations alike. Both groups seek to understand CSR's impact on firm value (cf. Saxton *et al.*, 2019; Dunn and Harness, 2018). Most CSR research focuses on large—typically public—corporations, probably because of the wider scale and scope of available data, the visibility of the focal companies, and their market preeminence. There is a gap in the understanding of how CSR impacts smaller private companies and the economic consequences for the communities they serve.

According to the Small Business Administration (SBA), there are over 30.2 million small- and medium-sized enterprises (SMEs) in the United States. This represents an astounding 99.9percent of total domestic firms (US Small Business Administration, 2018). Moreover, small businesses with fewer than 100 employees, which are the focus of this study, employ over 40 million people in 2.3 million unique firms across the U.S.

The significant size of the SME population has numerous implications for the economy in general. Small businesses with fewer than 100 employees added 1.9 million net jobs in 2017, which represents the largest gain of any sector (US Small Business Administration, 2018). Among all businesses with fewer than 500 employees, 8 million are owned by women and minorities. In addition, diversity rates are higher in the under-100-employee segment than in any other business segment (US Small Business Administration, 2018). This is but a short list of examples of the enormous impact SMEs have on the economy and the workforce.

Therefore, it is important to understand factors that contribute to SME success, financial health, and growth. One of these factors is the firm's relationship with its community, operationalized by its CSR.

CSR initiatives in large firms are often aimed at national environmental goals (Marquina Feldman and Vasquez-Parraga, 2013). The literature is mixed on consumer reactions to these efforts (Rizkallah, 2012). Small- and medium-sized CSR initiatives are more directly visible to

consumers than the efforts of large firms (Madden *et al.*, 2006) due to their proximity to the community affected (Kobeissi and Damanpour, 2009; see Udayasankar, 2009 for support for the efforts of large firms).

Numerous CSR studies have focused on firms' costs of equity (Dhaliwal *et al.*, 2014; Elliott *et al.*, 2014; Malik, 2015). This is less pertinent for SMEs because the owner-manager usually holds the equity and additional capital is raised through outside debt financing (Shen *et al.*, 2012). A gap exists in the literature concerning CSR's impact on SME access to debt financing through banks.

This study fills this knowledge gap through a quasi-experiment involving bank loan officers in two mid-sized cities in the southern and midwestern United States. Following Elliott *et al.* (2014), we tested the explicit identification of CSR disclosure and how it impacts financial outcomes. We presented financial statements for a fictitious local SME that sought exceptions to a loan covenant violation from the bank and measured the likelihood of the bank's waiving the covenant penalties. We found that banks are more likely to waive penalties for firms that violate loan covenants due to CSR activities. Further tests show that among the firms that were penalized, CSR firms were punished less frequently and less severely through interest rate increases.

The remaining sections of this paper are as follows: Section 2 reviews the current literature and presents our hypotheses. Section 3 explains the sample and the methodology. Section 4 discusses the results, and Section 5 presents the conclusion and provides opportunities for future research.

Literature Review and Hypothesis Development

Small- to Medium-Sized Enterprises

Small- to medium-sized enterprises are a major source of economic strength in the United States. Across the United States, 99.9 percent of businesses are SMEs, and 47.5 percent of U.S. employees (US Small Business Administration, 2018) are employed by them. Small- and medium-sized enterprises created nearly 2 million new jobs in 2015, with the smallest of these companies accounting for over 1 million new hires (US Small Business Administration, 2018). The enormous scope of small businesses in the U.S. makes understanding them an important topic in the literature. While previous SME research has focused on companies with 500 to 250 employees (Park and Krishnan, 2001; Morrissey and Pittaway, 2004), our study focuses on firms with fewer than 100 employees to be consistent with the SBA categorization of SMEs (US Small Business Administration, 2018).

When considering the role of SMEs, it is important to not regard them as "little big firms" (Fitjar, 2001, p. 31). The capital markets, management structure, and nature of operations in SMEs differentiate them from large, national companies (Fitjar, 2011). Therefore, SMEs must be considered separately when investigating business models and financial structure. While the SME literature is rich, very little work has been done concerning nonfinancial factors, such as CSR, within the United States. A robust cache of international research investigates this

interaction (Apospori *et al.*, 2012), but it may not generalize to the U.S. due to cultural and regulatory differences.

Several key characteristics illustrate the differences between SMEs and their large, public counterparts. SME owners are frequently involved in daily management tasks, and they often become the “face” of the company (Blackburn *et al.*, 2013). In addition, SME owners often serve as both the source of equity capital (Jensen and Meckling, 1976) and the company’s credit guarantor (Rahman *et al.*, 2017). Managers of SMEs have greater autonomy in decision making than large company managers (Lopez-Perez *et al.*, 2017). In SMEs, the hierarchy is typically flatter below top management, and employees have a direct and stronger influence on management decisions due to proximity to management and personal influence (Baumann-Pauly *et al.*, 2013).

Conversely, in large public companies, owners (that is, shareholders) are often geographically separated from operations and professional managers act on their behalf. This can lead to agency problems, especially when CSR decisions are made (Jensen, 1994). What managers may see as altruistic behavior benefitting multiple stakeholders can actually reduce firm value in large companies.

These differences are important in CSR research because business decisions have been shown to impact SME owners differently than large company owners (Perrini and Minoja, 2008). Also, SMEs are closer to the communities in which they operate than large companies (Kobeissi and Damanpour, 2009).

CSR

There are many definitions of CSR in the literature, but at its core, it means going beyond earning money for shareholders to protecting the interests of all stakeholders, including the communities in which the company operates (Freisleben, 2011). This includes intentional efforts related to corporate social performance, economic responsibility, ethical responsibility, and corporate citizenship (Ingenhoff and Sommer, 2011). This paper focuses on CSR because this construct is used in relation to SMEs and credit lending research.

CSR and Firm Value.

The literature is mixed regarding CSR’s impact on firm value. Some researchers find evidence that consumers attach value to a firm’s social responsibility endeavors (Heikkurinen and Ketola, 2012; McWilliams and Siegel, 2001). However, CSR literature has primarily focused on large firms with disparate stakeholders. A small business’s support of local charities can have more noticeable effects on cash flow and profitability than it does for large public corporations, but the contribution may also be more visible and/or have a larger local impact.

Small- and medium-sized enterprise managers that financially engage in local communities must weigh explicit costs against outcomes that may not overtly benefit the firm. These managers must be more aware of the long-term impact of CSR decisions than large firm managers need to be (Galbreath, 2017).

Lopez-Perez *et al.* (2017) suggest that a critical component of small business viability is the firm's ability to increase visibility and relationships. The literature indicates a strong link between SME reputation and trust when the community and its consumers are willing to choose the local company's brand over a national brand (Perrini and Minoja, 2008). Thus, small businesses benefit by maintaining a positive reputation and close relationships with community stakeholders. One way to gain and maintain this reputation is through community involvement and CSR (Lopez-Perez *et al.*, 2017).

Corporate reputation is derived from an accumulation of implicit and explicit signals (Janney and Gove, 2011) that can become a company asset when they are positive. In SMEs, reputation is built and cannot be purchased. Therefore, it is hard to replicate and serves as a barrier to entry in the marketplace (Castelo Branco and Rodrigues, 2006; Orlitzky *et al.*, 2011). When a company is seen as legitimately concerned with the common good of its community and their actions reinforce this perception, the threat of competitors in the marketplace is buffered (Jones, 1995). CSR positively impacts firm reputation when the marketplace is filled with numerous competitors (Heikkurinen and Ketola, 2012; Janney and Gove, 2011; Sen and Bhattacharya, 2001). CSR initiatives that align with the marketplace's goals and beliefs can differentiate a firm by developing consumer trust and emotional connections to the company, further reinforcing the benefits of a positive reputation (McWilliams and Siegel, 2001).

Through the social capital theory power of reputation, SME stakeholders use reward power (French *et al.*, 1959) to influence the SME's social responsibility objectives (for example, consumers may reward the business through increased patronage or positive word-of-mouth) (Harness *et al.*, 2018; for a review of consumer power in market channels, see Gaski and Nevin, 1985). More importantly, SMEs that engage communities by aligning with community objectives have a lower risk of failure during crises and negative events (Godfrey *et al.*, 2009); more directly, lenders would view this as a lower default risk. This decreased risk should result in increased firm value, which reinforces Jones's (1995) study that links the way stakeholder beliefs in a business's practices are reflected in increased financial value.

CSR may also provide indirect benefits to the small business. The increase in social capital can lead to positive views of the company's products and services if CSR engagement is consistent over time (Brown and Dacin, 1997). In fact, the authors found that CSR played a stronger role in consumers' evaluation of a product than the perceived sophistication of the product (Brown and Dacin, 1997). Other indirect benefits of CSR may include increased employee morale and commitment (Turban and Greening, 1997) and an improved ability to attract and retain high quality employees (Edmans, 2011).

There are potential risks when a small business adopts a robust CSR program. Structural and marketplace differences between SMEs and large firms may result in barriers to implementation of initiatives (Lewis *et al.*, 2015). Also, just as size moderates investment returns for many asset classes, firm size moderates returns from the CSR–corporate reputation–financial value path due to the scale of visibility (Lopez-Perez *et al.*, 2017). Typically, SMEs' financial

resources are more limited than those of large public firms, and the time required to realize financial benefits may be too far in the future to justify the expense. Blowfield and Murray (2011) cautioned that when viewing a firm through an agency theory lens, expenses incurred through the adoption of CSR activities reduce the firm's ability to maximize profits and shareholder value.

Additionally, the increase in firm value from engagement in CSR activities is not permanent. Jeong *et al.* (2018) presented evidence that firm value developed through CSR activities may increase and decrease over time as the firm's commitment to CSR changes. This suggests that an SME must remain committed to its CSR initiatives, even when it is not economically advantageous, in order to maintain the level of social capital required to influence business returns.

Access to Capital

The relationship between SMEs and bank financing is well documented in the literature. Previous studies indicate that bank loans are critical to SMEs due to the difficulty of finding alternative sources of capital (Shen *et al.*, 2012). Vos *et al.* (2007) found that the main reason SMEs seek external financing is for working capital. Congruently, we suggest that CSR expenditures are often a cost that interfere with internal financing.

Bank lending decisions involve multiple factors to determine the credit risks of SMEs. Because accounting information is typically more opaque in SMEs than in large public companies, banks use alternative data sources to make lending decisions and to determine interest rates (Berger, 2006). There is a critical difference between large banks and smaller community banks that is key to determining how CSR will be viewed as part of an SME's business. Large banks adhere more strictly to the use of accounting information, while smaller community banks use a combination of accounting data, the owner's personal consumer credit score, and soft information (that is, information about relationships, interpersonal trust, and other nonfinancial data) (Carter *et al.*, 2004).

Smaller SMEs pursue credit more frequently with small community banks (Berger, 2006), which provide several potential advantages. Berger and Udell (2012) found that small community banks are more likely to use soft information than to strictly use accounting information. In addition, Moro and Fink (2013) presented evidence that small banks provide more liberal loan provisions and credit limits and are subject to fewer credit constraints.

When assessing SME creditworthiness, a well-documented difference exists between large banking institutions and small banking institutions. Large banking institutions generally rely more on hard accounting information, specifically on profitability and cash flow, than small institutions (Palazuelos 2018). When audited financial statements are not available, large institutions use the owner's consumer credit bureau information to determine loan default risk (Berger 2006).

In cases of incomplete credit data, large institutions require equitable collateral, which may be in accounts receivable or in other monetizable assets (Berger and Udell, 2012). Reliance on hard information results in significantly lower interest rates for SME loans at large banking institutions than at small institutions (Carter *et al.* 2004; Hannan, 1991). This is a double-edged sword because SMEs must face the trade-off of increased accounting expenses (related to preparing and presenting formal financial statements) or higher interest expense.

If an SME is unable to demonstrate creditworthiness through financial information or collateral, credit access is restricted in the form of higher interest rates, lower debt caps, or both (Rahman *et al.*, 2017). Working capital loans extended to SMEs are commonly limited to \$250,000, and many banks set a cap at \$100,000 (Berger and Udell, 2012). These credit limits may significantly impact business viability when past CSR expenditures and future CSR obligations exceed the SME's internal cash generation.

Even though SME loans are not riskier than loans to larger corporations (Jacobson *et al.*, 2005), SMEs typically pay higher interest rates on loans from small banks (Rahman, 2017). This may reflect market forces because nonfinancial and relationship information is proprietary to individual lenders and is not easily communicated by SMEs to competing banks.

Loan Covenants.

Financial covenants are included in nearly all private lending agreements. They exist to mitigate agency problems (Jensen and Meckling, 1976) by providing creditors with mechanisms to monitor the activities of the borrower. As such, it is not surprising that the literature frequently refers to covenants as “trip wires” or early alerts to creditors to deteriorating conditions, and they may result in subsequent action (Smith, 1993; Dichev and Skinner, 2002). Dichev and Skinner (2002) noted that most loans with covenants are short- to medium-term and lines of credit with a median age of three years. They found that approximately 30 percent of debt covenants are violated; however, the violation was not necessarily evidence of financial distress. Apilado and Millington (1992) found that smaller firms are more likely to have loan covenants than larger firms, and that large independent state-chartered banks have the highest number of loan covenants. Prilmeier (2017) found that the number of covenants is larger at the onset of the relationship between the borrower and the lender; however, covenant tightness (that is, the number and potential severity of covenants) decreases as the lending duration increases.

The consequences of loan covenant violations have been the subject of research. Common outcomes include renegotiated contract terms, including raising interest rates and increased capital expenditure, investment and financing restrictions (Beneish and Press, 1993; Bradley and Roberts, 2015; Nini *et al.*, 2009; Asquith *et al.*, 2015), assessing pre-determined financial penalties, and decreasing available credit or cancelling the loan outright (Bradley and Roberts, 2015). On average, renegotiated rates were 80 basis points higher than the original terms (Beneish and Press, 1993). In addition, the penalties associated with covenant violation extend to future borrowing arrangements. Subsequent new loans have spreads that are on average 18 basis points higher and contain similar covenants with firmer thresholds (Freundenberg *et al.*,

2017). Other costs associated with loan covenant violations include higher bid-ask spreads, return volatility, and audit fees (Gao *et al.*, 2017).

Theory

We draw on social capital theory to frame our study and develop the hypotheses (Lin 2002). Social capital theory posits that trust, shared identity, and interpersonal relationships are the underlying factors that influence social group cohesion and functioning. Following Russo and Perrini (2010), we believe that social capital theory is more applicable to CSR in SMEs than stakeholder theory, which is frequently used to study CSR in large firms. Due to the individualistic nature of SMEs, owners are actively engaged in the management of the firm and the company relies heavily on the health of the community (Russo and Perrini, 2010; Sen and Cowley, 2013). As it relates to SME involvement in their community, Lopez-Perez *et al.* (2017, p. 987) described this phenomenon: “Thus, social capital stock is generated, which—by way of a virtuous circle—reinforces itself, and promotes cooperation, civic engagement, and collective well-being.”

Resource dependency theory (Pfeffer and Salancik, 1978) suggests that organizational decisions are partially based upon a firm’s dependence on external resources. This theory has merits when considering an SME’s interest in participating in community social and environmental activities (Barney, 1991). However, we follow the work of Sen and Cowley (2013), who argue that social capital theory is more appropriate due to the voluntary nature of CSR activities and the close personal relationships between SMEs and their communities.

Hypothesis Development.

Drawing on social capital theory, an SME’s community standing can be a competitive advantage. In line with social capital theory’s position that reputation is an asset, an SME’s local business prospects and reputation are included as nonfinancial information when dealing with small lending institutions (Berger and Udell, 2012). Small- to medium-sized enterprises with strong community ties could leverage this information to offset the lack of audited financial information when negotiating interest rates.

The size of the bank has also been shown to be relevant to SME financing. Scott (2006) found that SMEs’ access to bank financing is significantly impacted by how familiar a loan officer is with the small business. Scott’s (2006) study showed that loan officers at smaller banks are typically more familiar with the nonfinancial information of SMEs than loan officers at larger banks. This is consistent with the assumption of social capital theory that stakeholders are aware of the SME’s positive reputation; if the loan officer is not aware of the SME’s positive reputation, that reputation cannot be considered as a business asset. If an SME is seeking working capital funding in part to support local CSR initiatives, the lack of historical knowledge of the SME and its community impact could negatively affect the credit decision.

The preceding literature review leads to the following hypotheses:

H1: *Lending institutions are less likely to punish SMEs for violating loan covenants when the violations stem from community participation expenses. The SMEs that participate in CSR*

activities are viewed as less risky than SMEs with identical financial metrics that do not participate in community activities.

H2: *SMEs that participate in CSR activities will be punished less severely when their loan covenants violations are enforced. This leniency will be more pronounced in regional or local banks than in national banks due to the former's proximity to the community.*

Method

Design

We used a between-subjects, quasi-experimental design with a series of logistic and ordinal logistic regressions. Each loan officer respondent was given two years' worth of information on a fictitious SME in their area. The information included cash flow statements, balance sheets, income statements, and a table of company financial ratios and margins. Respondents were also given a statement about the firm characteristics, the industry, and the market to simulate relationship background information.

Following Elliott *et al.* (2014), the control and experimental conditions presented identical cash flows, balance sheet items, and income. For the experimental condition, a line item in the company's income statement and cash flow statement included information specifically identifying donations to the community and other CSR activities. For the control condition, all expenses and cash outflows were related to company operations. A panel of professional accountants validated the instruments to ensure the statements and manipulation were accurate and valid.

The hypotheses were tested through the fictitious SME violating its current loan covenants related to expenses and cash reserves. The loan covenant—violated in both the control and experimental conditions—required the SME to maintain an agreed-upon level of working capital reserves. In the control condition, routine business expenses triggered the violation (for example, higher than forecasted inventory costs or slower than normal accounts receivable turnover). In the experimental condition, the SME's charitable donations and community engagement activities caused the cash shortfall. In line with covenant literature, the loan agreement stipulated that when the covenant was violated the loan officer must review the file to determine if credit restrictions and/or increased interest rates are warranted.

Pilot Study

After the panel of professional accountants audited the financial statements to ensure they were objectively equal with the exception of the CSR expenses, we next conducted a pilot to further validate our instruments. Drawing from senior loan officers in the authors' personal networks, we randomly assigned either the control- or CSR-SME condition to each of nine bankers by randomly presenting the experimental and control condition statements to the nine bank officers. The bankers were asked to report how they would consider the SME's finances and if they would enforce the loan covenants. Untabulated results indicated that the financial statements represented identical companies and that the CSR-condition companies were viewed slightly more favorably than control condition companies.

Sample

The sample was drawn from active loan officers in two mid-sized cities in the South and Midwest in the United States. An email was sent to potential respondents through these cities' bankers associations with a link that invited participation in the survey. Participants were randomly assigned to either the control or experimental conditions (without knowing that the other condition existed) using a random number generator when they accessed the survey.

Between the two cities, 855 invitations were emailed, and 361 individuals responded for a 42.2 percent response rate. Of these, 29 responses were removed because they were incomplete. This left a final sample of 332 usable responses—split roughly 60 percent/40 percent between the cities with 52 percent in the control group. No statistical differences were found between the responses or response rates of the two cities. Table 1 presents descriptive statistics for the sample.

In addition to considering the fictitious company's financial statements and loan covenant, participants were asked professional experience and demographic questions such as the length of their banking careers; their formal education in finance, economics, or accounting (Hathaway and Khatiwada, 2008); the length of time in their current position (Benvenuti *et al.*, 2010); the length of time at their current bank (Benvenuti *et al.*, 2010); and institution size (Benvenuti *et al.*, 2010). The average tenure was 16.7 years with 75 percent of respondents having formal education in finance, economics, or accounting.

Procedures

Each respondent was given two years' worth of information on a fictitious SME in their area. Information included cash flow statements, balance sheets, and income statements, along with a table of company financial ratios and margins. Respondents were also given a statement of the firm's characteristics, the industry, and the market to simulate relationship background information.

The participants reviewed the SME's financial records and the manager's letter and considered whether they would enforce the penalties in the loan covenant. Participants then answered a series of questions related to their loan decision.

Those participants who indicated they would enforce the penalty were next asked to report by what amount they would increase the loan's interest rate (Freundenberg *et al.*, 2017). As suggested by the pilot study participants, and in line with Roberts and Sufi's (2009) findings that pricing grids are commonplace in renegotiations, a table representing the bank's standard interest rates was provided (cf. Houghton, 1983). These rates were based on prevailing market rates for medium-term working capital loans in May 2019 (US Small Business Administration 2019; Bankrate 2019).

We present the model specification in Equation 1 below.

$$\text{Enforce} = \alpha + \beta_1 \text{Group} + \beta_2 \text{BankType} + \beta_3 \text{Tenure} + \beta_4 \text{Education} \quad (1)$$

Where *Enforce* is a binary variable coded 1 if the loan officer chose to enforce the loan covenant penalties and coded 0 otherwise. *Group* is the main variable of interest indicating whether the SME was in the experimental (CSR) or control group. *BankType* is a binary variable coded 0 if the loan officer was employed at a national bank and coded 1 if the loan officer was employed at a regional or local bank. *Tenure* is a continuous variable representing the number of years that each respondent has worked as a loan officer. *Education* is a binary variable indicating whether the participant holds any formal education in finance or accounting; it is coded 1 for those that did and 0 for those that did not.

Results

< Insert Table I >

Table I displays the summary statistics for the sample and indicates preliminary support for the hypotheses. The results in Panel A indicate that there is a significant difference in the enforcement rate between the treatment and control groups ($\chi^2 = 40.19, p < 0.001$) with the respondents in the treatment group indicating they would be less likely to enforce the loan covenant. Panel B displays the enforcement results by bank type, indicating that regional banks are less likely than national banks to enforce the loan covenant ($\chi^2 = 16.64, p < 0.001$). Panels C and D display similar results for the rate increase variable. For example, of the 12.6 percent of loan officers that indicated they would increase the interest rate by 3.5 percent, 12.3 percent of them were from the control group and 0.3 percent of them were from the treatment group. The chi-square test indicates that there is a statistically significant difference between the control and treatment groups in the rate increase variable ($\chi^2 = 95.25, p < 0.001$). Panel D indicates that there is a significant difference between national and regional banks in the rate increase variable ($\chi^2 = 13.15, p < 0.001$). Thus, Hypothesis 1 is supported.

Table II presents the results of five logistic regressions; in each model the dependent variable is the loan officer's likelihood of enforcing the loan covenants. *Group* is negative and significant in all five specifications. The results indicate that loan officers are less likely to enforce loan covenant violations related to CSR activities than violations related to business operations. When *BankType* is added to the model (columns 2–5), it is also negative and statistically significant, indicating that regional banks are less likely to enforce loan covenants than national banks. Taken together, these results support Hypothesis 2.

Consistent with Benvenuti *et al.*'s (2010) findings, *Tenure* is also negative and significantly related to covenant enforcement. Thus, more tenured loan officers are less likely to enforce loan covenants. Contrary to Bruns *et al.* (2008), however, formal education in finance or accounting did not significantly affect the loan officers' decisions. We suggest that the influence of education may be overshadowed by the effects of social capital in our study.

< Insert Table II >

Equation 2 presents the logistic regression model.

$$\ln \left(\frac{P[\text{RateInc}=0]}{P(\text{RateInc}_i)} \right) = \beta_{1,i} \text{Group} + \beta_{2,i} \text{BankType} + \beta_{3,i} \text{Tenure} + \beta_{4,i} \text{Education} + \beta_{5,i} \text{City} \quad (2)$$

Table 3 displays the results of an ordinal logistic regression of the rate increase variable. Loan officers who indicated they would enforce the loan covenant were then asked to what level they would increase the loan's interest rate based on their bank's risk-rate matrix. The three interest rate step increases are the three dependent variables. Respondents who would not enforce the loan covenants served as the regression comparison category.

The results in Table 3 indicate that loan officers are less likely to increase interest rates among SMEs that violate loan covenants due to CSR activities. When loan officers do choose to enforce interest rate penalties, SMEs that are active CSR participants are less severely punished. The rate increases are smaller than the rates for SMEs who do not participate in CSR activities. Consistent with the results in Table 2, *Tenure* is also negative and statistically significant, indicating that loan officers with more career experience are less likely to punish SMEs that are active in their communities.

< Insert Table III >

Robustness Check

As a robustness test, we tested a log linear model using *Enforce* (Yes vs. No), *BankType* (National vs. Regional), and *Group* (Control vs. Experimental). The three-way interaction between *Enforce*, *BankType*, and *Group* was not significant ($\delta_{(1)} = 1.98, p = 0.159$). This suggests that the effect of *BankType* was approximately the same in both the CSR group and the control group. Removing the three-way interaction from the saturated model revealed significant interactions between *BankType*Enforce* ($\delta_{(1)} = 1.19, p < 0.001$) and *Group*Enforce* ($\delta_{(1)} = 34.44, p < 0.001$). These are consistent with the findings presented in Table 2 and provide increased support for our hypothesis.

Conclusion

In this study, we investigated the link between small businesses' CSR and the cost of their debt. Using loan covenants in a quasi-experiment, we provided evidence that community involvement can be a source of competitive advantage for SMEs—both in terms of their business models and their capital structure. Consistent with social capital theory, SMEs that invest financially and socially in their communities are viewed as less risky by loan officers even after they have violated loan covenants.

We acknowledge that our study contains limitations. Although the pilot test of our experimental instruments was conducted with both professional accountants and active loan officers, we cannot rule out spurious influences related to loan officer bias. Our method has been validated in previous studies; however, we encourage future researchers to extend these analyses by using archival SME data. Archival data would also help generalize these conclusions beyond the sample cities included in the analysis.

Second, instead of asking loan officer respondents to calculate and report a continuous interest rate, our experiment asked loan officers to apply loan increases from a bank matrix. A continuous interest rate increase would provide deeper insight into loan officers' decisions and

would provide a finer-grained analysis of punitive enforcement. However, our approach is consistent with professional practice and prior literature.

This study contributes to the literature on small business financing and CSR. It provides compelling evidence that SMEs that make significant CSR contributions to their communities are viewed more favorably by bank loan officers. We have extended the work of SME researchers who have linked managerial decisions to capital structure. We have also extended CSR literature to include SME financial outcomes.

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Corporate Social Responsibility and Small- and Medium-Sized Enterprise Debt Covenants

Tables I - III

Table I

Descriptive Statistics

Panel A: Enforce by Experimental Group									
	Enforce				Chi-Square	p-value			
	No		Yes						
	No.	%	No.	%					
Control	53	16.00	120	36.10	40.19	<0.001			
Treatment	104	31.30	55	16.60					
Panel B: Enforce by Bank Type									
	Enforce				Chi-Square	p-value			
	No		Yes						
	No.	%	No.	%					
National	71	21.40	118	35.50	16.64	<0.001			
Regional	86	25.90	57	17.20					
Panel C: Rate Increase by Experimental Group									
	0		0.015		0.025		0.035		
	No.	%	No.	%	No.	%	No.	%	
Control	80	24.10	18	5.40	34	10.20	41	12.30	C
Treatment	151	45.50	5	1.50	2	0.60	1	0.30	95
Panel D: Rate Increase by Bank Type									
	0		0.015		0.025		0.035		
	No.	%	No.	%	No.	%	No.	%	
National	120	36.10	12	3.60	23	6.90	34	10.20	C
Regional	111	33.40	11	3.30	13	3.90	8	2.40	13

Table II

Logistic Regression for Enforce Covenant

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Group</i> (CSR)	-1.454***	-1.367***	-1.329***	-1.339***	-1.338***
<i>BankType</i> (Regional)		-0.765***	-0.471*	-0.476*	-0.464*
<i>Tenure</i>			-0.087***	-0.088***	-0.087***

<i>Education</i>				-0.255	-0.267
<i>City</i>					-0.164
<i>Intercept</i>	0.817***	1.107***	2.408***	2.634***	2.722***
AIC	422.26	414.07	389.54	390.78	392.37

*p < 0.1; ** p< 0.05; *** p < 0.01

Table III
Ordinal Logistic Regression for Rate Increase

	β	SE	Wald χ^2	<i>p</i>	<i>exp(β)</i>
<i>Intercept 1</i>	1.883	0.47	4.00	<0.001	6.573
<i>Intercept 2</i>	1.360	0.462	2.95	0.003	3.896
<i>Intercept 3</i>	0.378	0.457	0.83	0.407	1.459
<i>Group (CSR)</i>	-3.139	0.404	-7.78	<0.001	0.043
<i>BankType (Regional)</i>	-0.209	0.295	-0.71	0.48	0.811
<i>Tenure</i>	-0.089	0.02	-4.44	<0.001	0.915
<i>Education</i>	-0.023	0.324	-0.72	0.47	0.977
<i>City</i>	-0.138	0.274	-0.50	0.615	0.871

The Role of Entrepreneurial Intentions in Developing Future Entrepreneurs

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Abstract

Entrepreneurship is a combination of opportunity, resources, and innovation. A better understanding of the factors which affect or help entrepreneurial intention (EI) among students can impact developing future entrepreneurs. This study develops a model using Interpretive Structural Modeling (ISM) on nine factors followed by a MICMAC analysis. Of the nine factors, entrepreneurial attitude is the most significant predictor of EI. The study is helpful to build a framework of course curriculum to prepare future entrepreneurs.

Keywords: Entrepreneurial intentions, entrepreneurial behaviors, ISM, MICMAC

Introduction

"If the mind is intensely eager, everything can be accomplished-mountains can be crumbled into atoms." Swami Vivekananda

Entrepreneurs are considered engines of economic growth as their contribution is significant to humankind, society, and the economic condition of a country. With the initiation of enterprises, entrepreneurs mainly contribute to job creation, as poverty alleviation increases the standard of living. (Agarwal & Lenka, 2018; Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2019). Employability is an issue in any country, and to handle this government promotes various programs and policies related to the encouragement of entrepreneurship. The government in India promotes this sector by implementing plans and policies to reinforce EI among the youth. India is considered the second most populated country in the world (World Population Prospects, 2019). Fifty percent of India's population is under 25 years old, and more than 65 percent is below the age of 35. It is anticipated that the average age will be 29 years by 2020, compared to 37 years in China and 48 years in Japan (India Today Web Desk, 2019). Indian government proposes various schemes to strengthen EI among students through an organization called the Ministry of Skill Development and Entrepreneurship (MSDE). They aim to educate and equip potential and early-stage entrepreneurs through online learning facilitated entrepreneurship courses using Massively Open Online Courses (MOOCs). Entrepreneurship education has been assimilated into the mainstream prospectus in 3,000 Indian colleges. These programs are in approximately 325 industrial clusters across the nation, while 50 nodal E-hubs (entrepreneurship hubs) set up across states aim to target existing and potential entrepreneurs for entrepreneurship education according to their needs (Ministry of Skill Development & Entrepreneurship, Government of India, 2020).

The investigation of entrepreneurial students' characteristics assumes distinct relevance for the development of entrepreneurship education courses contributing to the creation of enterprises. The students and youth are trustees of prosperity. Youth force and student force are dynamic in characteristics as most of the skills and orientation are attained in this stage. This significant part of the population contains a reservoir of energy that must be commissioned intelligently to develop society and the world.

This study examines the factors that determine the EI of students through Interpretive Structural Modeling (ISM) and develops a conceptual framework that provides linkages between elements. Dominant and dependent factors will be identified through a MICMAC analysis, which will guide the direction of entrepreneurship research for policymakers, researchers, and academicians. Previous studies determined that students with a propensity for start-up creation possess leadership and self-confidence qualities (Cardon, Wincent, Singh, & Drnovsek, 2009). In addition to this, a study found that entrepreneurship education is essential in envisaging and developing the EI of students (Lee, Lim, & Pathak, 2011). Entrepreneurial intention reinforces the learning and behaviors of future entrepreneurs. Significant factors exist which affect EI, and how these factors relate to each other define the entrepreneurial characteristics of future

entrepreneurs (Roxas, Cayoca-Panizales, & de Jesus, 2008). So, the research questions of this study are:

RQ1: What are the different factors that affect the EI of entrepreneurial students?

RQ2: How are these factors linked with each other?

RQ3: What are the dominant and dependent factors of EI?

This study followed a cognitive approach to explore the factors related to EI and proposed a conceptual framework on EI. The paper is structured as follows: First, the introduction covers the background of the study. Then, the methodology is covered, including the verification of factors completed by ISM and MICMAC approaches and the description of the findings. The paper ends with concluding remarks, implications, and future studies.

Background

Previous studies have shown that researchers mainly attribute EI to three critical factors: an individual's attitude towards entrepreneurial behavior, perceived social norms, and an individual's self-efficacy (Nowiński et al., 2019). Personal and environmental-related factors affect EI, such as characteristics of an individual, attitude, and social factors (Roxas et al., 2008; Sánchez, 2013). EI has been considered a predictor of future entrepreneurial behavior (Sánchez, 2013). Entrepreneurs are made, not born; as they are indoctrinated with entrepreneurial skills through proper entrepreneurship education and training. The learning behavior of future entrepreneurs is affected by various learning modes such as social learning, action learning, and experiential learning. The learning behavior of an individual is affected by internal and external factors. Internal factors might be reflected by the individual's career choices that examine traits and attitudes. Consideration of personality attributes as a means of analyzing entrepreneurial tendencies has a long tradition in research that has been strengthened by McClelland's work in the 1950s (Øystein Widding, 2005). Personality attributes such as locus of control, need for achievement, risk-taking propensity, and self-esteem have been associated in previous studies with the EI of future entrepreneurs (Sánchez, 2013). These traits are involved in the interactive process with the external environment to predict entrepreneurial type behavior. Social learning theory states that the individual learns information from society (parents, teachers, peers, colleagues, films, role models, etc.) (Agarwal & Lenka, 2016). This view maintains that we learn both from observation and direct experiences. This theory is an extension of reinforcement theory, which assumes that behavior is a function of consequences but also acknowledges the effects of perception and observational learning. Entrepreneurs always render the way they perceive, learn, and understand from the external environment (the process of attention, retention, motor reproduction, and reinforcement). Thus, based on the aforementioned discussion, various factors associated with EI are: knowledge, experience, attitude, self-efficacy, openness, family background, innovation, risk-taking ability, self-management, need for achievement, social skill, problem-solving skill, leadership skill, financial skill, marketing skill, entrepreneurship education and training, government policies, and entrepreneurial resilience (Agarwal & Lenka, 2016; Øystein Widding, 2005; Roxas et al., 2008).

Methodology

The various factors that affect EI have been identified from the literature review. A questionnaire has been circulated to experts from the entrepreneurial field to assess the significance of these factors. Thirty-three experts have given their opinion on the selection of essential factors affecting EI. This profile is made up of eight entrepreneurial students, ten individuals associated with educational institutions and expertise in entrepreneurship-related subjects, and fifteen novice entrepreneurs who have at least six months' experience. The experts identified nine significant factors that affect the EI of students. The identified factors are knowledge (F1), entrepreneurial attitude (F2), experience (F3), family background (F4), risk-taking ability (F5), entrepreneurial resilience (F6), entrepreneurship education and training (F7), competencies (F8) and government policies (F9).

Interpretive Structural Modeling (ISM)

ISM is the process of interactive learning. This method considers the expert's opinion on how items are related to each other. The results are presented in a digraph model; direct and indirect relationships between factors describe the situation more clearly as compared to individual elements in isolation. Therefore, ISM provides a more profound and collective understanding of relationships among these factors (Singh, Garg, Deshmukh, & Kumar, 2007).

Interpretive Structural Modeling Steps:

Step 1: Identify critical factors that affect EI with the help of review and expert opinions

Step 2: Establish a contextual relationship between factors with an expert's opinion and develop a structural self-interaction matrix (SSIM). To prepare SSIM (Table 1), seven experts from the entrepreneurial field were approached, and four symbols have been used to denote the relationship between the parameters i and j:

- (1) V: parameter i will lead to parameter j;
- (2) A: parameter j will lead to parameter i;
- (3) X: parameter i and j will lead to each other; and
- (4) O: parameters i and j are unrelated.

Table 1: SSIM

Factors	F2	F3	F4	F5	F6	F7	F8	F9
F1	V	A	A	X	X	O	V	V
F2		A	A	A	O	A	A	A
F3			X	V	V	V	V	V
F4				V	V	V	V	V
F5					A	A	A	O
F6						X	X	V
F7							V	V
F8								V
F9								

Step 3: Frame a reachability matrix from the SSIM as a binary matrix (given the relationship as 1,0 to V, A, X, O) by incorporating the given rules:

(1) If the (i, j) entry in the SSIM is V, the (i, j) entry in the reachability matrix becomes 1, and the (j, i) entry becomes 0.

(2) If the (i, j) entry in the SSIM is A, the (i, j) entry in the reachability matrix becomes 0, and the (j, i) entry becomes 1.

(3) If the (i, j) entry in the SSIM is X, the (i, j) entry in the reachability matrix becomes 1, and the (j, i) entry also becomes 1.

(4) If the (i, j) entry in the SSIM is O, the (i, j) entry in the reachability matrix becomes 0, and the (j, i) entry also becomes 0.

This table (Table 2) incorporates transitivity (A is related to B, B is related to C, thus A associated with C).

Table 2: Reachability matrix

Factors	F1	F2	F3	F4	F5	F6	F7	F8	F9	Driving Power
F1	1	1	0	0	1	1	1*	1	1	7
F2	0	1	0	0	0	0	0	0	0	1
F3	1	1	1	1	1	1	1	1	1	9
F4	1	1	1	1	1	1	1	1	1	9
F5	1	1	0	0	1	1*	0	1*	1*	6
F6	1	1*	0	0	1	1	1	1	1	7
F7	1*	1	0	0	1	1	1	1	1	7
F8	1*	1	0	0	1	1	1*	1	1	7
F9	0	1	0	0	0	0	0	0	1	2
Dependence power	7	9	2	2	7	7	6	7	8	

Step 5: Partition the reachability matrix into different levels with the iteration process.

Table 3: Iteration Tables

Iteration 1

SN	Reachability	Antecedents	Interaction	level
1	1,2,5,6,7,8,9	1,3,4,5,6,7,8	1,5,6,7,8	I
2	2	1,2,3,4,5,6,7,8,9	2	
3	1,2,3,4,5,6,7,8,9	3,4	3,4	
4	1,2,3,4,5,6,7,8,9	3,4	3,4	
5	1,2,5,6,8,9	1,3,4,5,6,7,8	1,5,6,8	
6	1,2,5,6,7,8,9	1,3,4,5,6,7,8	1,5,6,7,8	
7	1,2,5,6,7,8,9	1,3,4,6,7,8	1,6,7,8	
8	1,2,5,6,7,8,9	1,3,4,5,6,7,8	1,5,6,7,8	
9	2,9	1,3,4,5,6,7,8,9	9	

Iteration 2

SN	Reachability	Antecedents	Interaction	level
1	1,5,6,7,8,9	1,3,4,5,6,7,8	1,5,6,7,8	
3	1,3,4,5,6,7,8,9	3,4	3,4	
4	1,3,4,5,6,7,8,9	3,4	3,4	

5	1,5,6,8,9	1,3,4,5,6,7,8	1,5,6,8	
6	1,5,6,7,8,9	1,3,4,5,6,7,8	1,5,6,7,8	
7	1,5,6,7,8,9	1,3,4,6,7,8	1,6,7,8	
8	1,5,6,7,8,9	1,3,4,5,6,7,8	1,5,6,7,8	
9	9	1,3,4,5,6,7,8,9	9	II

Iteration 3

SN	Reachability	Antecedents	Interaction	level
1	1,5,6,7,8	1,3,4,5,6,7,8	1,5,6,7,8	III
3	1,3,4,5,6,7,8	3,4	3,4	
4	1,3,4,5,6,7,8	3,4	3,4	
5	1,5,6,8	1,3,4,5,6,7,8	1,5,6,8	III
6	1,5,6,7,8	1,3,4,5,6,7,8	1,5,6,7,8	III
7	1,5,6,7,8	1,3,4,6,7,8	1,6,7,8	
8	1,5,6,7,8	1,3,4,5,6,7,8	1,5,6,7,8	III

Iteration 4

SN	Reachability	Antecedents	Interaction	level
3	3,4,7	3,4	3,4	
4	3,4,7	3,4	3,4	
7	7	3,4,7	7	IV

Iteration 5

SN	Reachability	Antecedents	Interaction	level
3	3,4	3,4	3,4	V
4	3,4	3,4	3,4	V

Step 6: Analyze the iteration process, prepare the ISM based model by assigning the factors to level wise.

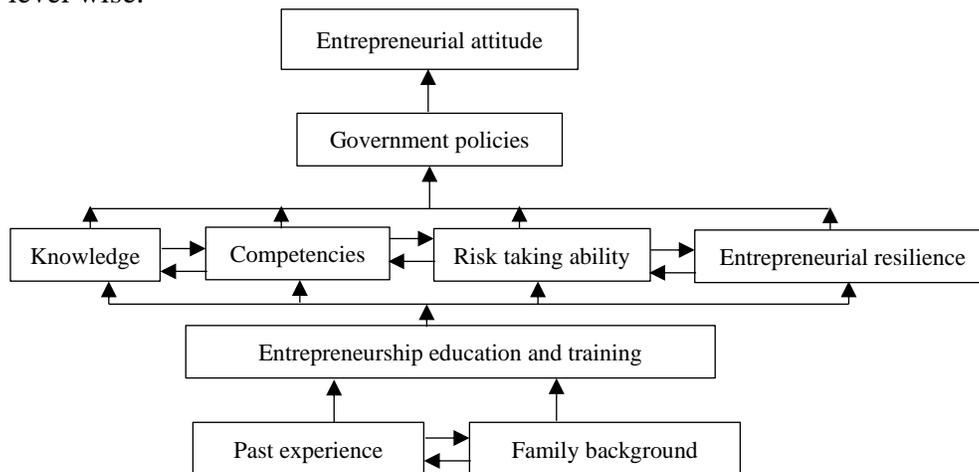


Figure 1: Modeling of student's entrepreneurial intention

Step 7: With the help of the reachability matrix, prepare the dependence and driving power-based diagram (MICMAC approach) which depicts the dependent, autonomous, linkage, and driver's factors.

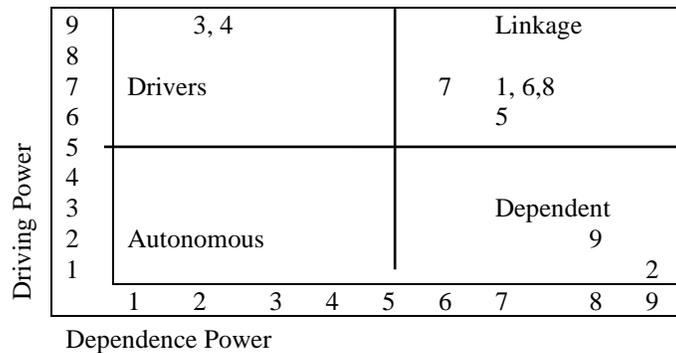


Figure 2: MICMAC approach

Discussion

The study found that:

1. From the above analysis, the ISM-based model emphasized that entrepreneurial attitude is derived from government policies, which means students are more attracted to entrepreneurship by awareness of policies and campaigns.
2. To assess an understanding of government policies, students must have knowledge, competencies, risk-taking ability, and entrepreneurial resilience.
3. Experience and family support correlate with EI and are integral to students' entrepreneurship education and training.

Study results revealed the nine significant entrepreneurial intention predictors. The first factor is an entrepreneurial attitude, which is indicated primarily by a supportive university environment. According to the findings, if a university provides adequate awareness and motivation for entrepreneurship, the ability to choose an entrepreneurial profession can increase among young people. This outcome confirms the critical role that education plays in developing entrepreneurial intention. Therefore, as a result of learning processes entrepreneurship can be encouraged. To strengthen the EI, family background and experience of work are important. From a theoretical point of view, this result is interesting, but it is a wake-up call for educators and policymakers. Business activity is essential to a country's economic growth, and both groups concentrate on developing more successful educational policies.

Future Research

Graduates should focus on entrepreneurship as a profession rather than jobs relying on the government and the private sector. Future research should include public and private universities for a more diverse sample. Additionally, the country's view of corruption and its impact needs investigation.

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What Attributes Determine the Speed of Startup Failure over its Lifecycle? An Empirical Inquiry in India

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Abstract

How soon do tech startups fail, given their lifecycle comprising multiple stages of evolution? What attributes determine the speed of failure of tech startups over their lifecycle? These questions need exploration, particularly in the emerging economy context. Against this backdrop, this study aims to understand and identify a tech startup's life expectancy in India and explore its determinants. We gathered primary data from 151 cofounders (101 failed startups and 50 successful ones) from six leading startup hubs of India and analyzed them using survival analysis techniques. The survival probability statistics ascertain that life expectancy is different across the lifecycle stages. The hazard ratios throw light on stage, revenue, conflict with investors, number of current startups pursued by the cofounder, cofounder experience, level of confidence, and educational qualifications as the attributes that influence startup speed of failure.

Keywords: Startups, Life expectancy, Failure, Entrepreneurship, Lifecycle, Ecosystem, India

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1. Introduction

Tech startups bring innovative products and services to the market and fuel economic growth (Stel et al., 2005), and the innovations can take multiple dimensions (Shepherd & Kuratko, 2009). The high ratio of innovations at lower R&D costs comes with higher uncertainty and multiple challenges (Agarwal & Audretsch, 2001). The challenges encountered by entrepreneurs are many (Roininen & Ylinenpaa, 2009) and perseverant entrepreneur tries to address the challenges with the resources available with them known as internal factors and tries to leverage the resources from the ecosystem known as external factors (Amankwah-amoaah, 2016). If the challenges are not addressed resolutely, the startups are exposed to a high failure rate (Watson & Everett, 1996). This establishes the need to understand a tech startup's life expectancy and identify the attributes that impact life expectancy (Agarwal & Audretsch, 2001; Audretsch & Mahmood, 2013).

The following key research questions are explored: How soon do tech startups fail, given their lifecycle comprising multiple stages of evolution? What attributes determine the speed of failure of tech startups over their lifecycle? This paper explores these research questions based on primary data gathered from 151 cofounders of tech startups. They are spread across the different stages of a startup lifecycle, from India's six major startup hubs.

2. Literature on Life Expectancy of tech startups

Over the last decade, considerable literature has grown up around startup failure under the umbrella of entrepreneurship. The literature review was carried out to understand the landscape of startup failure and life expectancy.

2.1. Startup failure

In entrepreneurship research, the definition of startup failure has become an important topic of discussion. Failure is the inability of an entrepreneur to achieve the desired results. It is characterized by a steady decline in revenue and a steady increase in startup costs (Politis & Gabrielsson, 2007). A failure represents the termination or cessation of a startup operation (Cotterill, 2012b). Considering the planned exit strategy (R. Carter & Van Auken, 2006) and forced exits (Headd, 2003), the above failure definition is insufficient. Failed startups take different exit routes (Jenkins & McKelvie, 2016), and therefore, there is a need for a comprehensive failure definition for the study. Failure is when the firm ceases its operations and loses its identity because of its inability to respond and adapt to changes in the market (Amankwah-amoaah, 2016). After a careful review of startup failure characterizations, the above definition of Amankwah—Amoah was preferred as it encompasses cessation of operations of the startup and the loss of identity of the firm.

2.2. Startup lifecycle stages

Startup evolution has a lifecycle, and it goes through a series of stages requiring a precise execution (N. M. Carter et al., 1996) and the following three options were reviewed for stages:
5 stage model - Inception, Survival, Growth, Expansion, and Maturity (Scott & Bruce, 1987)
4 stage model - Conception, Gestation, Infancy, and Adolescence (KESSLER et al., 2012)

3 stage model - Emergence, Survival, and Growth (Bala Subrahmanya, 2017a)

After reviewing the above options on stages, the three-stage model is chosen, mainly because the choice of a three-stage startup lifecycle establishes distinct and mutually exclusive measurement criteria for each of the stages. It is essential to understand the critical activities involved in each of these three stages.

Emergence: The focus is on developing a proof of concept (POC), a prototype, and a minimum viable product (MVP). The key milestones are customer testing and market identification. The product market fit (PMF) is yet to be established, and the startup is yet to earn revenue.

Stability: The focus shifts to keeping the paying customer with consistent delivery. The key milestones are attracting repeat customers and market penetration with additional customers. The startup tries to establish an organizational framework for delivery. It continues to operate below break-even volume while earning revenue and incurring losses.

Growth: The focus shifts to increasing the market share. The key milestones are scale of operations and market expansion. The market expansion effort results in crossing the break-even volume and earning a steady profit.

2.3. Critical incident leading to startup failure

The startup formation and execution require triangulation of behavioral characteristics of entrepreneurs, internal factors, and external factors leveraged by them:

Firstly, entrepreneurs hone their professional skills and exhibit specific behavioral characteristics. The focus is on three distinct attributes to overcome the fear of failure: Confidence from Hubris theory (Hayward et al., 2006), risk seeking ability from Prospect theory (Kahneman & Tversky, 1979; Shepherd & Kuratko, 2009), and decision making ability from Real options theory (Mcgrath, 1999). Entrepreneurs exhibit key behavioral characteristics in establishing and executing a startup, such as overconfidence, risk-seeking ability, being decisive, and these characteristics are critical and responsible for launching a startup. We can find how the same attributes are harmful during a startup's execution, especially when there are challenges.

Secondly, entrepreneurs command internal factors (Amankwah-amuah, 2016) under their control, such as finance, product, marketing, organization, human resources, and environment (Pardo & Alfonso, 2017). Entrepreneurs have limited resources, and the proportion of factor/attribute requirements varies based on the startup's lifecycle stage. Entrepreneurial execution requires applying the resources judiciously to a varying magnitude at different stages to maximize the returns.

Thirdly, entrepreneurs leverage ecosystem's components, such as mentorship, formal institutions, infrastructure amenities, and information technology (Audretsch & Belitski, 2017). These resources that are not controlled, but leveraged by entrepreneurs, are known as external factors. The availability of infrastructure through tech incubators, accelerators, and coworking spaces enables entrepreneurs to initiate their startups with minimal establishment costs.

The startup creation and execution occur when entrepreneurs' fuse these three factors competently. When these triangulation challenges remain unaddressed, it may lead to critical

incidents, causing startup failures. The level of uncertainty surrounding decisions can lead to actions or inactions (Shepherd, 2003). There are two possible scenarios: first, failing to act when an action is required; and second, acting when inaction is needed, triggering a "Critical Incident," leading to startup failures.

The critical incident leading to a failure can be a single episode or a series of episodes whose complexity is influenced by multiple attributes. One episode triggering a few more series of episodes can lead to catastrophic situations, and the complexity escalates, leading to a startup failure, and it is preceded by a struggle for survival (Cotterill, 2012a). The steep learning curve of an entrepreneur and the lasting memories help to describe what is known as a critical incident (Cope & Watts, 2000). The harsh and expensive lessons learned by an entrepreneur involve intense feelings as they are fully involved with the emotional event of grief recovery (Cope, 2011). Attribution is the process by which an entrepreneur explains the causes of the critical incident. In identifying the causes of failure, there is a need to understand the entrepreneurial execution and manage the attributes efficiently (Pardo & Alfonso, 2017). A cause indicates the reason, and attribution represents the perceived cause. An entrepreneur's perception of why the startup had failed gets attributed. The resource deployment at each stage should get aligned to the expected deliverables at each stage. Any misses on entrepreneurial characteristics, firm level internal factors, and ecosystem leverage availed by an entrepreneur, known as attributes, are explored at the elementary level. It helps in identifying the causes of startup failure. With a detailed understanding of startup failure literature, it is appropriate to identify the critical research gaps.

2.4. Gaps in the literature

The literature review provided a broad overview and the need to study life expectancy. First, the survival analyses on life expectancy consider startup as a single entity (Headd, 2003; Watson & Everett, 1996), and we need to break the startup by its lifecycle stages (Bala Subrahmanya, 2017a). Second, to identify the attributes impacting startup life expectancy, causal attribution needs to be explored. The systematic literature review (Amankwah-amuah, 2016; Kraus et al., 2020; Lattacher & Wdowiak, 2020; Rhaïem & Amara, 2019) and the synthesis of a conceptual framework (Amankwah-amuah, 2016; Klimas et al., 2020) provide the landscape for the study. Third, there are three methods adopted in studying startup failure: qualitative analyses using case-based methods, secondary data analyses, and primary data analyses. We need to identify an appropriate method for performing survival analyses.

In conclusion, the life expectancy of startups to be examined by trifurcating the startup evolution into stages. There is a need to identify attributes that accelerate/decelerate the startup life expectancy. The above gaps can be effectively addressed with the right source of data for survival analyses.

2.5. Conceptual framework

First, the integrative process framework (Amankwah-amuah, 2016) covers the internal factors and external factors. The attributions based structure model (Pardo & Alfonso, 2017) provides a landscape detailing internal factors at the attribute level and personal characteristics. Figure 1 presents the conceptual framework for this study. The triangulation of entrepreneurial

characteristics, firm-level internal factors, and ecosystem external factors leveraged by an entrepreneur are comprehensively addressed in the conceptual framework.

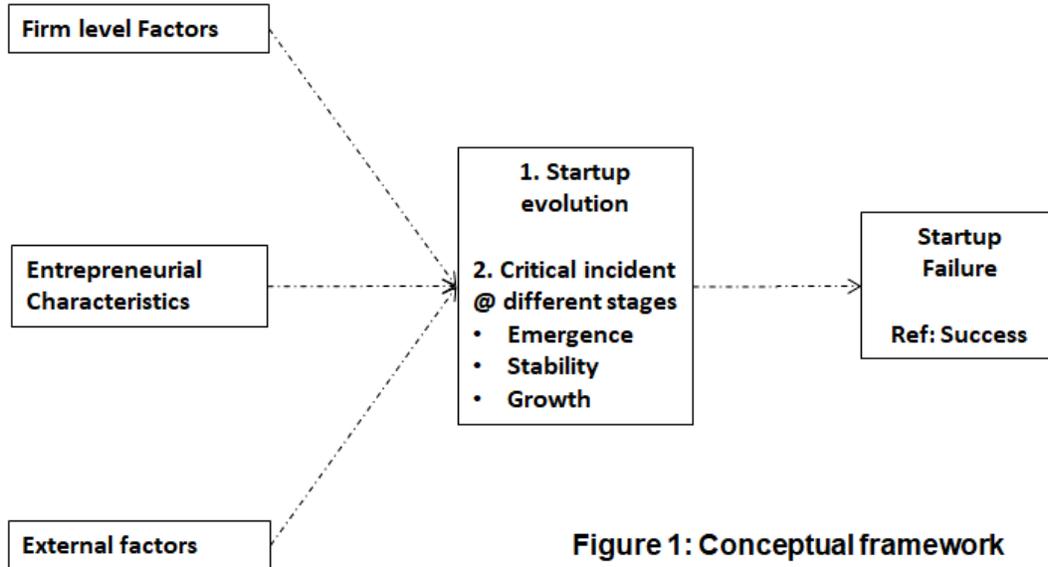


Figure 1: Conceptual framework

Second, the startup lifecycle stages are introduced in the startup evolution and managing the execution (Bala Subrahmanya, 2017a). The challenges vary across the lifecycle stages, which triggers the critical incident leading to startup failures when not addressed. The lifecycle stages are defined: Emergence: Not earning revenue. Stability: Earning revenue but not profitable. Growth: Established revenue stream and operating with-profits

Third, the primary data collection method is a more appropriate option to gather data required for this study, as it enables the gathering of both quantitative and qualitative data.

The conceptual framework is comprehensive, the stage measurements are definitive, and the primary data collection method is identified. This sets the stage to measure the life expectancy of a startup by lifecycle stage and identify the attributes that accelerate/decelerate startup failures.

3. Objective

This study has the following two specific research objectives: Does life expectancy vary between the lifecycle stages? What are the attributes that determine failure? The analyses aim to characterize life expectancy (Agarwal & Audretsch, 2001) variations across the different stages of the startup lifecycle (Bala Subrahmanya, 2017a), namely emergence, stability, and growth. The attributes that accelerate/decelerate the rate at which startups fail will be ascertained.

3.1. Scope

The study is confined to India, a fast-growing emerging economy. It is the third-largest startup hub globally, as per National Association of Software and Service Companies (NASSCOM, 2019). This report classifies six Tier-one cities as established startup hubs: Bangalore, Delhi NCR,

Mumbai, Pune, Chennai, and Hyderabad. Our study has focused on these six cities, which are the country's leading startup hubs (Startup Genome report, 2020).

3.2. Sampling & Data sources

The sample startups identified are from NASSCOM, LinkedIn, and the Department of Industrial Policy & Promotion (DIPP) databases. Each sampling unit was a startup stewarded by a cofounder (CxO). Data were gathered from one of the cofounders, who served as a key informant (Jenkins et al., 2014) with comprehensive information on their startup's evolution, resulting in its success/failure. The semi-structured questionnaire had sections on entrepreneur's behavioral characteristics, internal and external attributes, startup and entrepreneur profiles, followed by details of both startups' and entrepreneurs' exit data. There is a stigma associated with failure in India that posed major challenges for primary data collection, which we overcame with our commitment and determination and obtained primary data from 101 cofounders. The study represents startups incorporated between January 2010 to June 2020, while the data collection period ranged from January 2019 to June 2020.

3.3. Method of Analysis

The survival analysis technique using the non-parametric Kaplan–Meier survival estimation and semi-parametric Cox proportional hazard regression are the most popular methods for investigating the survival time (Chatterjee & Mukhopadhyay, 2013).

Kaplan–Meier survival estimation

The non-parametric Kaplan–Meier survival plots provide a visual understanding of the survival function (Gelfand et al., 2016; Hornuf et al., 2018). Kaplan–Meier plots survival function against time and is useful when the survival probabilities are compared between distinct groups. Kaplan–Meier estimator is a step function with discrete intervals at each observed event times, but not at the censoring times (Chatterjee & Mukhopadhyay, 2013).

The survival function provides the unconditional probability that a subject survives past time t

- $S(t) = \text{Probability}(T > t) = 1 - F(t)$, where
- $F(t)$ is the cumulative distribution of the response variable T , denoting time to failure
- at $t = 0$, $S(0) = 1$ and $t = \infty$, $S(\infty) = 0$

The first objective probes whether life expectancy varies between the three different lifecycle stages, which is examined using Kaplan–Meier statistical estimation. The log-rank test statistic guides to interpret the statistical significance between distinct groups.

Cox proportional hazard regression

The semi-parametric Cox proportional hazard regression (Agarwal & Audretsch, 2001; Audretsch & Mahmood, 2013; Bala Subrahmanya, 2017b; Chatterjee & Mukhopadhyay, 2013; Hechavarría et al., 2016; Hornuf et al., 2018) is the most preferred method by researchers for survival analysis. The rate at which the event happens is measured by the hazard function, and it is independent of the underlying distribution of the survival time. The Cox proportional hazard

regression separates the time-dependent and time-independent parts appropriately (*Sir David Cox / British Statistician / Britannica, 2020*).

The hazard function gives the instantaneous rate at which events occur.

- $h(t) = f(t) / S(t)$ is the hazard
 - where $f(t)$ is the probability density function with respect to time t to failure
- $H(t)$ is the cumulative hazard and $H(t) = -\log S(t)$

The Cox proportional hazard regression equation is as follows:

- $h(t) = h_0(t) * \exp(\beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n)$
- $h_0(t)$ is the baseline hazard function and depends on time
- $\exp(\beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n)$ does not depend on time
 - β 's the model coefficients of each covariate, and X 's are the covariates

Hazard Ratio (HR) is a ratio of hazards. $\text{Exp}(\beta) = \text{Hazard of treatment group} / \text{Hazard of the control group}$. $\text{HR} = 1$ shows that the variate has no impact on the risk of the event. $\text{HR} < 1$ shows that variate reduces the risk of the event. $\text{HR} > 1$ shows that the variate increases the risk of the event

The semi-parametric Cox proportional hazard regression was used to explore the second objective to ascertain the attributes that determine failure. The study uses survival analysis techniques as it is the most appropriate technique to analyze the objectives until the event of interest occurs.

3.4. Variables

We defined the outcome variables, predictor variables, and control variables for this study.

Outcome variables

- ✓ **Event:** The failed startups are marked as having an exit event while successful startups are operating and right censored. 101 failed startups with an exit event and 50 successful startups continuing their operations are right censored.
- ✓ **Survival Time:** The measure of time to event or censoring is defined in months.
 - Failed startups that had an exit event: Startup exit date – Startup registration date
 - Successful startups that are operating and right censored: Study close date – Startup registration date

Predictor variables

- **Startup lifecycle stages:** Emergence, Stability, and Growth
- **Internal factors:** The factors controlled by the entrepreneur are under six groups: Finance (7), Product (5), Marketing (5), Organization (6), HR (4), and Environment (6). The numbers in brackets show the number of causal attributes on a Likert scale of 1 to 5.
- **External factors:** The factors leveraged by the entrepreneur are beyond their control, such as mentorship, seed grants, government policy benefits, and infrastructure availed.
- **Entrepreneur behavioral characteristics:** An entrepreneur exhibits key behavioral characteristics in initiating and executing a startup, such as overconfidence, risk seeking ability, and being decisive.

Control variables

Startup Profile: Nine different attributes were considered part of a startup profile

Entrepreneur Profile: Nine different attributes were considered part of the entrepreneur profile

4. Analysis results and discussion

First, we did a descriptive analysis of survival time. The non-parametric Kaplan–Meier estimator was used to studying the first objective on life expectancy. The semi-parametric Cox proportional hazard regression was used to explore the second objective on attributes determining failure.

4.1. Descriptive analysis of survival time

A simple descriptive statistical analysis was used to understand the survival time. The Shapiro–Wilk statistic (W at 0.881, $p < 0.001$) for the startup survival time shows that data are not normal, and it is appropriate to interpret the median. The median survival time of a tech startup is 29.9 months, i.e., nearly two and a half years. The median survival time is reviewed from three different perspectives.

- i. **Median survival time by status:** It is observed that the survival of a successful startup is 31.3 months when compared to that of a failed startup, which is at 28.8 months.
- ii. **Median survival time by stage:** The survival of a startup at the emergence stage is 24 months, while that of the stability stage is 30.1 months, and the growth stage is 49.5 months. The variance between the three stages seems to be significantly different.
- iii. **Median survival time by status_stage:** To assess the interaction impact of two levels of status with three levels of the lifecycle stages, six different status-stage combinations data were reviewed. The median survival time by status_stage combination has a significant difference. The results obtained from the preliminary analysis of median survival time sets the stage to analyze the survival time using Kaplan–Meier estimates.

4.2. Does life expectancy vary between the lifecycle stages?

The outcome variables, namely, survival time and event information, were used to plot the Kaplan–Meier survival graph using the SPSS package. The survival graph has a steep slope over the initial period of 40 months, portraying the vulnerability of the tech startups to failure. It is observed that 25% of the startups exiting in 22.3 months, 50% of the startups exiting in 36.7 months, and 75% of the startups exiting in 71.1 months. The failure rate from the survival function (R. Carter & Van Auken, 2006; Headd, 2003; Watson, 2003) of startups was extrapolated. The startup failure rate shows a rapid increase from 7.5% at the end of the first year to 82.2% at the end of the seventh year, reaching alarming levels. The results are comparable with the study done in the USA (Headd, 2003). The startup failure rate graph is quite revealing and emphasizes the need to understand this phenomenon in detail. Under this backdrop, the survival function is examined by each of the three lifecycle stages.

The predictor variable, i.e., the stage, was introduced as a factor in the survival plot. The survival curves do not overlap, which signifies the survival time variation by lifecycle stages. The Log Rank test results (Chi-squares 21.386, DF 2, and $p .000$) show statistically significant results,

which confirm that the survival time varies by stage. The results indicate statistically significant evidence to reject the null hypothesis and conclude that life expectancy varies between the three different lifecycle stages. The median survival time review shows that emergence stage startups are experiencing early failure at 27.2 months, while stability stage startups survive up to 34.5 months, and growth stage startup survival is high at 79.5 months. With the insights gained from survival curves, the failure rate of startups was extrapolated by stage and plotted. First, emergence stage startup exits are skewed over the first three years, and 80% of the startups fail by the third year. Second, stability stage failure accelerates from the second year to peak at 88% by the sixth year.

In summary, the life expectancy variation between the lifecycle stages of a tech startup has been ascertained. The emergence stage startup failures are indicated by a lack of revenue. The superior product or service delivery, identification of the market, and paying customers should lead to revenue for the startup. The stability stage startup failures are indicated by a lack of profit. The volume growth to reach the break-even level of operations, establishing organizational mechanisms for consistent delivery, retaining the existing customers while there is a parallel effort to look for market expansion should lead to profit for the startup. The growth stage startup failures had varied challenges.

4.3. What are the attributes that determine tech startup failure?

The semi-parametric Cox proportional hazard regression model is used for this analysis. The hazard ratio is the central statistical output (Bala Subrahmanya, 2017b) from the Cox proportional hazard regression, and the following hypotheses were tested.

Ho: Hazard Ratio, $HR = 1$, shows attribute has no impact on the risk of the event.

Ha1: Hazard Ratio, $HR > 1$, shows attribute increases the risk of the event.

Ha2: Hazard Ratio, $HR < 1$, shows attribute reduces the risk of the event.

The Cox proportional hazard regression model analyses were carried out using the SPSS package. Survival time data and event (failure of startup) were used as output variables. The following predictor variables are defined in blocks, and the stepwise backward likelihood ratio Cox regression model was used.

- Block 0: No covariates
- Block 1: Stage enters as a categorical covariate. The growth stage is defined as a reference to predict the hazard ratio of emergence and stability stages. Two Cox regression models were generated to see the impact of the stage. Model 1 with the stage as a covariate and Model 2 without stage as a covariate.
- Block 2: Since the number of predictor variables is on the higher side, the non-parametric Kruskal Wallis test was used to identify the attributes which impact status_stage. The status_stage option was chosen as they are more impactful collectively than individual treatment of status or stage. Only the significant attributes are considered for the Cox regression proportional hazard model. Out of the 33 internal attributes, 15 are statistically significant. Of the four external attributes, none of them is statistically significant. Out of the six entrepreneur behavioral characteristics, three of them are statistically significant.
- Block 3: Startup profile attributes

- Block 4: Entrepreneur profile attributes

The results indicate that emergence stage and revenue determine failure, and it may pose a question of whether the attributes are not correlated? To understand this, the Cox proportional hazard regression was executed with stage and without stage, respectively, and the results were compared. The two model comparison results indicate that stage provides a more deflective hazard rate and adds more determining attributes to the model. This proves that the emergence stage is a clear milestone with more deliverables and not limited by revenue component alone. One more key observation is that the revenue issues are present across the lifecycle stages but more prominent and visible in the early life cycle stages. With this inference, model 1 is used for subsequent interpretation of the results. The results indicate that the final Cox regression proportional hazard model is significant with the Chi-Square value of 72.6, DF of 13, and statistically significant with a p-value of less than .05 significance level.

The HR (Hazard Ratio) is expressed in the form of $\text{Exp}(B)$. Out of the 13 covariates in the final model 1, eight are statistically significant, and five are not. The above statistical evidence is against the null hypothesis. The eight attributes with $\text{HR} \neq 1$, which means they determine startup failure, are interpreted as follows. Life expectancy accelerators with $\text{HR} > 1$ in five attributes. Life expectancy decelerators with $\text{HR} < 1$ in three attributes. The attributes determining startup failure are discussed one by one.

In summary, the attributes that determine startup failure are identified. When the startup ascends from one stage to the next, it reduces the hazard of a startup significantly and increases life expectancy. This implies that the progression into successive stages from emergence to stability and stability to growth enhances the longevity of the tech startup. The focus on revenue and avoiding conflict with the investor are the next two key attributes an entrepreneur should give attention. Focusing on the current startup and not straying with multiple startups can help the entrepreneur progress and prosper with the startup. The higher level of confidence at execution, balanced and complementary skills of cofounder experience, and higher educational qualification of a cofounder are the other key attributes that will impact a tech startup's life expectancy.

5. Conclusions and implications

The life expectancy was measured by survival time, and the Kaplan–Meier survival graph found out the life expectancy variation between the lifecycle stages of a tech startup. The attributes determining startup failure were identified using Cox proportional hazard regression. This empirical study on the tech startup life expectancy has the following two practical/policy implications.

First, to the entrepreneur to plan for resources and be aware of the potential pitfalls in their startup journey require a correction. The focus on product and establishing the product market to get revenue to move into the next stage. The next priority to establish the operating mechanisms for superior delivery to get into the higher stage. The awareness of life expectancy and determining factors should help an entrepreneur to plan their very vital runway. The need to establish a conflict resolution mechanism with investors is emphasized.

Second, policy support should be differentiated to meet the challenges of startups' lifecycle stages and should be progressive. The current policy mechanisms and measurements are more focused on giving birth to more startups. The focus should get shifted to establishing the right measures and boosting the immunity of the startups, which are crawling and walking to reduce the higher socio-economic costs.

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Emergence and Scaling of Incubators with Government Support in India

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Abstract

Incubator performance studies presume incubators' emergence and look at outcomes at startup, incubator, university, and system levels. In transitioning economies, where private sector participation is meager, incubator emergence cannot be presumed. Hence, incubators' emergence and performance with government support needs an investigation. We examined the role of the Department of Science and Technology (DST), Government of India, in the development of incubators in six Indian states. DST grants have led to a qualitative emergence and resource munificence of incubators. Yet, these incubators show divergence in both scale and efficiency in providing entrepreneurship support. We find that specialized incubators exhibited longer-term commitment in startup investments while being efficient as well. The university-based incubators did not scale as much as non-university-based incubators. Based on the findings, we draw policy implications for incubation in India by adopting specialization as a strategy and public-private development models.

Keywords: entrepreneurial ecosystem, incubation, Start-ups, government support, efficiency

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- Introduction

Technology business incubators form an indispensable part of such an entrepreneurial ecosystem (Mason and Brown, 2014). Globally, nurturing entrepreneurial ecosystems stems from the need for regional development. Systemic views on entrepreneurial ecosystems identify several

components, including universities, large firms, government policy supporting industry, mentors, and entrepreneurial support actors (Bala Subrahmanya 2017). Incubators are support organizations for technology startups, and they have a multitude of stakeholders like universities, government, MNCs, markets, and investors. These stakeholders have different roles and objectives in technology, startup emergence, support, and development. Incubators lend external legitimacy to startups and resolve their liability of newness and smallness in early stages and provide them with necessary resources (Freeman, et al. 1983; Singh, et al. 1986). Much of the empirical research on incubation from developed economies presumes that incubators are already emerged and focus on processes, and outcomes at different levels. Whereas, in the context of an emerging economy, the emergence of incubators themselves have to be studied. We contribute to incubator literature on two fronts, firstly we use an external resource based view on the emergence and development of incubators using government support, secondly, we evaluate the impact of such development by examining at the scale of entrepreneurship support and efficiency in using the government provided funds. The rest of the paper is organized as follows, following this introduction we provide a brief literature review. In the third section we frame the research problem and the research objectives, and in the fourth section, we present our main analysis and results. In the final section, we present our conclusions and derive implications for incubator development in India.

- Literature review

Governments' support for incubation became necessary when market-based mechanisms did not develop quickly to support entrepreneurship (Audretsch, et al. 2007). There are various gaps and deficiencies in the support available for smaller firms, including infrastructure, access to finance and other resources. The inadequacy of private sector participation to provide such services at modest returns made a further case for public assistance to small firms (Commission, 2002). Thus, the role of government in bridging the gaps in entrepreneurial support became important. This is generally not the case in developed economies where the infrastructure is already well developed and there is broad private participation in providing entrepreneurial support. Nevertheless, governments globally have spearheaded developing support structures for entrepreneurship both within and outside of universities.

The development of incubators was aided by several local and national governments worldwide, including a blanket support to science parks from the EU in the 1990s. Such a support led to proliferation of the incubator models across the world and subsequently academic research interest in incubation has increased over the years. Incubators have proliferated and evolved in the last three decades in the developed economies. In addition to providing basic infrastructure as the primary service, incubators provided other services including mentoring, networking and technology commercialization enablement. They further evolved to provide specialized services and integrated with institutions like universities for better resource access (Mian et al., 2016). In an emerging economy context, incubation may be evolving differently, with infrastructure, mediation services and specialization developing simultaneously with government support. Studies covering the attraction of grants by incubators are underrepresented in extant literature (Lalkaka, 2006).

The support from government comes with a burden of objectives to be achieved (Aerts, Matthyssens, and Vandenbempt, 2007). These include creating new ventures, jobs, commercialization of research, and delivering specialized services (Carrasco and Aceytuno, 2015). Over the years, incubators adopted different strategies and processes to achieve these objectives (Hackett and Dilts, 2004). Policy objectives vary depending on the national priorities, the local context and sector specific objectives. Policy assistance for incubators may be for a limited period, beyond which the incubators are expected to become self-sufficient, although policy makers develop guidelines to set up incubators and tools to evaluate incubator performance (Shapira, 1997; Gerlach and Brem, 2015). There are not many studies around the emergence and performance of incubators receiving government support (at the central, state government, city, or local region levels) (Abetti, 2004; Indiran, et al., 2017).

Due to the heterogeneity in incubator definitions, developmental paths, and local peculiarities, various types of incubators emerged and got represented in literature. Extant literature notes significant differences in performance among regional development and university types (Barbero, et al., 2012). Incubators performance varies when incubators are classified considering the institutional mission, location, sector, period of incubation, sources of revenue, among others or looking at the process of selection, support and mediation provided by the incubators or by the specialization of the incubators (Grimaldi and Grandi, 2005; Bergek and Norrman, 2008; Schwartz and Hornyh, 2012). Measuring incubation performance for each stakeholder involved is difficult, due to multiple and flexible targets (Alsos, Hytti, and Ljunggren, 2011). There is a lack of systematic framework to understand the performance of incubators. This emerges primarily from a lack of clarity regarding the nature of performance itself. Incubator performance may be evaluated at four levels 1. at the level of science parks and incubators, 2. at the startup level 3. at the entrepreneur level, and 4. at the systemic level (Phan 2005). We prefer evaluating performance at incubator level that has received government support.

There is opportunity to add to empirical research to compare incubator performance, particularly covering emerging economies. In this backdrop, we examine the Government of India's institutional mechanisms that sponsor incubator establishment and development across the country. There is a need to develop and scale infrastructure for entrepreneurship support with facilities, mediation and other resources. Hence, we will limit our focus to the government's role in providing grants to develop incubator infrastructure and providing financial access to startups through incubators.

Research objectives, scope and methodology

Objective

Our exploratory research objective is to examine the emergence and performance of incubators relying on government support. We consider a typology of four orthogonal incubator characteristics, including age, location, specialization and university-base of the incubator for studying this objective.

The government provides grants for development and continuing operations of the incubator, this impacts the number and types of incubators established in the country. At this macro level we propose the following hypothesis,

Hypothesis 1: The degree of government support is associated with the incubator typology (age, economic geography, specialization and university-base).

Incubators utilize such government support for two ends: (i) to develop infrastructure and operate the incubator, (ii) to provide financial access to technology startups. The scale and efficiency of the incubator in providing entrepreneurship support may also differ among incubator types. This led us to two hypotheses at the incubator level, as follows:

Hypothesis 2: The scale of incubation is associated with the government support received and incubator typology.

Hypothesis 3: The efficiency of utilization of government support received is associated with the incubator typology.

Scope

The technology business incubators in India are mainly sponsored by the Department of Science and Technology (DST), Government of India. The data for the analysis were collected from DST on the quantum of grants provided to the incubators. Further we collected data from the individual incubators on how they have utilized the grants. DST support included capital expenditure and some recurring operating expenditure of the incubator (capopgrant). DST also provides a seed support scheme grant (sss), which provides the incubators the initial reserve of funds. Seed funds are ultimately disbursed to technology startups supporting them financially in early stages. We limit ourselves to incubators that have received grants among six industrialized states in India. These six states include Andhra Pradesh (AP), Telangana (TL), Maharashtra (MH), Gujarat (GJ), Karnataka (KA) and Tamil Nadu (TN) for the study. These states have higher than the national average state per capita GDP and growth, higher levels of human development indicators, urbanization, and higher education and research universities (Finance, 2018; RBI, 2020). We take forward an ex-post facto, comparative, cross-sectional, exploratory study of incubators that have received government support through the DST's institutional mechanisms. 54 incubators had received some grants from the DST across these six states. Before we begin, we provide the definitions of the typological characteristics considered. University-based incubator UBI (univ): A not-for profit organization hosted at a research or higher education university that supports the emergence and development of startups at the university. Non-UBIs have hosts that are not universities.

Specialization (spln): An incubator is considered specialized if it supports no more than one industry classification. For this we consider the disclosure given by the incubator to DST and compare it against the National Industrial Classification first digit code (Labour Bureau, 2017).

This is a strict classification and hence we can expect the number of incubators that are considered to be specialized to be very small compared to the overall number of incubators.

Tier-1 City (city): A city where the incubator is located is considered Tier-1 if they are classified as "X" based on the statute by the Department of Expenditure, Ministry of Finance, Government

of India (Finance, 2015). Tier-1 cities are larger urban agglomerations and contribute significantly to state GDP, while other cities are relatively smaller.

Age (incubage): This is the age of the incubator in years.

Methodology

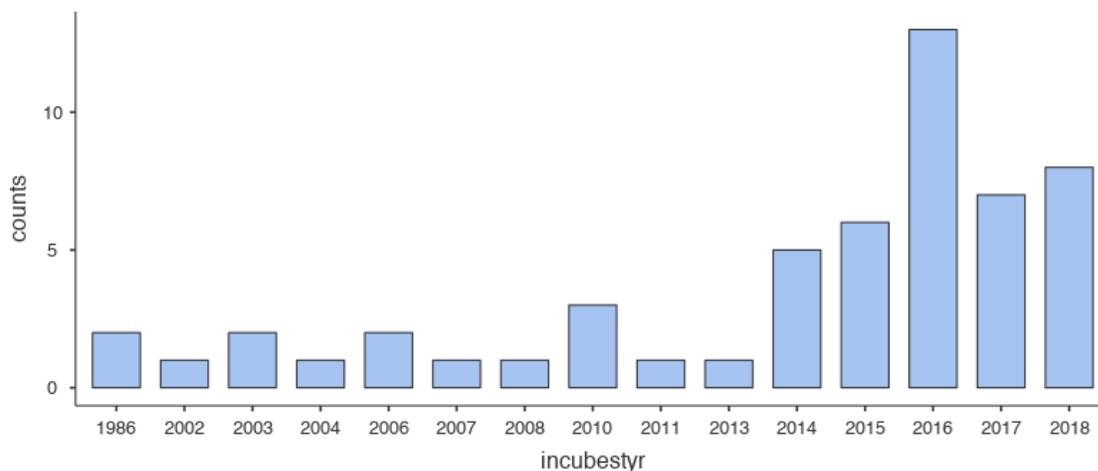
For examining macro level incubation support by the government, we take forward a linear regression on the amount of capital grants provided to incubators considering their typology. This will help us understand the institutional mechanism's preferences. Further at the macro level, we look at the likelihood of an incubator receiving grants under the seed support scheme, and for this we rely on logistic regression.

In the second part of the analysis we look at how incubators have utilized the macro level incubation support, particularly looking at the efficiency of utilization of grants, and scale of incubation achieved by the incubators considering the same typology. We rely on non-parametric ANOVA to compare distributions among the incubator types.

Results and discussion

In this section we present the results from our analysis on attraction and utilization of government grants by the incubators in the six states. We firstly provide summary of the context on the distribution of support provided by DST over the last three decades to incubators. We can note from figure 1 that the incubator phenomenon is fairly early stage and provision of grants is frequent and broad based only in the recent years particularly since 2014. Although different programs have been supported in the 1980s, this institutional mechanism has sustained over three decades and four different dispensations in the government.

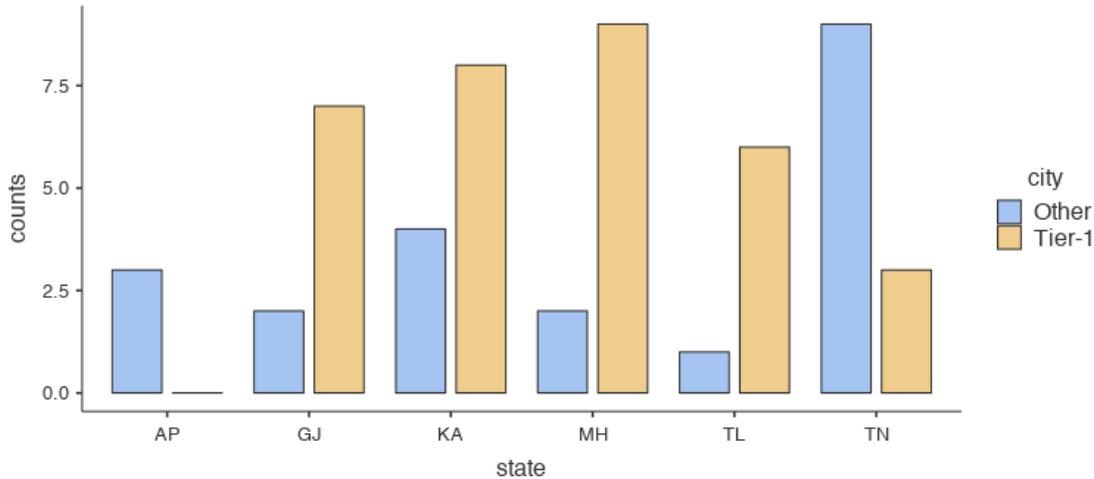
Figure 1: Number of incubators supported by DST in the top 6 industrialized states by establishment year (1986 – 2018)



*note the break in years when no incubators were established with DST support

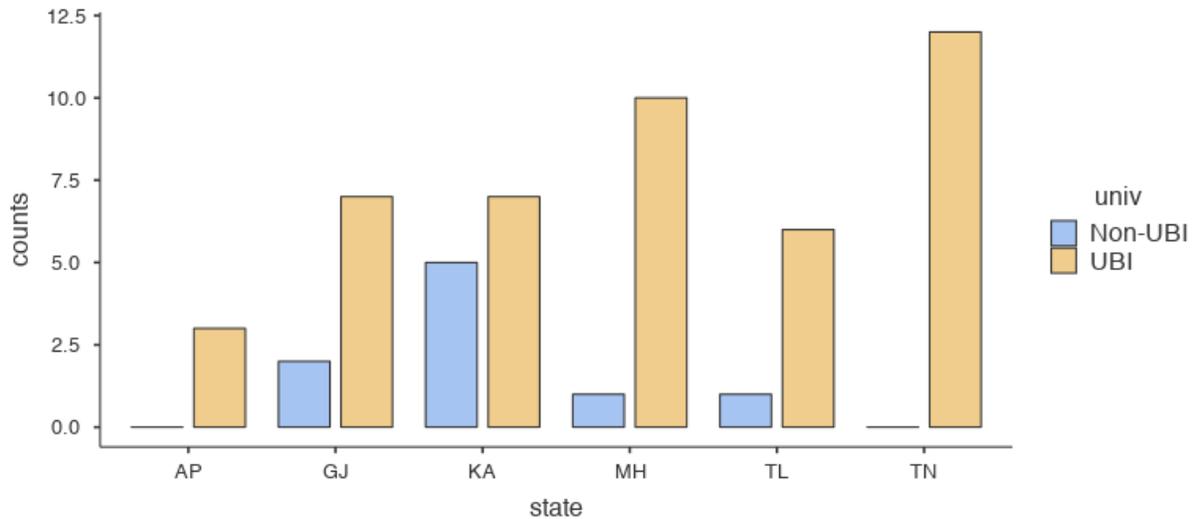
TN and KA host the largest number of incubators among these 6 states (see Figure 2). Further from the distribution of incubators between tier-1 and other cities, the number of incubators is higher in tier-1 cities. AP as a particular case does not yet have any tier-1 city as it is a newly bifurcated state. MH had 2 tier -1 cities namely Mumbai and Pune.

Figure 2: Number of incubators in the six industrialized states by city



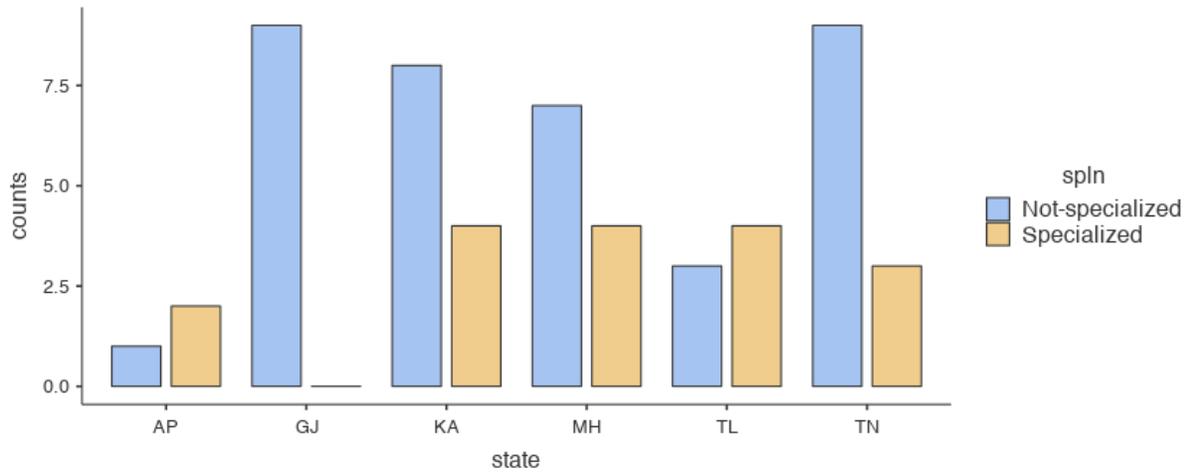
At the outset we can note that across all the states, the number of UBIs are higher than non-UBIs (see Figure 3). Further, we noted that higher education and research universities were concentrated in tier-1 cities.

Figure 3: Number of incubators in the six industrialized states by university-base



Specialization as a strategy is not very common among incubators in these six states (see Figure 4). We can note that it is early stage in the evolution of incubators to be specialized for specific industry sectors or invest in specialized infrastructure, but these are considerable beginnings.

Figure 4: Number of incubators in the six industrialized states by specialization



While there are more specialized incubators hosted in universities, in general, the number of specialized incubators is much less compared to incubators that are not-specialized. Importantly, Non-UBIs also can develop specialization. A UBI can develop specialization along more than one sector, especially with the existing research infrastructure. In figures 5 and 6 we can note that UBIs, tier-1 cities and not – specialized incubators have garnered a large proportion of the government capital and seed fund support.

Figure 5: Number of incubators in the six industrialized states by university-base and specialization

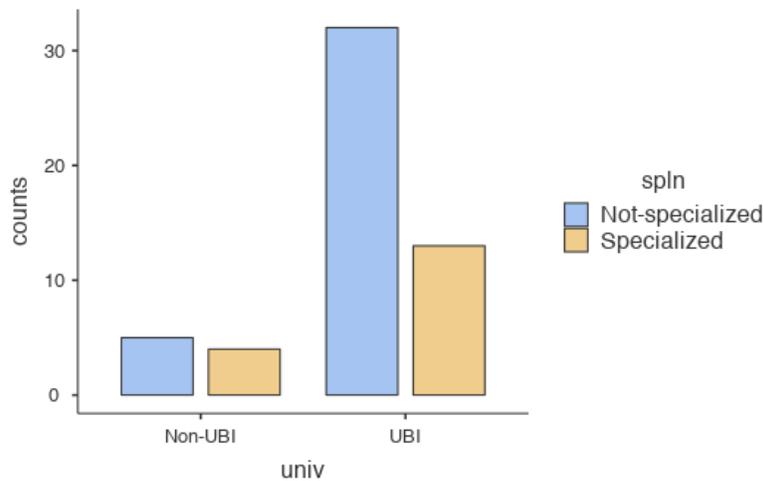
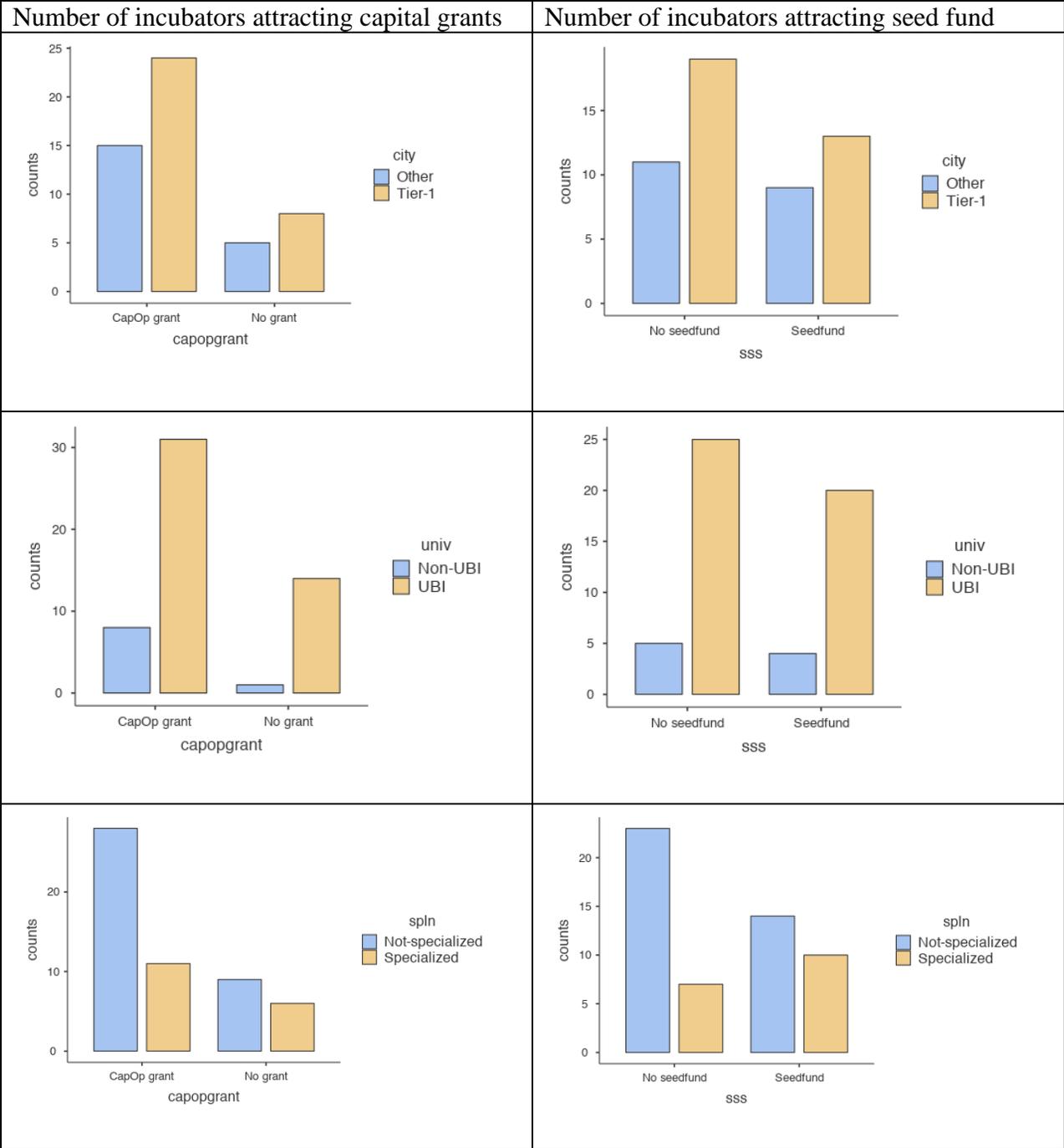


Figure 6: Number of incubators attracting government grants by city, university-base and specialization



Attraction of capital grants by incubators

For examining, the effect of typology on the extent of government support, we relied on multiple linear regression with the model in equation 1.

Equation 1

We converted the sanctioned amount to constant prices appropriately, using the index figures used for this conversion, from the Ministry of Finance notification (Income Tax India, 2019). The dependent variable was the total grant (totalsanc, that includes both capital and operational grants). The overall model was significant with $F(4, 34) = 2.89$; p -value = 0.037 and explained about 25% of the variance. The model summary is provided in Table 1. Further in this model, the incubator age was turning out to be significant, with 95% confidence intervals (-0.806, -0.201), showing the clear directionality of the relationship. The results indicated that younger incubators were getting more capital and operational grants from the institutional mechanism, thus supporting new incubators' emergence. The assumptions on normality, linearity, equality of variances and multi-collinearity for carrying out the regression were met adequately.

Table 1: Linear regression model results for total government grants against incubator typology

Dependent variable - totalsanc					
Predictor	Stand. Estimate	p	VIF		
Intercept ^a		< .001***			
incubage	-0.5032	0.002***		1.01	
univ: UBI – Non-UBI ^a	-0.0604	0.874		1.09	
city: Tier-1 – Other ^a	0.0206	0.948		1.10	
spln: Specialized – Not-specialized ^a	-0.1580	0.635		1.03	
^a Represents reference level					
Number of observations: 39; $R^2 = 0.254$; Adjusted $R^2 = 0.166$; F- statistics: $F(4,34) = 2.89$, $p=0.037$					

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Attraction of seed funds by incubators

We formulated a logistic regression model for the incubators' attraction of seed funds, given in equation 2.

Equation 2

P_i is the probability of an incubator getting seed funds from DST, and β s are the exponentiated coefficients of the independent typological variables.

The logistic regression model itself was significant in predicting if an incubator will attract seed support scheme against the incubator typological variables (with $\chi^2(4) = 38.2$; p -value < 0.001). The model could predict with 81% accuracy if an incubator is likely to get seed fund. The incubator age was turning out to be significant and the odds ratio indicated that older incubators were more than two times more likely to get seed funds. This directionality of relation was further confirmed from the 95% confidence interval of incubator age (1.3438, 4.610). The logistic model summary is provided in Table 2.

Table 2: Logistic regression model results: Seed funds against incubator typology

Predictor	Estimate	Odds ratio	P
Intercept	-4.165	0.0155	0.018***
incubage	0.912	2.4890	0.004***
spln: Specialized – Not-specialized	1.350	3.8565	0.144
univ: UBI – Non-UBI	-0.959	0.3834	0.344
city: Tier-1 – Other	-0.817	0.4417	0.374
Number of observations: 54 incubators; seedfund: 24 seedfund, 30 no seedfund Deviance: 36.0 R ² Cox and Snell: 0.507 R ² Nagelkerke: 0.609 Model χ^2 statistic: $\chi^2(4) = 38.2$; p-value <0.001 Model accuracy: 81.5%; AUC: 0.920			

***p<0.01, **p<0.05, *p<0.1

Although the incubator specialization's odds ratio was high, the variable itself did not turn out to be significant. We attribute this to the lesser number of specialized incubators in the overall sample (17/54 or only 31%). The area under the curve was 0.920 indicating that the model worked well across the distribution of incubators. This result was interesting, considering that while the institutional mechanism encouraged newer incubator establishments, it was entrusting seed funds primarily to older (and established) incubators. This preference in turn influences the number of startups to apply to the older incubators looking for seed funds.

Utilization of capital grants by incubators

We proceeded with a series of non-parametric ANOVA (Kruskal Wallis test) testing the distribution of efficiency and scale of these incubators against their typology. The results of the tests are shown in Table 3. The capital grants utilization efficiency differed between the specialized and the non-specialized incubators and the effect was moderate. The non-parametric ANOVA test on the scale represented by the number of startups incubated showed that there were significant differences between relatively old (more than 4 years) and young incubators. This showed that older incubators have scaled well to support more technology startups with a moderate effect. There was also moderate effect when compared between the city of incubators, where tier-1 city incubators supported a larger number of technology startups. There was a large effect in terms of scale among the incubators considering their university base. Although UBIs cumulatively support a larger number of startups, the Non-UBIs have had a greater number of startups on average. In our sample, the 45 UBIs in total supported 2326 startups, while the 9 Non-UBIs supported 425 startups. So, we can see that Non-UBIs have scaled much better than UBIs.

Table 3: Summary of ANOVA results: Grants utilization efficiency and incubation scale

Scale/ efficiency	Incubage (old-young ^a)	city (tier1-others ^a)	univ (UBI ^a -Non UBI)	spln (Specialized – Not specialized ^a)

Efficiency of capital grants utilization	-	-	-	$\chi^2(1) = 4.488$; p=0.034**; $\epsilon^2=0.1181$;
Scale of incubation	$\chi^2(1)=2.9347$; p=0.087*; $\epsilon^2=0.0889$;	$\chi^2(1)=3.3801$; p=0.066*; $\epsilon^2=0.1024$;	$\chi^2(1)=7.163$; p=0.007***; $\epsilon^2=0.217$;	-
Efficiency of seed funds utilization	-	$\chi^2(1)=3.9679$; p=0.046**; $\epsilon^2=0.180$	-	-
Scale of seed funding into startups	-	$\chi^2(1)=3.0534$; p=0.081*; $\epsilon^2=0.153$	-	-
Equity investments proportion of total seed investments	-	-	-	$\chi^2(1)=3.7663$; p=0.052*; $\epsilon^2=0.171$;

***p<0.01, **p<0.05, *p<0.1

[moderate effect]

[large effect]

^a indicates reference level

The scale is higher among older incubators, as they have gained legitimacy over the years and can support a greater number of startups. The tier-1 city incubators supported a higher number of startups than other city incubators. This is both a matter of supply, with many startups registering and moving to active entrepreneurial ecosystems and a matter of demand as incubation in tier-1 cities is higher than in other cities (Bala Subrahmanya, 2017). Finally, the university-base of the incubator presents a picture where, the Non-UBIs have scaled far more than the UBIs, and can support a higher number of technology startups. There were a few cases where Non-UBIs have invested significantly to scale up and specialize their infrastructure with private investments. This indicates, firstly, the latent demand exists for incubation, and secondly, the Non-UBIs were specializing and catering to startups at a larger scale.

Utilization of seed funds by incubators

Seed funds are transmitted to startups through incubators because the government cannot directly do such investments into private entities using public funds. Thus, the incubators clearly perform the role of transmission of financial support given by the institutional mechanism. Seed fund efficiency is defined as the ratio of total amount disbursed to startups by the incubator over the amount sanctioned by the institutional mechanism. The sanctioned seed support funds become available to the incubators over several years. Therefore, converting these amounts to constant prices become necessary. Further for the analysis of scale, we consider the number of startups that have received seed funds through the incubators. Furthermore, there were differences among the incubators in the type of instrument used for funding startups and the amount of funding given to individual startups. Therefore, additionally, we examine these differences using the typology.

A total of 24 incubators had received seed fund support from the DST across these six states. We proceeded with conducting a non-parametric ANOVA Kruskal Wallis test for both scale and efficiency. The result of the analysis is presented in Table 3. There was a large effect on scale among incubators considering the economic geography, as the tier-1 city incubators tended to seed fund more startups. Urbanization and agglomeration effects seem to have mattered in seed funding as well.

Investment type is the preference towards specific instruments used for investing. Equity and debt are common investment types. Due to uncertainty in technology, market and a startup reaching the growth stage, equity investments are considered a high commitment, high risk and provides returns only over the long term. Whereas debt-based investments into technology startups is considered a low commitment, less- riskier and provides return over the short term in the form of interest payments to the incubator. Incubators that rely on the institutional mechanism for seed fund support, use equity or debt or combination of these instrument types to support startups financially. The combination instruments included compulsorily convertible debt, where the debt investment gets converted into equity at a future date. We relied on non-parametric ANOVA on the dependent variable viz. the proportion of startups receiving investments in direct equity type with a longer term commitment from the incubator.

Tier-1 city incubators have done more seed fund disbursement to startups and we found support that these startups survive better. There was also a large effect on preferring equity investments among specialized incubators. In general, higher capital expenditure and longer product lifecycle times are common among specialized startups. Some portion of the startup's capital investments are shared by the incubator, which develop infrastructure to support specialized startups. In addition to this infrastructural support, specialized incubators were more willing to take equity positions on these startups than non-specialized incubators. Equity investments take longer to mature and provide returns to the investor. Hence the specialized incubator's taking longer term commitments through the equity route shows its willingness to share risks with the startups.

- Summary and conclusion

We have examined how macro level incubation support from the DST was utilized by incubators considering their typology. We looked at the incubators' efficiency in utilizing grants and the scale achieved in supporting startups. The institutional mechanism's objective of scaling up the number of incubators was accomplished, and the grants provided a fillip for several new incubators to be established. For capacity creation, DST has preferred university-based incubators in tier-1 cities.

Scaling up infrastructure

Our analysis implied that scale on average was better in non-university-based incubators, than UBIs. But UBIs constitute more than 80% of the incubators and hence cumulatively they supported a larger number of startups. This shows potential for opening up more non-UBI private sector or public-private partnership models to scale infrastructure support for technology startups. The results indicated that specialized incubators, owing to their infrastructural needs, are typically capital intensive, and hence more efficient in utilizing the grants. This result is in line with extant literature on specialized incubators providing quality infrastructure (Barbero et

al., 2012; Schwartz and Horny, 2012). If incubators adopted a specialization strategy, we can expect them to be efficient as well.

Thus, on the one hand if DST plans to scale up on incubator infrastructure for the future, both specialization strategy and developing alternate public-private models of incubators will help. On the other hand, if existing UBIs are to be scaled up further, it may be worth considering starting new specialized incubators within the same university. The incubator specialization could be matched with the research infrastructure already available in the university.

Scaling up financial access

Having gained legitimacy both through its association with the host university and its experience in incubation, older incubators were more likely to get seed funds from DST. DST seems to be relying on them as a transmission mechanism. The odds of older incubators to attract seed funds was more than twice that of newer incubators, indicated the institutional mechanism's preference. Age confers incubators experience (skills/human capital), relationships and legitimacy (social capital), in the entrepreneurial ecosystem. Older incubators were thus more likely to provide financial support and exposure to a larger pool of startups. Further, older incubators likely have a larger number of startups incubated, and hence a possibility to enforce a high selection criteria (Bergek and Norrman, 2008). Newer incubators are likely to have fewer startups, and enforcing a high selection criterion would not be possible.

There are other simpler routes to provide financial access at scale, such as priority sector lending from banks directly to startups. Thus, relying on incubators as a transmission mechanism will not necessarily scale financial access. When we looked at the investment instrument of preference (equity versus other instruments), we noted that specialized incubators were committed through the longer-term equity route. Further, the choice of instrument should ideally be long-term, sharing both risks and rewards of such commitment, which could be mandated by DST. Such restrictions will improve selectivity in the investments. Specialized incubators are better equipped to take longer term investment decisions, which would mean differential impetus has to be given to them for scaling financial access. As incubation evolves in India, we need to continuously examine both needs of the startups and priorities of DST to nurture an active entrepreneurial support ecosystem.

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Sometimes a little is more than a lot: The role of Dark Triad personality traits in creativity, problem solving, and innovation in SMEs

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Abstract

Businesses of all sizes are capitalizing on the benefits of cloud computing and the power of shared resources. As companies migrate to the cloud, and software upgrades are required more frequently than ever before, IT must evaluate and determine which customizations and applications are replaced by out-of-the-box capabilities. For many employees of SMEs that have spent their careers creating and fostering these apps, it can be such a challenging experience that they begin to engage in deviant behavior. This paper addresses the gap in academia by proposing that some employees of SMEs have certain personality types that predispose them to deviant behaviors within the organization. Further recommendations are given on how leadership can recognize and mitigate these destructive impacts. It is imperative that IT organizations redirect employees with certain personality types to stop protecting their creations and embrace the new paradigm of less customized software.

Key Words: Dark Triad, Deviant Behavior, SMEs

**Views of Small Businesses in a Resort Town
On
Location, Marketing, and Ease of Doing Business**

Authors

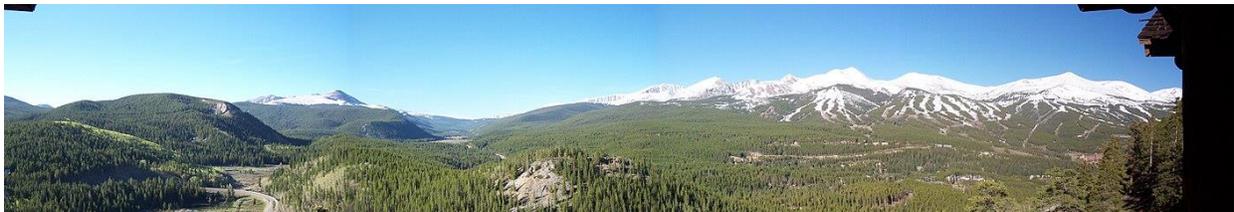
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Abstract

An exploratory survey of small businesses in a Colorado resort town determined if location was important to their business and how they complemented location with traditional marketing. While a mix of businesses were surveyed, the subset of retail, entertainment and food services were heavily reliant on tourism and therefore were extremely focused on location. Their mean reliance on tourism was much higher than the whole sample mean. While the results are not surprising, they do highlight the focus these businesses must have on location. The results need to be verified with a larger sample or a small sample size method. A surprising result was that this subgroup does not rely on location alone and used a mix of traditional marketing and advertising to promote their businesses. They were also surprisingly neutral on the ease of starting a business and the value society places on small businesses. I

Keywords: Location, marketing, ease of starting a business, society value of small businesses

**Views of Small Businesses in a Resort Town
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Introduction

The authors interviewed 32 small businesses in Breckenridge Colorado to determine their focus on location, and how they complemented location with traditional advertising and marketing. A convenience survey was used. Each respondent was asked a series of 32 questions about their experience, business experience, reliance on tourism, and marketing. In addition, their distance from the front door to the edge of the sidewalk on main street was calculated.

Literature Review on Location

Both large and small retail, food, and entertainment business make careful location decisions. For most small businesses location is critical for their survival (Brooks, 2009; Jardon, 2018; Vlachou and Iakovidou, 2015; Montgomery, 2003; Wendt, 1972). Large retail corporations use a multitude of complex algorithms to determine proper locations for their stores (Harris, Webber and Sleight, 2005; Phelps and Wood, 2018; Weber and Chapman, 2011). Many big businesses use location consultants, consortiums or complex algorithms to help with location decisions (Weber and Chapman, 2011; Phelps and Wood, 2018).

Location analysis has a long history (Phelps and Wood, 2018). These authors found that early models focused on three principal factors: cost, demand, and sale potential. Currently most big and medium sized businesses use a mix of algorithms based on the typical variables such as: population density, income, education, age, gender, neighborhoods, government regulations and infrastructure such as travel patterns, ease of entry and exit into a location (Weber and Chapman, 2011; Kimelberg and Williams, 2013). Some may include psychographic variables of who makes the buying decisions, what motivates them, why, how often they buy, and what influences them.

One complex model uses principal component factor analysis with geospatial neighborhood classifications data and then a multicriterial model using analytical hierarchy process of 41 variables (Weber and Chapman, 2011). The outcome is a visual map with the location in the center and the degree of that variables influence shown graphically. Users can see visually the importance of each variable and adjust for other iterations. Unfortunately, most small businesses do not understand or have access to these complex location algorithms and rely on foot traffic.

About Breckenridge

Breckenridge is a 9,600-foot Colorado mountain town in the Rocky Mountains. It is a year-round resort with winter alpine activities such as downhill skiing, cross country skiing, snow shoeing, back country skiing, sledding, snow sculpture competitions, and snow mobile rides.



Summer activities include National Repertory Orchestra and Breckenridge Music Institute concerts, theater, art exhibitions, hiking, mountain biking, road biking, fly fishing, and mountain hiking with many hiking trails from easy trails to the arduous 14,265 foot Quandary peak and numerous 13,000 foot peaks. The many former mining camps and vistas provide great hiking.





It has a rich Victorian history as a former mining town with colorfully decorated buildings from the 1880s and 1890s. The town's planning commission vigorously maintains the historical image of the town. The main street is full of tourists walking the 8 blocks from the north to the south.

The Survey

Methodology

The authors personally interviewed 32 business along the main street and asked a number of demographic and business questions including the respondent's personal business experience, the company's duration in years, and their views on starting a small business. Each was given sufficient time to complete the survey. Given the small sample size this survey should be viewed as a qualitative exploratory research.

Determining Distance

All of the foot traffic goes from 350 S. Main to 150 North main in an 8-block area (see map in appendix). The foot traffic is stopped at the south end by the roads to Hoover Pass or Boreas pass and bounded on the north by a light commercial area and Wellington Street. In addition, the one block of Ridge Street from 106 S. Ridge to 113 S. Ridge Street also sees heavy foot traffic and complements main street by being one block away. All of the retail, entertainment, and restaurants are located within these two areas.

The foot traffic is heavy. On a summer day at a non-peak foot traffic hour the authors counted 330 pedestrians in a one-hour period. The count occurred on the west sidewalk because most tourists would walk up one side and down the other to view all of the shops.

Winter foot traffic is approximately twice that amount from 4 to 6 pm in the winter when the skiers come off the mountain into downtown. The gondola (one block from main street) from the mountain empties at the northern end of the 8-block area and is easily walkable even in ski boots. The distance in feet of the business to the edge of the main street sidewalk was measured in feet by a combination of smart phones and google maps.



Reliance on tourism was measured with two questions. The first question asked the respondent on a 5-point Likert scale the business's dependence on tourism from 1 low strongly disagree to 5 high or strongly agree. The second question asked the respondent what percentage of the business depended on tourism with five choices: 0 to 20 percent, 21 to 30 percent, 41 to 60 percent, 61 to 80 percent, and 81 to 100 percent.

Hypotheses on Location

Because a majority of these businesses depend on tourism, the distance of the business in feet to the main street was measured.

Hypothesis one: the correlation between distance in feet will be negatively correlated with that business's dependence on tourism.

Survey Findings on Location:

The answer to the first question using a scale of 1 low to 5 high, had a mean of 3.83 for all the businesses (this included banks, construction, remodelers, insurance companies, and title companies with all the others). However, the mean for the subset of just retail, arts, entertainment, and accommodations was 5.00. Their answer meant that all of them were heavily reliant on tourism.

The second location question asked the respondents to put the percentage of reliance on tourism into categories. Using all the respondents, 69 percent reported that they had 41 to 100 percent reliance on tourism. The subset of retail, food, entertainment, and accommodations had a mean of 4.5 on the question asking them to rate their reliance on tourism from 1 low to 5 high. The distance hypothesis yielded a negative correlation of negative .536 using question one with the distance measurement and a correlation of negative .35 using the second distance question.

While this seems to confirm the hypothesis, small sample size methods should be used or the study replicated with a bigger sample size.

Survey Results On Other Variables

The Respondents and Their Business

Table 1 shows that 65.4 percent of the respondents have from five years to over 20 years of business experience.

Table 1 Years of Business Experience of Respondent

Years of Experience	Percent
1 to 5	34.6
Over 5 to 10	19.2
Over 10 to 20	30.8
Over 20	15.4

Similarly, 79.3 percent of the businesses had been in existence over 5 years which indicates experience and longevity.

Table 2 Years the Company has been in Business

Years in Business	Percent
1 to 5	20.7
Over 5 to 10	24.1
Over 10 to 20	27.6
Over 20	27.6

The sector heavily dependent on foot traffic such as retail, arts and entertainment, accommodations was 53.2 percent of the total. However, it can be noted that the other businesses particularly construction, finance and insurance depend on the first category by providing construction, banking, insurance, and other services to those businesses. The last category, real estate, depends on the overall health of the town’s economy, its draw, number of visitors that create the demand for real estate- many who visit buy a second home in the area. So, the first category is dependent on tourism, the second category dependent on the first, and the third category indirectly dependent on all the above.

Table 3 Industry

Industry Classification	Percent
Retail	34.4
Real Estate	18.8
Construction	15.5
Finance & Insurance	12.5
Arts and Entertainment	9.4

Most of the business have good annual revenue. A majority, 66.7percent were cash flow positive.

Table 4 Approximate Annual Revenue

Revenue	Percent
0	0
1 to \$25,000	0
\$26,000 to \$50,000	4.2
\$51,000 to \$100,000	8.3
\$101,000 to \$150,000	8.3
\$151,000 to \$200,000	4.2
\$201,000 to \$250,000	4.2
\$251,000 to \$300,000	4.2
\$300,00 to \$400,000	8.3
\$401,000 to \$500,000	16.7
\$501,000 to 1 million	20.8
\$1 million to 2 million	4.2
\$2 million to 5 million	8.3
\$5 million to 10 million	0
Above \$10 million	8.3

The following shows the percentage of businesses that rely on tourism. The data shows that that 70.0 percent responded with 41 % and over. On a separate question the subset of retail, arts, and accommodations were asked their reliance on tourism from 1 low to 5 high. While the mean of all the business was 3.83 this group all responded with a 5.

Table 5 Reliance on tourism

Percent of the Business that Rely on Tourism	Percent
0-20%	16.7
21-40%	13.3
41-60%	10.0
61-80%	36.7
81-100%	23.3

In addition to location many respondents use other forms of advertising and promotion. While in many areas of the US, traditional media are decreasingly used, in this mountain community the local TV, radio, newspapers, and magazines are heavily used by locals and tourists.

Table 6 Current reactions to the business environment.

Type of Marketing or Promotion or Sales Force	Percent
Public Relations (attending events)	18.6
Advertising (magazines, radio, TV)	18.6
Adding new Products/Services	17.0
Extending Working Hours	15.3
Promotions (coupons, bundling)	11.8
Decreasing Sales Force	6.8
Reducing work hours	5.1
Increasing Sales Force	3.4
Using more part-time workers	1.7
Cutting employee benefits	1.7

It should be noted that some extended their hours, some reduced their sales staff and others increased it.

The following shows their use of media advertising. While most still the local newspaper, radio, and TV many are using social media to advertise their hours, reservation systems, and menus.

Table 7 Use of the following media for the business's advertising

Type of Media Advertising	Percent
Social Media	37.0
Newspaper	19.5
Radio	15.2
Magazine	10.9
TV	10.9
Outdoor advertising	6.5

It is encouraging that 75.9% of the respondents do have some legal structure other than sole proprietor or a general partnership.

Table 8 Legal Organizational Structure

Type of Legal Structure	Percent
S-Corporation	38.0
Limited Liability	24.1
Sole Proprietor	20.7
C corporation	13.8
General Partnership	3.4
Limited Partnership	0

When asked how easy it is to start a Colorado business on a Likert scale from 1 strongly disagree to 5 strongly agree the mean was 3.03 barely above neutral. When asked if the USA culture supports, encourages, rewards and values small business the mean was 3.36 again barely above neutral.

Conclusion

The results on location were expected especially that the subset relying totally on tourism placed themselves as close as possible to main street. A surprising result was the continuing complementary reliance on traditional advertising. As mentioned above, this is understandable given the strength of the local media. Another surprising result was their concern about the difficulty of starting a business in Colorado and their response that there was lack of support for small business in the US.

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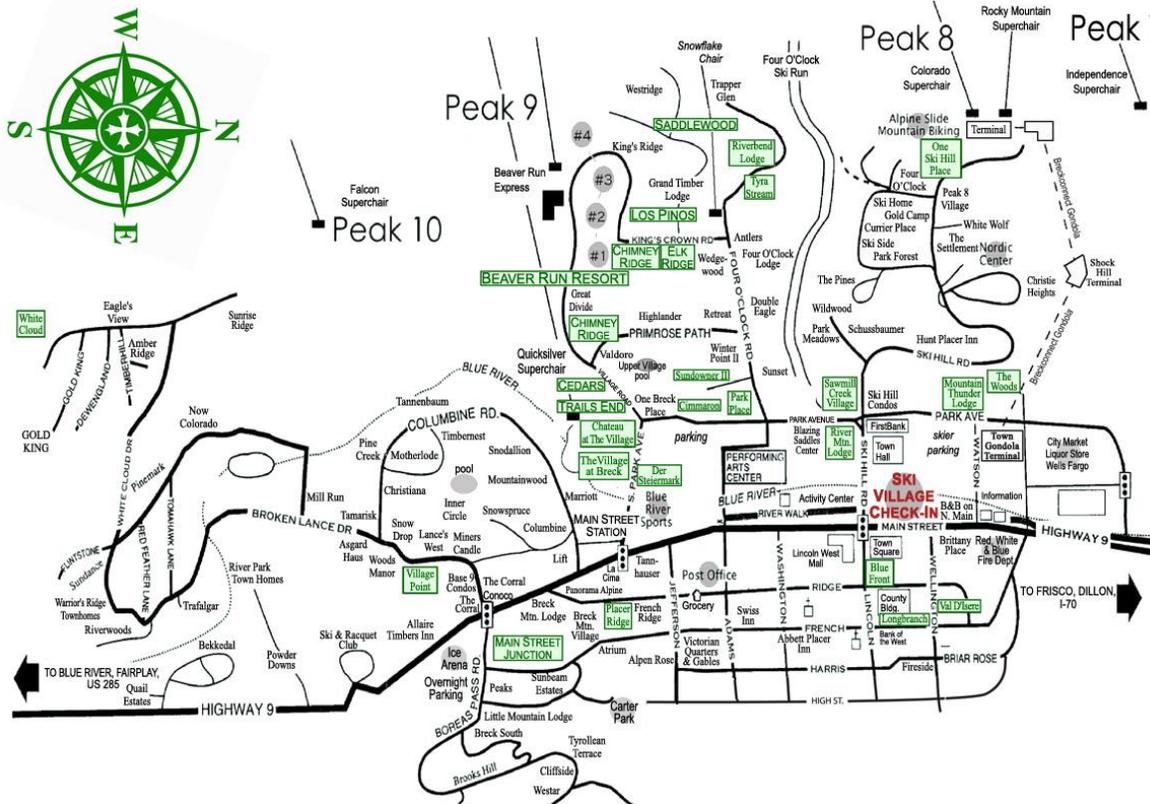
Appendix A

Pictures and Maps of Breckenridge



Source: Breckenridge web site with the ski areas shown in the background.

Map of Main Street Foot traffic from Main Street Station in the south to Wellington in the north.



Picture of tourists on Main Street



Burnout Academic in Bachelor's Students in Mexico: An Exploratory Study

Resume

The dimensional structure of the Maslach Burnout Inventory–Student Survey (MBI–SS) was investigated using data collected from Undergraduate students from the Bajío of the Mexican Republic (total N=84; 52% males, 48% females; M age 22.0 yr., SD=1.71). Single group Confirmatory Factor Analyses corroborated the hypothesized three-factor model for the composite sample as well as for the three independent samples. Subsequent factorial analysis confirmed the three dimensions of efficacy, Emotional exhaustion, and cynicism. It is concluded that the MBI–SS can be used to assess burnout in Mexican students.

Introduction

60% of university students in Mexico suffer from stress caused by schedules and the level of demand (Notimex, 2014). According to one study, the condition of the syndrome in students is distributed according to the career as follows: 34% law students; 13% Psychology; 13% Administration; 10% Commerce; 9% Public Accounting; 8% International Relations; 6% Information System; 3% Tourism and 2% Communication (Ricardo & Paneque, 2013).

University students are exposed to fulfilling demands that go beyond the academic burden and that on many occasions this involves not only accrediting subjects but also carrying out projects, procedures and carrying out complementary activities of their area to this adding the burden of other contexts of life, which often give rise to sensations of intense tension in them, a phenomenon recognized as academic stress (Dominguez, Hederich, and Saduño, 2009). Stress is the precursor to burnout, if stress builds up, after a certain time it gives rise to burnout, that is, burnout cannot be activated without having experienced stress for a long period of time (Koek, 2020).

Academic Burnout is a persistent and negative mental state, related to academic activities that is characterized mainly by emotional exhaustion, distress, little motivation in the face of studies, as well as intention to abandon them (Dominguez, Hederich, and Sañudo, 2009; Cruz & Puentes, 2017).

When stress reaches this point it may present some negative factors in the student's life such as low academic productivity, attention deficits, concentration, memorization, zero meaning in problem solving and effective decision-making; some attitudes that can be presented are, disinterest, self-sabotage and deterioration of the study's assessment (Palacio Sañudo, Caballero Domínguez, & González Gutiérrez, 2012) as well as the absence of self-efficacy that is defined as "the belief in one's own abilities to organize and execute courses of action that are required to handle future situations" (Bandura, 1999) which gives a sense of not able to be being give more of itself. The person with burnout syndrome remains overwhelmed, disinterested in work or academic activity and recurrently deploys avoidance and escape behaviors as their only strategy for dealing with situations. It is important to maintain a strong sense of self-efficacy and seek coping tactics, as well as design from the University mental health and student well-being strategies, thus hoping to improve the quality of life of students.

Although her precursor to Burnout is psychiatrist Freudenberger (to whom the concept is attributed), Dr. Maslach is her principal investigator, giving this syndrome global positioning (Olivares, 2016).

Theoretical Framework

Burnout has been conceptualized as a process that occurs among professionals who work towards people, or whose object of work is people (e.g. patients or students). Following the Maslach Burnout Inventory, the phenomenon was defined as a syndrome characterized by three dimensions: emotional exhaustion (EE; being too widespread and emotionally exhausted), depersonalization (D; feeling negative and insensitive) and lack of personal accomplishment at work (AP; feeling incompetent and lacking experiences of success and accomplishment) (Maslach & Jackson, 1981). Emotional exhaustion is the feeling of tiredness, fatigue and emptiness experienced by the worker in situations of excessive demand, overwork, and limited emotional resources. There is loss of energy, of interest towards the role played, dissatisfaction and irritability (Maslach & Jackson, 1981). The worker perceives that his ability to feel decreases or disappears, thus reducing his emotional resources until he feels that he has nothing to offer his users or customers (Tello, 2010). On the other hand, depersonalization is a negative response of the worker to the recipient of his services. It is characterized by insensitivity, apathy, indifference, considering people as objects. The person distances himself not only from his users, but also from his co-workers, because he perceives that responsibility for his frustrations and low job performance is caused by them, thus generating a highly negative attitude towards the workplace (Tello, 2010).

The third dimension, the lack of personal performance at work, refers to the decrease in feelings of competence and success at work, as well as a tendency to negatively evaluate itself, particularly in working with others (Maslach & Jackson, 1981).

For the study of burnout in the academic context, the MBI-GS was adapted, giving rise to the Maslach Burnout Inventory - Students Survey (MBI-SS). The application of the latter showed that students can also suffer burnout, characterized by the feeling of not being able to give more of themselves, an attitude of negative criticism, devaluation, loss of interest, transcendence and the value of studies and growing doubts about one's ability to carry them out. MBI-SS assesses exhaustion, low professional efficiency and cynicism, the latter rather than depersonalization, which includes negative, indifference or distance attitudes towards the study (Schaufeli, Martinez, Marques, Salanova, and Bakker, 2002).

Today, Maslach defines burnout as a prolonged response to stress at work, a psychological syndrome born of chronic stress resulting from conflicting interaction between the worker and his employment. Maslach unraveled the conceptual clarity of the syndrome and positioned it as a particularly real problem, where there are dysfunctional responses of the individual in working contexts characterized by strong levels of pressure and labor tension. A socio-labor problem resulting from chronic work stress, a harmful reaction to progressive and intense occupational tension (Olivares, 2016).

However, the "Burnout" has been studied especially in working areas (Maricu, Sava, and Butta, 2016). However, the syndrome is not necessarily restricted to human service professionals (assessed with the MBI-Human Services Survey). Its main researcher (Maslach & Schaufelli, 1993) point out that although this syndrome appears as a specific process of these professional fields, the phenomenon has been described in other types of professionals, such as managers and intermediate managers of any type of organization, coaches and athletes (evaluated with the MBI-General Survey instrument), and has even been studied outside the field of work, such as the academic, to students (assessed with the MBI-Student Survey instrument), who were the recipient in the first instance (Motta, Rodrigues, and Figueiredo, 2020). Therefore, the objective of this research is to make a diagnosis of academic burnout in undergraduate students of an University Campus of the Bajío the Mexican Republic.

Method

Research design

Exploratory study to diagnose academic burn out in the undergraduate students of an University Campus of the Bajío the Mexican Republic.

Participants

Undergraduate students from the Bajío of the Mexican Republic who are between their fifth and ninth enrollment of their career were invited to participate. There were 84 participants, from the digital arts, engineering and business management programs, who wanted to participate voluntarily.

Instruments

Prior to the intervention, a sociodemographic questionnaire was used to collect relevant information such as: age, sex, cohabitation (alone or as a family), bachelor's degree and current degree in progress, if you also work, perception of the state of health (very bad, bad, good, excellent), psychiatric history, weekly average of hours dedicated to physical exercise and academic training. The sample predicts the male sex (52%) over the feminine male. The ages are between 20 and 25 years old, with an average of 22 years and a typical deviation of 1.71.

The burnout evaluation instrument used was the Maslach Burnout Inventory - Students Survey (MBI-SS), which was adapted from the Maslach Burnout Inventory - General Survey (MBI-GS) and this in turn, from the original Maslach Burnout Inventory - Human Services Survey (MBI-HSS). The MBI-SS is the most accepted questionnaire as an instrument for assessing academic burnout; consists of 15 items for the dimensions of emotional exhaustion (5 items), cynicism (depersonalization) (4 items) and academic effectiveness (6 items). All items in each of the three subscales are scored on a 7-point frequency scale, ranging from 0 (never) to 6 (always). The MBI-SS has been examined in scalability, structural validity, and reliability, with positive results in different instruments (Perez & Brown, 2019).

For the calculation of the results, the recommended regulatory data are taken in technical note NTP-732 of the National Institute of Safety and Hygiene at Work of Spain. It focuses on the interpretation of the MBI-SS, which shows Burnout levels according to the percentiles obtained in a sample of 1963 workers of various occupations (Table 1).

Table 1 Regulatory data for correcting scale scores

		Exhaustion	Cynicism	Efficiency
Very Low	>5%	<0.4	<0.2	<2.83
Under	5-25%	0.5-1.2	.3-0.5	2.83-3.83
Medium (low)	25-50%	1.3-2	0.6-1.24	3.84-4.5
medium (high)	50-75%	2.1-2.8	1.25-2.25	4.51-5.16
High	75-95%	2.9-4-5	2.26-4	5.17-5.83
Very High	>95%	>4.5	>4	>5.83
Arithmetic Mean		2.12	1.5	4.45
Typical Deviation		1.23	1.3	0.9
Exhaustion	Added exhaustion/5			
Cynicism	Adds cynicism /4			
Efficiency	Sum Efficiency /6			

Procedure

Prior to the application process, students were offered basic information about research, an indispensable for the signing of informed consent. Subsequently, the application of the questionnaire of the different students who consented to their participation in the research was carried out online.

Statistical Analysis

IBM SPSS Statistics statistical software was used for the processing of information. At first, the data matrix was debugged through frequency analysis and stereotypical extreme scores.

Upon completion of debugging, different reliability analysis procedures and factorial validity analysis of the instrument were performed. Reliability analysis was done using the Cronbach Alpha to determine the internal consistency of each scale. To determine whether the data fit the factor analysis, the Kaiser-Meyer-Olkin Index (KMO) was calculated, using the $KMO > 0.7$ index and the Barlett sterity test as the cutting criterion. The analysis calculated the Oblimin oblique rotation with Kaiser for correlated dimensions.

For the assessment of the results with respect to those obtained from technical note NTP-732 concerning Spanish workers, t-tests were examined for a sample in the means obtained in each dimension with the values of the means noted in the technical note.

Results

In order to examine the coherence between the structure proposed for the instrument and empirical results, an exploratory factorial analysis was examined, using the main components method, on the 15 items on the scale of the maslach Burnout Inventory- Student Survey (MBI-SS), by Schaufeli, Martínez, et al. (2002) using an oblique rotation method (Oblique).

As is customary in this type of analysis, compliance with the conditions necessary for the execution of factor analysis, and the compliance with the multi-line requirements of the data, must first be

verified. This is done through two procedures: the KMO sample adequacy measure, which results in an index of .772, its significance value is less than 0.05 so the factorial analysis can be performed. Three factors explain more than 58% (58,469%) variance. Factorial loads are presented in the left half of Table 2.

The rotated component matrix yielded three factors: Exhaustion, Cynicism, and Efficiency. Eliminating Efi4 is obtained: three factors, 5 exhaustion items, 4 cynicism and 5 efficiency. See table 2.

Given the difficulties related to the inclusion of item Efi 4, this item was removed, and the factorial analysis was recalculated. The factors are the same as those obtained in the previous analysis, although in this case the variance explained is slightly greater and some of the factorial loads appear slightly increased. The communalities of the 14 items are greater than 0.341 and the factorial loads on each factor appear in the right half of Table 2.

Table 2 Rotated Component Matrix^a

	Component		
	1	2	3
Ago1	.833		
Ago2	.824		
Ago3	.799		
Ago4	.703		
Ago5	.688		
Cin1		.811	
Cin2		.802	
Cin4		.792	
Cin3		.761	
Efi4			
Efi2			.772
Efi6			.762
Efi1			.731
Efi3			.696
Efi5			.341

This solution shows an instrument with very adequate factorial validity and represents strong evidence about the construct validity of the questionnaire, especially after excluding item Efi 4, at least in its present transcription. What follows, that only the results derived from the 14 items of the questionnaire will be taken.

Descriptive analysis of scales

Table 3 presents the statistics of the different subscales and the total scale. Its calculation was made from the average of the items that made up each of the scales. To the extent that each item was

scored between values 0 and 6, the means of the subscales and the total scale are unified between minimum values of 0 and maximum values of 6.

Table 3 Descriptive statistics of the subscales and MBI-SS

		Exhaustion	Cynicism	Efficiency
Average		3.8142	1.9017	4.2777
Standar Deviation		1.22	1.41	0.81
Cronbach Alpha		.856	.851	.717
Cronbach's Alpha Based on Standardized Items		.859	.851	.713
No. Items		5	4	5
Score ranges	Very Low (>5%)	0 0.0%	8 9.5%	3 3.6%
	Low (5%-25%)	0 0.0%	10 11.9%	16 19.0%
	Medium-Low (25-50%)	7 8.3%	11 13.1%	35 41.7%
	Medium-high (50%-75%)	15 17.9%	29 34.5%	18 21.4%
	High (75%- 90%)	34 40.5%	19 22.6%	7 8.3%
	Very High (>95%)	28 33.3%	7 8.3%	5 6%

As noted, 40.5% of the sample has high levels and 33.3% very high depletion. Normality tests on this scale show that the distribution differs very significantly from that corresponding to the normal curve. The alpha value is found within acceptable levels, in addition to the Cronbach alpha reaching its maximum value on this scale. Only 8.3% of the sample has a very high attitude and 22.6% high indifference, self-buttoning and estating from the studies. Cynic scale normality tests show that the distribution differs very significantly from the distribution corresponding to the normal curve. The alpha value on this scale is acceptable.

For its part, the subscale of academic self-efficacy, consisting of the total sum of the values of the cin co ítems, has high values of 8.3%, or very high, in 6% of the sample. Also, in this case, the shape of the distribution differs significantly from the normal curve. By combining data from the three subscales, it is possible to obtain the measurement of the prevalence of the syndrome in the sample. In total, 20 subjects, representing 23% of the total sample, meet all conditions to have burnout syndrome: high, or very high, levels of exhaustion and cynicism, and low, or very low, levels of self-efficacy.

Conclusions

The findings of this study indicated that the three dimensions of the Maslach Burnout Inventory - Students Survey (MBI-SS) can be used to evaluate burnout syndrome in Mexican undergraduate students. MBI-SS scales, structural validity, and reliability have good levels of .733 full-scale Cronbach alpha, 0.717 efficiency, 0.856 exhaustion, and cynicism of 0.851. Factorial analysis confirmed the three dimensions of efficacy, Emotional exhaustion, and cynicism (despersonalization).

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The Impact of COVID-19 on US Legacy Passenger-Belly Air Cargo Carriers

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Abstract:

The latest socio-economic crisis to hit the worldwide aviation industry is the COVID-19 Pandemic. The purpose of this study is to determine the specific impact to the worldwide cargo industry because of this pandemic. The importance of this study is to allow cargo-based suppliers to prepare for future impacts to the industry by diversifying their methods of transportation and therefore preventing choke points, when one method is reduced or even eliminated. The method of study will be a comparison of cargo operations in January to June 2020 to same time during the previous year utilizing rate of change metrics. This study will show that Passenger Belly Cargo operations were most affected by COVID-19 causing some of those operators to use passenger aircraft for freighter operations to meet the demand of the void when passenger flights were cancelled. The reduced income for Passenger Belly Cargo Aircraft forced the utilization of these type aircraft into a freight only role which is unprecedented and has not been seen in previous crisis. These aircraft are expected to continue in these configurations until passenger traffic resumes to post downturn levels which is not expected to recover in a timely manner.

Keywords: Air Transportation; Cargo Operations; COVID-19, Coronavirus

Word Count: 2,951 words + 3 tables (250 words per table) = 3,701 words

Submitted 15 October 2020

INTRODUCTION

Every few years, there is an economic situation that causes a downturn that affects aviation. Over the last few decades, we have seen a few of them that all had similar traits with modest recovery rates. We saw declines in the early 1980's, 1990's and early 2000's. On September 2001, it was a terrorist attack in New York City that halted all air traffic for the first time in the history of the United States of America. In 2009, the sub-prime mortgage crisis caused the housing boom to collapse in the United States which led to a global financial crisis and an impact to aviation.

In November 2019, a new virus was discovered in Wuhan, China that was named coronavirus disease of 2019 (COVID-19)¹. On 11 March 2020, COVID-19 was declared a pandemic by the World Health Organization. This microscopic virus is having a huge impact on aviation in a way that has never been seen before. If we compare the S&P 500 (SPX) for Severe Acute Respiratory Syndrome (SARS) in 2002 and the Hong Kong Flu (HK Flu) in 1968, we would see that COVID-19 has had a greater impact in the first 50 days that the other two

epidemics. The 1Q2020 United States GDP was negative 5.0% and is predicted to be negative 52.8% for 2Q2020.

Airports pose the greatest risk for transmission of the disease². Travel restrictions have impacted the movement of people by air including the response efforts³. There are many areas of focus for the impact of this virus on air transportation⁴, but this paper specifically analyzes the impact of COVID-19 on the Air Cargo Industry.

DISCUSSION

According to the International Air Transport Association (IATA), “Airlines transport over 52 million metric tons of goods a year, representing more than 35% of global trade by value but less than 1% of world trade by volume. That is equivalent to \$6.8 trillion worth of goods annually, or \$18.6 billion worth of goods every day⁵.”

The Boeing World Air Cargo Forecast 2018-2037⁶ predicted a 4.2% annually, but in 2018 COVID-19 was not even discovered yet. The next update to this document is expected in fourth quarter 2020 and it will be interesting to see the impact act of COVID-19 on the numbers and the prediction of the future growth.

The impact to Air Cargo Operations was first mentioned in Air Freight Market Analysis in December 2019 with the following statement, “Note that this survey precedes the Coronavirus outbreak in China, which is likely to impact these data, given airport and factory closures and travel restrictions more recently put in place.” It goes on to say, “As above, the health situation in China will impact the forecasts, although at this stage it is impossible to estimate exactly how; the duration and geographic spread of the outbreak will be critical to understanding the impact.” According to a recent article⁷, “The air transport industry has forecasted a reduction of 861 to 1,292 million passengers and approximately USD \$151 to \$228 billion loss of gross operating revenues of airlines under a V-shaped path, where first signs of recovery are not predicted until late May. The same source projects a 44%-80% decline in international passengers in 2020. The industry supports a total of 65.5 million jobs globally and has been severely impacted by COVID-19 and the halt of all international travel and tourism⁸.”

The current socio-economic crisis this year has been one of the largest that we have seen in many years. The United States has been hit the hardest by number of confirmed cases and deaths. With several of the world’s largest airlines based in the United States, this created a major impact to the airline industry with a steep reduction in passenger demand. With reduced flight frequencies/schedules, passenger belly cargo operators are the hardest hit by this economic downturn. Based on the information obtained from the IATA Air Cargo Market Analysis Monthly Reports for January⁹, February¹⁰, March¹¹, April¹², May¹³ and June¹⁴ 2020, there has been a significant decline in Available Cargo Ton Kilometer (ACTK) with a negative % change starting in February 2020 (Figure 1).

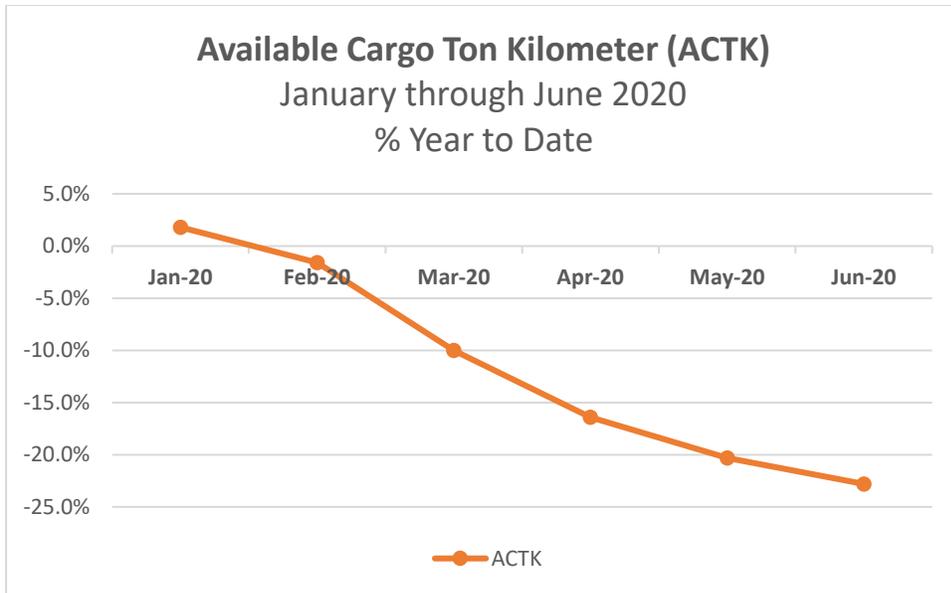


Figure 1 Available Cargo Ton Kilometer (ACTK) January through June 2020 % Year to Date.

PASSENGER BELLY CARGO CONVERSION TO PSEUDO FREIGHTERS

As the availability of passenger belly cargo aircraft decreased, several foreign airlines started to fly cargo in the seats of passenger aircraft. This configuration leads to several additional considerations. The seats are covered by plastic to protect them from damage. The cargo is in the form of boxes which can be placed in the seats with the arm rests raised. The cargo must be hand loaded through the passenger boarding door which limits the size, shape, and weight of each piece.

The next step is to remove the passenger seats and secure cargo to the seat tracks in the cabin of the aircraft. This essentially allows a passenger aircraft to be converted into a combination aircraft. It is unclear which airlines will take fully advantage of this and remove the seats from their passenger aircraft as this would incur an additional labor cost plus the cost of storing the seats. Temporarily converting a dedicated passenger aircraft to a dedicated freighter aircraft will increase the ATCK, but it is not yet clear the impact to the industry overall.

Weight and Balance Considerations

Weight and Balance is an important consideration when deviating from standard operating procedures. A deviation from the allowable limits of just .01% must be corrected before departure. In the United States, the Federal Aviation Administration (FAA) uses assumed passenger weights for each aircraft which are different for children and adults and vary from the winter to the summer season. If all the cargo is the same weight, then the system can be tricked by changing the default weights. For example, if each box weighs 50 pounds, then the default

weight for child can be changed to 50 pounds and the cabin reported as all seats filled with children to obtain the proper weight and balance information.

If the seats of the aircraft are removed, then the aircraft should be re-weighed to determine the overall weight and center of gravity. When loading the cargo, the weight must be determined by zone. Once again, the system must be tricked into thinking that the cargo is passengers to avoid reprogramming the aircraft by using passenger equivalents. For example, the cargo in Zone A could be 30 adults weighing 200 pounds each, while Zone B could be 60 adults weighing 200 pounds each, and Zone C could be 40 adults weighing 200 pounds each. This would allow the crew to compute the weight and balance of the aircraft using the existing programming to ensure that it is within limits.

RESULTS

Impact on Specific United States Legacy Passenger Belly Cargo Carriers

Although COVID-19 has impacted the entire passenger belly cargo industry, we can see the specific impact to the five legacy passenger belly cargo carriers in the United States. Utilizing the Security and Exchange Commission (SEC) filings for the Legacy Belly Cargo Carriers, we can see the data for each and compare them against each other.

United Airlines

United Airlines has flights to ~370 international destinations which is the highest of the legacy passenger carriers. United Airlines reports cargo ton miles (CTM) in millions quarterly in their SEC filings¹⁵. 1st Quarter CTM was reduced by 122 million CTM (-15%) from 2020 compared to 2019. 2nd Quarter CTM was increased by 107 million CTM (36%) from 2020 compared to 2019. For the 1st and 2nd Quarters, that is only a 15 million CTM (1%) reduction from 2020 compared to 2019 which is impressive given the current decline in international passenger flights (Table 1).

Table 1-United Airlines cargo ton miles (CTM) in millions for 1st and 2nd Quarters 2019 and 2020.

1Q2019	2Q2019	1&2Q2019
805	295	1,100
1Q2020	2Q2020	1&2Q2020
683	402	1,085
Year over Year Change (CTM) and %		
-122	107	-15
-15%	36%	-1%

United Airlines has clearly taken advantage of the cargo carrying ability of their passenger aircraft. In a recent news article regarding United Airlines Cargo Only Flights¹⁶, "Our cargo-only flight program has grown to now operate 270 flights per week to over 20

airports worldwide," Krems wrote. "Together, we have transported over 47 million kilos of cargo, providing the products and materials the world needs to manage through this crisis."

American Airlines

American Airlines has flights to ~350 international destinations which is the second largest of the legacy passenger carriers. American Airlines reports cargo ton miles (CTM) in millions quarterly in their SEC filings¹⁷. 1st Quarter CTM reduced by 188 million CTM (-15%) from 2020 compared to 2019. 2nd Quarter CTM decreased by 107 million CTM (-36%) from 2020 compared to 2019. For the 1st and 2nd Quarter, that is a 256 million CTM (-29%) reduction from 2020 compared to 2019. (Table 2).

Table 2-American Airlines cargo ton miles (CTM) in millions for 1st and 2nd Quarters 2019 and 2020.

1Q2019	2Q2019	1&2Q2019
624	244	868
1Q2020	2Q2020	1&2Q2020
436	176	612
Year over Year Change (CTM) and %		
-188	107	-256
-30%	-36%	-29%

1Q2020 Results Report stated, "To support the communities it serves, American: Launched the company's first cargo-only flights since 1984 to transport critical goods between the U.S. and Europe, Asia and Latin America. American is currently able to transport more than 6.5 million pounds of critical goods weekly on its cargo-only flights."

2Q2020 Results Report stated, "To support the communities it serves, American: Expanded its cargo service to transport critical goods between the United States and Europe, Asia and Latin America. American currently operates more than 310 weekly widebody and cargo-only flights and transported more than 100 million pounds of mail, goods and supplies critical to the global economy in the second quarter."

In contrast to United Airlines, American Airlines has not been able to take advantage of the cargo carrying ability of their passenger aircraft.

Delta Air Lines

Delta Air Lines has flights to ~325 international destinations which is the third largest of the legacy passenger carriers. Delta Air Lines does not report cargo ton miles (CTM) in millions quarterly in their SEC filings¹⁸.

Delta reported that “Delta and its 90,000 employees are taking an active role in our nation’s fight against the virus by: Chartering international cargo-only flights to provide healthcare workers with materials needed to do their jobs.”

Alaska Airlines

Alaska Airlines predominately transports passengers and cargo throughout the USA. They purchased Virgin America in 2016. Alaska Airlines does not report cargo ton miles (CTM) in millions quarterly in their SEC filings¹⁹.

1Q2020 Results Report stated, “Utilized our dedicated fleet of cargo freighter to transport essential supplies from Seattle and throughout Alaska.”

2Q2020 Results Report they stated, “Operational Updates: Received FAA certification to transport cargo in the passenger cabin on five Boeing 737-900 passenger aircraft, and began cargo-only service to Unalakleet, Alaska.”

Hawaiian Airlines

Hawaiian Airlines predominately transports passengers and cargo to and from Hawaii from Mainland USA. Hawaiian Airlines does not report cargo ton miles (CTM) in millions quarterly in their SEC filings²⁰.

Summary

Based on the information obtained from the IATA Air Cargo Market Analysis Monthly Reports for January, February, March, April, May and June 2020, the following data is compiled (Table 3, Figure 2, Figure3).

Table 3- Cargo Revenue by Legacy Passenger Belly Cargo Carriers (\$ millions)

Airline	1Q2019	2Q2019	3Q2019	4Q2019	1Q2020	2Q2020
United Airlines	286	295	282	598	264	402
American Airlines	218	221	208	216	147	130
Delta Air Lines	202	108	189	187	182	186
Alaska Airlines	50	59	60	52	46	39
Hawaiian Airlines	36	37	38	37	34	17

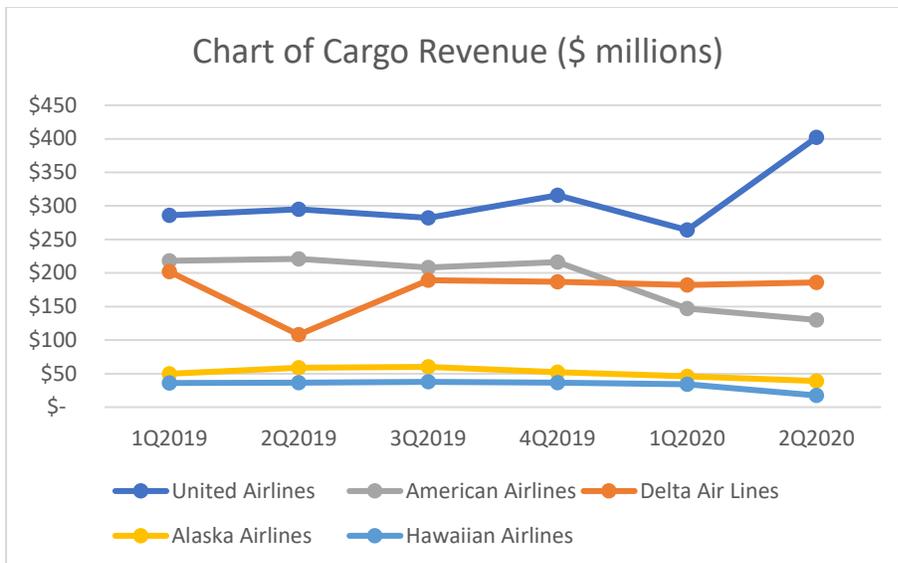


Figure 2 is a plot of the airlines and their trends by quarter from 1Q2019 through 2Q2020.

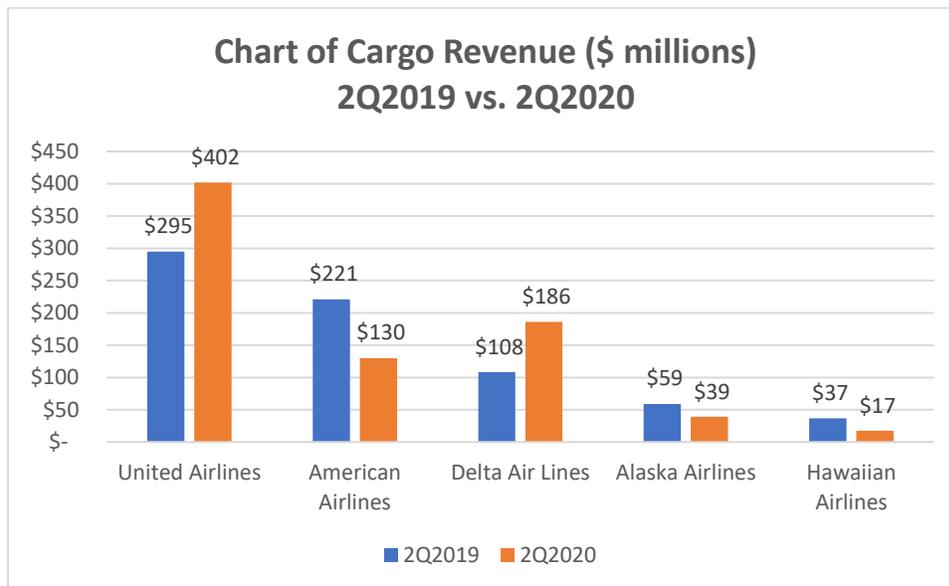


Figure 3 is a chart of the airlines specifically comparing 2Q2019 to 2Q2020. Note that only United Airlines and Delta Air Lines had an increase in Cargo Revenue from 2Q2019 to 2Q2020 while all the others show a decline.

Specific Impact on Other Carriers

A few passenger-only airlines have changed their business models based on the reduced passenger demand. Mesa Airlines and Sun Country Airlines have both changed its business model from all passengers to adding cargo only flights utilizing B-737's for Amazon Prime Air. If the COVID-19 related loss in air travel demand progresses, there is a chance that we will see other airlines change their business models also to add or increase cargo operations.

CONCLUSIONS

The impact of COVID-19 has been different than any previous economic slowdown that we have seen in the past. Passenger demand significantly decreased suddenly and steeply which caused a decrease in Passenger-Belly Cargo Capacity. Passenger airlines were able to fly limited cargo in the passenger seats of aircraft, but it did not have a significant impact. Passenger airlines are also able to remove passenger seats for cargo, but this too will only provide minimal impact. These makeshift freighters only slightly increased the Available Cargo Ton Kilometer (ACTK).

Although Passenger-Belly Cargo Capacity will eventually return, it will not resume as quickly as desired. Freighter Operations will continue to increase but not at the levels previously anticipated. It will take much longer than anticipated until the demand for passenger travel meets the levels that they were before COVID-19 was announced as a pandemic in March 2020.

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AUTHOR CONTRIBUTIONS

The author confirms that no other authors contributed to the paper.

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Competitive Abstracts

Competitive Abstract

Reframing Start-Up Success: Action Learning and Beyond

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Abstract

Fear of failure is a key factor inhibiting 21st century start-up entrepreneurs from actively embracing entrepreneurship. Action Learning reframes failure as a learning step toward success and is the pedagogical foundation upon which to build and sustain academic-community-industry partnerships.

Keywords

Fear of failure, 21st century start up education curricula, active learning, Action Learning

Literature reaffirms challenges encountered by start-up entrepreneurs and validates prevailing ontological uncertainty (Failory, 2020; Mansfield, 2020). Germinal theorists (Christensen, 1995; Drucker, 1985; Schumpeter, 1926) and contemporary thought leaders (Isele, 2020; Neck & Greene, 2011; Revans, 1980) present competing, and frequently conflicting, theories and lack of actionable knowledge. Factors sabotaging start-up success encompass traditional elements such as fear of failure, lack of leadership, business skill, finance, resilience, and self-efficacy, and emerging factors such as personal credit rating, occupation in the industry, and fast recovery (Deane, 2020; GEM, 2020; U.S. Bureau of Labor Statistics, 2019).

Fear of failure is a key factor inhibiting 21st century start-up entrepreneurs from actively embracing entrepreneurship (Cacciotti et al., 2020; Chandra, 2020; Kamal & Daoud, 2020). Action Learning reframes failure as a learning step toward success (Neck & Greene, 2011), guiding start-up entrepreneurs toward a model of self-efficacy and, when embraced holistically, toward a model of self-actualization, the highest level of self being. If only 3% of people globally possess requisite aptitude to achieve start-up success (J. Venturi, personal communication, May 15, 2016), 97% of start-up entrepreneurs may benefit from the progressive Action Learning model.

Reframing start-up success is achieved by integrating theory and practice in a safe learning and personal growth environment; failure is a learning step toward success (Anaissie & Olesund, 2016; Hasso Plattner Institute, 2020; Isele & DuBois, 2020; Isele et al., 2020; Neck & Greene, 2011). Predicated on the view that solutions to complex problems exist outside of theoretical textbooks and can be found by simply asking the right questions (Marquardt & Banks, 2010; Revans, 1980), Action Learning synthesizes design thinking with experiential learning, trains learners to reframe challenges as solutions, and provides a pedagogical foundation upon which to build sustainable partnerships with academic, community, and industry stakeholders.

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REI Revisited: Socioemotional Wealth Among Small Family and Non-Family Businesses

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Abstract

There is little empirical validation and evidence that socioemotional wealth is higher in family businesses compared to non-family businesses. The reliability of the REI socioemotional wealth scale was empirically tested with a nationally representative sample of 477 small businesses in the U.S., of which 60% were family businesses. As hypothesized, family businesses do have higher REI scores and, thus, higher SEW than non-family businesses. Family business owners scored higher not only on the REI scale in total, but also on every individual item in the scale. However, parts of the REI scale may still need to be improved.

Researchers have made the case that socioemotional wealth is a distinguishing characteristic of family businesses (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, & Moyano-Fuentes, 2007; Berrone, Cruz, & Gomez-Mejia, 2012; Cennamo, Berrone, Cruz, & Gomez-Mejia, 2012; Zellweger, Nason, Nordqvist, & Brush, 2013; Chua, Chrisman, & De Massis, 2015; Hauk, Suess-Reyes, Beck, Reinhard, & Frank, 2016). Yet, socioemotional wealth (SEW) or the affective utility a business owner derives from owning a firm may also be found in non-family businesses (Miller, Le Breton-Miller, & Lester, 2011; Miller & Le Breton-Miller, 2014). For example, small business owners often work to preserve their social status, highly identify with their businesses, and derive intense emotional satisfaction from their businesses. These non-financial motivations of small business owners are related to ownership control and identity similar to those of family owners. However, one would expect that SEW preservation would be higher in family firms than non-family firms (Gomez-Mejia et al., 2007; Berrone et al. 2012). Yet, there is scant empirical validation of SEW in the family business literature (Hauk, et al., 2016) and little evidence that SEW is indeed higher in family businesses compared to non-family businesses.

Berrone, Cruz, and Gomez-Mejia (2012) developed a 27-item scale with five dimensions of SEW and labelled their scale FIBER: **F**amily control and influence, **I**dentification of family members with the firm, **B**inding social ties, **E**motional attachment of family members, and **R**enewal of family bonds of the firm through dynastic succession. Several researchers have used Berrone et al.'s (2012) FIBER scale. For example, Bratnicka-Mysliwiec, Wronka-Pospiech, and Ingram (2019) used the FIBER measure in their study of Polish family firms and Gast, Filser, Rigtering, Harms, Kraus, & Chang (2018) used the scale in their study of Swiss small- and medium-sized family businesses. Hauck et al. (2016) validated the FIBER scale and developed a short version of the scale that consists of nine items within three dimensions. The three dimensions are: renewal of family bonds through dynastic succession (R), emotional attachment (E), and identification of family members with the firm (I). They used a sample of 216 German family-owned and -managed firms. The REI scale closely follows the definition of SEW by Gómez-Mejía et al. (2007, p.106) of “identity, the ability to exercise family influence, and the perpetuation of the family dynasty”. Umans, Lybaert, Steijvers, and Voordeckers (in press) used a portion of the REI scale with Belgian family businesses. Huack et al. (2016) call for

researchers to revalidate and replicate their scale across more heterogeneous firms and different countries.

The contribution of this study is twofold. First, the study contributes to the literature by testing the reliability of the REI scale among U.S. small family businesses. Second, I use a modified version of the REI scale with non-family businesses to compare SEW between small family and non-family businesses. The individual items for the REI scale are shown in Table 1. We hypothesize that small family businesses will have higher overall REI values compared to small non-family businesses.

Table 1. REI Scale (Hauck et al. 2016) and Modified Items for Non-Family Businesses

REI	Family Business Items ^a	Non-Family Business Items
<i>Renewal of family bonds through dynastic succession</i>		
R 1	Continuing the family legacy and tradition is an important goal for my family business	Continuing the business' legacy and tradition is an important goal for my business
R 2	Family owners are less likely to evaluate their investment on a short-term basis	Owners are less likely to evaluate their investment in the business on a short-term basis
R 3	Successful business transfer to the next generation is an important goal for family members	Successful business transfer to the next generation is an important goal for my business
<i>Emotional attachment</i>		
E 1	In my family business, the emotional bonds between family members are very strong	In my business, the emotional bonds among owners and employees are very strong
E 2	Strong emotional ties between family members help us maintain a positive self-concept	Strong emotional ties among owners and employees help us maintain a positive self-concept
E 3	In my family business, family members feel warmth for each other	In my business, owners and employees feel warmth for each other
<i>Identification of family members with the firm</i>		
I 1	Family members have a strong sense of belonging to my family business	Owners and employees have a strong sense of belonging to my business
I 2	My family business has a great deal of personal meaning for family members	My business has a great deal of personal meaning for its owners and employees
I 3	Family members are proud to tell others that we are part of the family business	Owners and employees are proud to tell others that they are part of the business

^a Measured on a 7-point Likert scale from (1) strongly disagree to (7) strongly agree

Data

The data used are from the 2019 Small Business Values Survey (SBVS, Author, 2019). The 20-minute online survey was built in Qualtrics and distributed through Kantar® to small business

owners. The survey was launched on April 24, 2019 and closed when defined quotas were met (35% female and 20% minority based on US business census statistics) on April 30, 2019. To qualify for the survey, respondents had to own their business. Approximately 60% of the small businesses self-identified as family businesses. The survey included questions focused SEW, family and business functioning, work/family balance, crisis events, and exit strategies.

From the cooperative sample of 910 businesses, 35 were not eligible because they were not business owners, leaving 875 qualified business owners. Two “attention check” questions were included in the survey to help enhance the quality of the collected data. The first attention check questions dropped 364 observations. The final sample consisted of 511 complete surveys. For this study, a small business was defined as a business with less than 100 employees. After culling businesses that had over 100 employees, the study sample used had 477 small businesses.

Results

Descriptive statistics are shown in Table 2. Family business owners were more likely to be male and younger than non-family business owners. Family businesses were older, had more employees, and were much more likely to be run by copreneurs. Family businesses owners were more likely to put family first more often (61% of the time) compared to non-family businesses (56% of the time). Family businesses were more likely to be in production and wholesale industries than services compared to non-family businesses.

Table 2. Descriptive Statistics of Sample

Variable	N	Family Businesses (286) Mean (Std. Dev.)	Non-Family Businesses (191) Mean (Std. Dev.)	T-test
Women-owned	476	0.51 (0.50)	0.59 (0.49)	*
Owner age	470	43 (13.74)	46.13 (14.11)	**
Minority-owned	475	0.33 (0.47)	0.27 (0.45)	
Business age	477	14.69 (12.71)	10.98 (9.79)	***
Employees	477	18.12 (23.40)	11.09 (19.68)	***
Copreneur	476	0.53 (0.50)	0.16 (0.37)	***
Sole proprietor	477	0.63 (0.48)	0.67 (0.41)	
Corporation	477	0.18 (0.38)	0.21 (0.41)	
Perceived success (1-5)	477	3.77 (1.19)	3.66 (1.10)	
Percent time family comes first (0-100)	476	60.59 (21.81)	56.08 (25.42)	**
Production	475	0.25 (0.44)	0.18 (0.39)	*
Wholesale	475	0.30 (0.46)	0.20 (0.40)	***
Services	475	0.44 (0.50)	0.61 (0.49)	***

***p<0.01; **p<0.05; *p<.10; Source: Author’s Data

Testing the reliability of the REI scale provided unexpected results shown in Table 3. The items for emotional attachment and identity proved to be highly reliable for family *and* non-family businesses with Cronbach’s alphas greater than 0.65. Results for renewal of family bonds (R)

were mixed with a family business Cronbach's alpha of 0.54 and an alpha for non-family businesses of 0.70. The item for R2 seemed not to be a good fit for that measure.

As hypothesized, family businesses do have higher REI scores and, thus, higher SEW than non-family businesses. Family business owners scored higher not only on the REI scale in total, but also on every individual item in the scale. All but one of the items were statistically significantly different. The item for R2 was not statistically different and scored lower overall compared to the other items.

Table 3. REI and REI individual items for family and non-family businesses (N=477)

Item	Family Businesses	Non-Family Businesses	All Small Businesses
	Mean (St. D.)	Mean (St. D.)	Mean (St. D.)
REI Scale***	5.57 (1.01)	4.42 (1.40)	5.11 (1.31)
Cronbach's alpha	0.89	0.92	0.92
<i>(R) Renewal of family bonds through dynastic succession</i>			
R 1***	6.01 (1.62)	4.54 (1.93)	5.43 (1.91)
R 2	4.46 (1.77)	4.28 (1.62)	4.38 (1.71)
R 3***	5.38 (1.67)	4.29 (1.87)	4.95 (1.85)
Cronbach's alpha	0.54	0.70	0.63
<i>(E) Emotional Attachment</i>			
E 1***	5.70 (1.36)	4.57 (1.66)	5.25 (1.56)
E 2***	5.72 (1.34)	4.82 (1.67)	5.36 (1.54)
E 3***	5.76 (1.28)	4.70 (1.65)	5.34 (1.53)
Cronbach's alpha	0.88	0.87	0.89
<i>(I) Identification of family members with the firm</i>			
I 1***	5.86 (1.27)	4.52 (1.80)	5.33 (1.64)
I 2***	5.86 (1.25)	4.52 (1.78)	5.33 (1.62)
I 3***	6.01 (1.16)	4.54 (1.81)	5.43 (1.62)
Cronbach's alpha	0.88	0.94	0.93

Note: standard deviation in parentheses. T-test ***=P-value<0.001; Source: Author's Data

Conclusions

This study empirically tests the reliability of the REI scale with not only family businesses, but also non-family businesses using a sample of small businesses with less than 100 employees. The REI scale is indeed a reliable scale for SEW. The REI scale was reliable among family businesses and the modified version was reliable among non-family businesses. In fact, the Cronbach's alphas were higher among non-family businesses than family businesses. Although both types of business owners display SEW, family businesses did in fact have higher SEW than non-family businesses. These results concur with Miller and Le Breton-Miller (2014) who state that SEW may not be unique to family businesses.

However, parts of the REI scale may still need to be improved. Item R2, which is related to short-term investments, did not seem to be as good a “fit” for measuring renewal of family bonds through dynastic succession. It was not only the lowest scored item, but also was not statistically different between family and non-family businesses. Thus, the study concurs with other researchers calling for more empirical revalidation and replication of scales measuring SEW.

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Role of government support on emergence and development of incubators in India

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Abstract:

Technology business incubator effectiveness has been studied variedly in literature from developed economies, looking at outcomes at various levels, including startup, incubator, university and system levels. In transitioning economies, particularly with underdeveloped private sector participation, the emergence of incubators with the support of government becomes important. The objective of our study is to understand the role of government support on incubator development in India. We conceptualize incubation support at two levels, namely, the “macro level incubation support” where government provides financial support to incubators, and the “meso level incubation support” where incubators utilize government grants to develop scale in supporting technology startups. We relied on data from the Department of Science and Technology (DST), Government of India on grants provided to 54 incubators across six Indian states. These six states stood well above national averages on industrialization, per capita level economic and human development indicators, and higher education institutions concentration. DST capital grants has led to a qualitative emergence of new incubators with preference to university-based incubators (UBIs), but Non-UBIs were scaling better. Older incubators were twice as likely to get seed grants, indicating reliance on incubators experience, relationships and their legitimacy for efficient transfer of financial support to technology startups. Specialized incubators although efficient, but limited in scale, exhibited longer term commitment in technology startup seed investments. Our study shows incubator scaling potential, through development of public-private partnership models, with specialization as a strategy.

Keywords: entrepreneurial ecosystem, incubation, government support, efficiency

THE INFLUENCE OF INDUSTRY SELECTION ON SUCCESSFUL FRANCHISE OWNERSHIP AND SATISFACTION

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Abstract

The significance of industry choice on franchise business ownership is investigated in this study. Franchising is a popular choice for small business ownership. However, entrepreneurs considering purchasing a franchise have a choice of approximately 75+ different industries to choose from in the franchise arena. Previous studies on entrepreneurs, not constrained to franchisees, have found that many entrepreneurs can be dissatisfied with owning and operating their own business and further, industry choice can influence success and satisfaction. This quantitative study applies a comparative research model to assess whether the practice of considering industry is significant for franchise business owners. A survey instrument was selected to measure the differences in satisfaction between franchise business owners in three different industries. A total of 1,280 surveys were mailed and 251 surveys were completed. Findings reported here indicate that industry category plays a significant role in a franchise business owner's level of job satisfaction.

Introduction

This follow-on study examines the influence of industry choice on satisfaction associated with successful franchise business ownership. Franchising takes place when a company, referred to as the franchisor grants the rights to an individual, known as a franchisee permission to sell its products, use its brand name, and system (Chirico, Ireland, & Simon, 2011). According to the International Franchise Association Foundation (2018), there are over 75+ industries that use franchising as a means of distribution and growth. Previous research has explored the impact of industry on entrepreneurship (Isabelle, Horak, McKinnon and Palumbo, 2020; McManus, 2017; Porter, 1979; Shane, 2007), nevertheless, limited research has focused specifically on the franchise format of business ownership. This study seeks to fill this gap in research.

Problem Background

Previous studies have found that many entrepreneurs can be dissatisfied with owning and operating their own business and further, industry choice can influence success and satisfaction. This research follows a 2018 study conducted by McDermott and Butler on the impact of gender of franchisee success and satisfaction. An initial literature review to this 2019 study identified that women who pursue a career in entrepreneurship perform not as well on almost every business performance measure and have more difficulty obtaining business financing for their business venture. Shane (2008) suggests females have more trouble raising capital because they pursue business opportunities that are less profitable and are more likely to be found in less appealing industries.

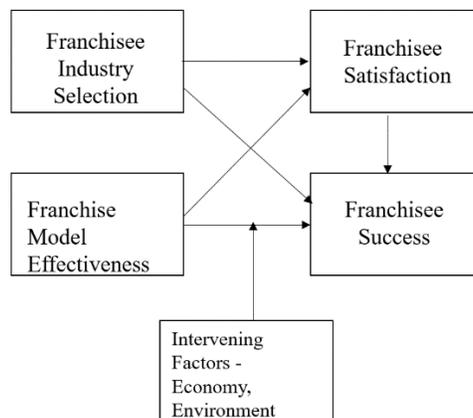
Grounds for the Study

This follow-on study attempts to determine the impact of industry choice on franchise ownership satisfaction. Previous research has explored the link between expectations and satisfaction. Oliver (1981) describes satisfaction as a psychological state developing when the feeling surrounding disconfirmed anticipations is tied with a person’s prior feelings about the experience. This study relates past experience to more accurate expectations, which can be argued are better displayed by satisfaction, the variance between expectations and results (Parasuraman, Zeithaml, & Berry, 1988). Abraham (2012) suggests job satisfaction is a significant measuring tool as it produces outcomes associated with successful organizations such as higher engagement, enhanced productivity, more loyal customers, a higher level of motivation, and more dedication to the job.

Conceptual Framework

The concepts of industry selection and successful franchising are the theoretical underpinnings of this research. As shown in Figure 1, there are multiple factors that can influence a franchisee’s success and satisfaction with a franchising arrangement. This research, as shown in Figure 1 focuses on the relationship between industry and satisfaction.

Figure 1



The context of this research is based on industry providing a better opportunity of being an entrepreneur and more precisely, satisfied and successful franchisee. The assumption behind this research is that if aspiring entrepreneurs have more realistic expectations, they will be more successful (Carree & Verheul, 2012).

Literature Review

The researcher will present a brief synthesis of the relevant literature pertaining to industry selection. Kotler and Keller (2016) define industry as “a group of firms offering a product or class of products that are close substitutes for one another.” In addition, “industries are classified according to several different factors, such as the number of sellers, degree of product differentiation, presence or absence of entry, mobility, exit barriers, cost structure, degree of vertical integration and degree of globalization” (p. 277). One of the most popular sources for analyzing the attractiveness of an industry is Michael Porter’s (1979) Five Forces model. The

five forces include bargaining power of buyers, bargaining power of suppliers, threat of new entrants, threat of substitute products or services, and rivalry among existing competitors. These five forces were applied to any industry. Nevertheless, some scholars have challenged Porter's model. For example, Isabelle, Horak, McKinnon, and Palumbo (2020) suggest entrepreneurs and policy makers go beyond the traditional five forces suggested in Porter's model. These additional forces of consideration include the following: industry exposure to de/regulation, threat of digitalization, exposure to globalization, and the competitor's level of innovativeness. These new theories on industry attractiveness can play a crucial role in a business's success or failure if these new variables are not taken into consideration. According to Frey and Osborne, industries frequently face rapid changes in their processes due to technology and are aggressively seeking employees with a high level of creativity and social skills to seek sustainable competitiveness (Frey & Osborne, 2013).

According to Shane (2007), many entrepreneurs start businesses in industries that have a high level of competition. These industries selected by entrepreneurs typically mirror their competitors and have lower profit margins. Shane suggests many entrepreneurs choose these less attractive industries for two reasons. First, they have a higher comfort level in industries they are familiar and have experience and next, the barriers to entry in these industries are low. For example, hair stylists open hair salons and chefs open their own restaurants. The next section will address the hypothesis for this study.

HYPOTHESES

Previous studies have shown that industry selection can have a positive impact on job satisfaction and success. It therefore follows that:

H1 Industry choice will show a statistically significant level of difference in job satisfaction.

The next section will address the methodology for this study.

Methodology

This study is a follow-on to a 2018 study conducted by McDermott and Butler. A seven-step model was used to evaluate the hypotheses. To examine the hypotheses, a comparative research model was selected to measure the differences in job satisfaction between three different industries. The independent variable for this study was industry type and the dependent variable was job satisfaction. The population for this study is business owners performing under a franchise model and agreement. To minimize variance created by context, the number of industries was limited to the following: Business Services, Home Repair and Improvement Services, or Cleaning and Maintenance Services. The final sample was established using a stratified random sampling method. This study utilized a self-administered mailed survey with 20 items. Survey contents were taken from the Minnesota Satisfaction Questionnaire (1977). The Minnesota Satisfaction Questionnaire uses a five-point Likert scale from not satisfied to extremely satisfied on a variety of elements pertaining to job satisfaction. The Minnesota Satisfaction questionnaire was chosen for its alignment to the study and high reliability. Industry type was obtained by asking survey participants to circle their industry.

Results

Sample Characteristics

The original sample of 1,280 had a response rate of 19.6% yielding a sample size of 251. The franchisees randomly selected in this study came from organizations franchising over 25 years ($M = 25.17$, $SD = 12.49$, minimum-maximum 11-61, $N = 12$). All the data was analyzed using IBM SPSS, Version 24.

Results from tests of the Hypotheses

Tests of the hypothesis used a one-way between groups ANOVA with alpha originally set at .05. To reduce the risk of a Type 1 error, a one-way between groups ANOVA was used to compare the means for job satisfaction for industry type. ANOVA by its very nature reduces the risk of a Type 1 error.

SCALE	INDUSTRY	N	MEAN	STD. DEV.	STD. ERROR MEAN	LOWER BOUND	UPPER BOUND	MIN	MAX
JOB SATISFACTION	Maintenance, Cleaning Services	82	73.10	9.930	1.097	70.92	75.28	46	94
	Home-Repair Improvement Services	66	77.05	9.534	1.174	74.70	79.39	56	96
	Business-Related Products Services	103	76.97	10.056	.991	75.01	78.94	51	98
	Total	251	75.73	10.010	.632	74.48	76.97	46	98

Table 2 shows the output for the one-way between groups ANOVA for the independent variable “Industry Type” with job satisfaction as the dependent variable.

SCALE	ANOVA	SUM OF SQUARES	df	MEAN SQUARE	F	SIG.
JOB SATISFACTION	Between Groups	841.036	2	420.518	4.307	.014
	Within Groups	24210.996	248	97.625		
	Total	25052.032	250			

A statistically significant difference was found for job satisfaction between the three industry types.

Discussion and Conclusions

This study addresses the importance of industry selection in choosing a business, specifically a franchise opportunity. In franchising, there are over 75+ industries to choose from. Shane (2008) notes that many entrepreneurs make poor choices when selecting a business. Their selection is often based on choosing industries they are most passionate and enjoy. Nevertheless, these are not necessarily the most important factors in determining an organization's success. Aspiring entrepreneurs that are interested in franchising should place industry choice at the top of the criteria when selecting a franchise. This research makes several contributions. First, this is one of the first studies that has verified that industry choice has an impact on a franchisees job satisfaction and success. In addition to Porter's Five Forces model, aspiring entrepreneurs should also consider variables such as industry exposure to de/regulation, threat of digitalization, exposure to globalization, and the competitor's level of innovativeness.

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Toxic Leadership and Employee Outcomes in SMEs: The Unique Impact of Employee Personality

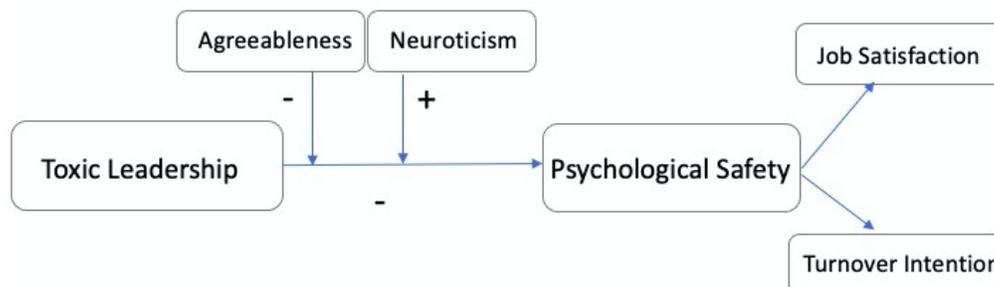
Maggie Davis, Doctoral Student
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Abstract

The current study examines the impact of toxic leadership in small businesses on employees, including employee psychological safety, job satisfaction, and turnover intention. In addition, building on power-dependence and social exchange theories, I examine how employee personality traits impact the relationships between these variables. This study proposes that the impact of toxic leadership is stronger in the small business setting. Toxic leadership is demonstrated by narcissism, abusive supervision, authoritarian leadership, self-promotion, and unpredictability. The unique setting of small business is conducive to centralized decision-making power and a heightened direct relationship between leaders and subordinates. While many benefits of a direct relationship between leader and subordinates are identified, I expect this closeness to enhance the impact of toxic leadership traits when present. In addition, I examine how employee personality traits of neuroticism and agreeableness moderate the impact of toxic leadership traits on employee psychological safety, and thus, additional employee outcomes. This study advances research in the area of toxic leadership by considering how unique employee personality factors can determine the impact of toxic leadership behaviors in the workplace (see Figure 1).

Past research examining the relationship between follower personality characteristics and negative leadership styles finds that individuals low in agreeableness and high in neuroticism are more likely to become targets of destructive leadership (e.g., Tepper, 2007). However, following an extensive literature review, I did not find prior studies which examine the proposed model in a small business setting where I expect the impact to be more pronounced at the individual level. In addition, the long-term effects of turnover under a toxic leader is expected to gradually result in an employee pool more likely to conform to the expectations of the leader and less likely to demonstrate qualities such as innovation and autonomy. The long-term strategic implications of these behavioral relationships are discussed.

Figure 1



Are Face Coverings Emotional Dampers: The Effects of Face Coverings on Organizational Display Rule Enforcement and Compliance

Abstract

During the age of the COVID-19 pandemic, wearing face coverings (masks) for prolonged periods of time is the norm for many individuals, especially at work (Scheid et al., 2020). Face coverings have become so common that they are now considered a clothing accessory (Nester et al., 2020). As many emotional signals are conveyed with facial expressions, covering up half of one's face obviously has an effect on one's ability to display/express emotions and the ability of others to perceive their emotions correctly (Nester et al., 2020). So, what impact does this have on organizational display rules and an individual's willingness/ability to comply with these display rules. Sutton and Rafaeli (1988) coined the term "Display Rules" to describe how organization set rules (i.e. service with a smile) that regulate the observable emotional display of their employees. Employees then use emotional labor to create publicly observable facial and bodily displays that comply with these rules (Hochschild, 1983). This article explores how the use of emotional labor and enforcement of display rules has changed with the advent of face covering requirements. To date, research has found that face coverings lead to, for example, emotional misclassification (Kotsia et al., 2008), lack of perceived empathy (Wong et al., 2013), loss of relatedness (Scheid et al., 2020), and enhanced perceptions of negative emotions (Nester et al., 2020). Herein we use the available literature to explore what is known about the effects of face coverings on emotions at work. Further, we propose that the widespread use of face coverings had led to 1. Organizations relaxing their emotional display rules and 2. Employees engaging in less emotional labor because of relaxed display rules and the difficult/frustration associated with displaying emotions with a large portion of their faces obscured from view.

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Understanding Everyday Entrepreneurs: A Qualitative Study of Their Human Capital

Everyday entrepreneurs are individuals who create new, primarily local, organizations to exploit opportunities using common ideas, products, or services, and using validated business models. While these entrepreneurs account for most new ventures created in the U.S each year, they are overlooked in entrepreneurship research in favor of the founders of high-growth, technology-based ventures (Welter *et al.*, 2017). Recently, scholars have noticed this disconnect in the literature and called for greater contextualization in entrepreneurship research (Welter, 2001). This contextualization includes further examination of who everyday entrepreneurs are and why they do what they do (Baker & Welter, 2018).

In this study, we draw on human capital theory (Becker, 1964) to explore the knowledge, skills, and abilities (KSAs) of everyday entrepreneurs. Human capital theory suggests individuals reap returns from prior investments in human capital, and that human capital is a determinant of an individual's success (Ployhart & Moliterno, 2011). Traditionally, KSAs are developed through education, training, and prior experiences. Unfortunately, little empirical research exists on the human capital of everyday entrepreneurs. As a result, we pose two research questions to fill this gap:

What knowledge, skills, and abilities do everyday entrepreneurs perceive contribute to their success?

How do everyday entrepreneurs develop the necessary human capital to run their ventures successfully?

We are collecting data from 20 everyday entrepreneurs using the long interview technique. Our findings will contribute to academic research on everyday entrepreneurs and offers opportunities for advances in pedagogy and policy.

How Would You Solve This Problem? A New Approach to Teaching Future Generations

Nicole Predki
Rebecca Prater

ABSTRACT

The Fourth Industrial Revolution (FIR) is making significant changes to our labor market. The World Economic Forum states, "The importance of skills such as creativity, originality and initiative, critical thinking, persuasion and negotiation will retain or increase their value." As a result of Covid, resilience, flexibility and complex problem-solving have proven to be necessary skills for business owners and job applicants.

Given our students will be looking for work in a world impacted by the FIR and Covid, it does not make sense to be educating future generations in ways that undervalue creativity, originality and initiative, critical thinking, persuasion and negotiation, resilience, flexibility and complex problem-solving, all skills necessary in the coming years. Most of our students will be working jobs that have not yet been created. Yet, we are educating them using outdated systems.

We limit students' capabilities by forcing them to choose one area of study, instead of encouraging them to explore all of their interests. Yet, all of their curiosities make them unique individuals able to contribute unique perspectives and solutions to a changing labor force. If we are looking for innovative ideas, we need to encourage our students to see their talents and interests as a collaboration of knowledge within themselves—an asset, not a distraction.

The FIR is also making it clear that we need to train humans to be lifelong learners. Change is the only constant. We need to shift our student's mindsets to value change and growth. By locking them into one way of thinking, one specialty in which they either succeed or fail, we are failing them.

We propose the following changes to our educational systems:

- Make the entrepreneurial mindset an integral part of all courses.
- Create an environment that encourages students to think, "How would you solve this problem?"
- Teach students to appreciate their complexity as humans is an asset, not a distraction.

**The Effect of COVID-19 on African American and Minority Firms in
Entrepreneurial Ecosystems:
A Socio-Economic Impact Pilot Survey of Lexington/Fayette County Kentucky**

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The 2021 Small Business Institute 46th Annual Conference
February 25-26, 2021

Abstract

COVID-19 has disproportionately impacted African American and minority businesses (Fairlie, 2020). The pandemic has also raised concerns about survival rates of African American businesses, which historically are undercapitalized and encounter significant obstacles to obtaining financing due to discriminatory lending practices (Federal Reserve System, 2017). These businesses often have less cash on hand, making it more challenging to compete and survive financial emergencies (Small Business Outcomes, 2020). Although financial performance is one indicator of success for firms in general, small and mid-sized businesses make significant contributions to local economies and value chains (sba.gov, 2019). This case study will examine racial inequality in free enterprise, the effects of COVID-19 on small companies and, the socio-economic impact on African American and minority firms located in Lexington/Fayette County, Kentucky. A measuring impact framework will be used to assess the impact of small business owners' responses to the pandemic. A pilot survey will be administered to firms capturing data beginning from February 2020 to present measuring each firm's financial and social impacts in the respective region.

Rural Entrepreneurship Success Factors: An Empirical Investigation in an Emerging Market

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Abstract

Small businesses in rural communities play a key role in achieving global sustainable economic development because they are the driving force of poverty reduction, job creation, resiliency, and economic development. This study examines the factors that drive the success or failure of small businesses in rural communities in emerging markets. This survey interview research study uses a logistic regression model to test the Lussier success vs failure prediction model with a sample of 230 businesses from the rural communities in emerging markets, Ghana. This study supports the Lussier model validity ($p < 0.01$) with high overall accuracy of 71 percent in predicting a venture as successful or failed. Capital, industry experience, staffing, and marketing skills are the most significant (t -values $< .05$) factors that distinguish successful from failed rural businesses in Ghana's emerging market. The findings can help future and nascent business ventures in rural communities avoid failure and successfully contribute to economic development. Implications for government agencies or public regulatory bodies, financial institutions, investors, suppliers, educators, consultants, and entrepreneurs as well as limitations and future research are presented. This study also contributes to the international validity of the Lussier model that can be used in both advanced and developing economies, and it contributes to the development of theory.

Stakeholder Networking

Stakeholder Capitalism argues that the most effective way to run a business is not with the intent to provide the greatest return to shareholders but rather to create as much value for as many of a business's stakeholders as possible. And, in so doing, this kind of thinking creates the greatest return to investors. Just last year, the Business Roundtable, an industry association representing many of the largest companies in the United States, provided a clear articulation of this philosophy when it revised its Statement on the Purpose of a Corporation to include value creation for not just investors but also customers, employees, suppliers, and the communities in which those businesses operate.

A critical element of successful small business ownership is one's ability to create a network. A great deal has been written about what constitutes networking and how it can be used effectively to grow a small business. Often, networking is perceived as largely transactional. What if, however, one applied Stakeholder Capitalism's admonition to create value for all to the practice of networking? Rather than seeing each interaction through the lens of creating value only for the person doing the networking, small business owners would approach networking with the intention to build relationships to create value for the people with whom they are networking. This approach would likely provide greater return to the business owner in the form of greater trust, loyalty, and strength of relationships which, in turn, would provide greater financial returns to the business.

*Exploration of PsyCap Constructs of Positive Leadership with
Students From U.S. and Mexico*

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Abstract

Mexico and the U.S. share a border of 2000 miles with 55 active ports of entry (U.S. Department of State, 2019). Diplomatic relations between the two countries has often been contentious leading to strained relations over such important topics as foreign trade and immigration. In this study, the researchers will conduct pre and post survey's which will focus on four Psychology Capital (PsyCap) constructs of positive leadership: hope, optimism, confidence, and resilience (Luthans et al., 2007). Students from a class in the US and students from a class in Mexico will be paired with each other throughout a semester, interacting utilizing various communication technologies. Enhanced understanding of cultural differences in leadership, entrepreneurship and business is a driving force in this study of comparing and contrasting positive leadership by designing specific interactions and activities to promote undergraduate students' understanding of these topics.

Keywords: *PsyCap, Positive leadership, cross-cultural competencies*

Employer's Perceived Value of Technology Credentials Infused Within a College Degree

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Abstract

Technology knowledge is a known driving force for talent development in the economy. The purpose of this study is to investigate employer perceptions of the value of technology industry badges and credentials embedded into undergraduate and graduate courses. First, the article begins by reviewing industry technology badging and certifications. Key constructs previously demonstrating employer perceptions of these skills and types of credentials will be analyzed. Skills acquisition theory is used as the conceptual framework. Finally, results are shared from a survey of employers in mid-sized midwestern city that examined three employer perception criteria: 1) employers perceived potential employees' level of enhanced skills, 2) perception of work ready employability level, and 3) perceived level of potential employees' motivation to continuing enhancing industry technology skills while learning (lifelong learner).

Key words: technology badging, skills acquisition, micro-credentialing

Linking A Written Business Plan and Social Media CRM to SME Performance

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The study explores the link between SMEs developing a written plan, social media CRM capabilities and performance. The ability of SMEs to establish a formal strategic planning process has shown to improve performance (Dibrell, Craig & Neubaum, 2014). Formalizing processes and the subsequent written plan may offer SMEs a competitive advantage, as they are better able to position the firm, organize activities and bundle resources (Barney, 1991).

Research suggest that today's SMEs by in large use some form of social media CRM within their business operations (Ahani, Rahim & Nilashi, 2017). Exploring the role of social media CRM offers as another capability that enhances performances amongst SMEs, yet little research to date has explored these relationships. This study attempts to investigate these areas of SMEs written plans, social media CRM and performance. The study also explores how different environments might affect these relationships. The study uses a sample of 176 self-reported survey respondents from SMEs. The results suggest that SMEs with a written plan use social media CRM differently than those SMEs that do not. In addition, the results suggest SMEs that having a written plan achieve higher performance. The paper concludes with some direction for future research.

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History, Race, and Performance

The reckoning of the presence of institutionalized and systemic racism has been aided by the senseless deaths of George Floyd, Breonna Taylor, and Ahmaud Arbery. Like the rest of the world, the ivory tower is not sheltered from systemic racism, where Blacks, Hispanics and other racial and ethnic minorities are unlikely to receive research funding or get published as often as white scientists, leading to stressors and income inequality as a result of fewer promotions, decreased mobility, and lower incomes throughout their academic careers (Thompson, Salazar, & Ecklund, 2020).

It has been well documented that Black faculty's mental health and well-being suffer at Historically White Institutions (HWIs) amidst their heightened concerns of successful reviews and appraisals being marginalized by mental and physical health and well-being (Eagan & Harvey, 2015). Promotion from the rank of assistant to associate professor tends to be particularly arduous in business schools, where competition is part of the sector's culture. This is a problem. Stressors on Black faculty have been said to prompt productivity losses in scholarship, teaching, and engagement (Edwards & Ross, 2018). Losses accrue beyond the individual faculty member: neither students, other faculty, the university and the community experience a win when faculty are asked to leave. These entrenched costs are emotional as well as economic. The persistent wealth gap between American whites and Blacks currently at \$1.5 trillion is triggered by lost consumption and investment between 2019 and 2020, hardly surprising (Noel, Pinder, Stewart, & Wright, 2019).

Scholarly research is illuminating persistent inequities but recommendations to mitigate these inequities are illusive. This study attempts to track salaries and measure well-being (by its antonym, stressors) of tenure track black faculty in business schools in three Midwestern cities. Survey research methodology is employed to understand existing policies and practices for supporting Black faculty mental health and well-being and a Delphi-panel is used to identify factors that may positively impact the same. Preliminary results suggest that positively impacting mental health and well-being may lead to enhanced performance and successful outcomes for Black faculty at HWIs (Kelley, Gayles, & Williams, 2017). This enables the capacity to potentially generate greater economic returns for Black faculty and their families, and the communities and businesses they engage.

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Applying a Craft Stakeholder Approach to Cannabis Legalization

Pete Nelson

In 2018, the cannabis market within the United States was valued at 11.3 billion dollars. Due to increased legalization by states for both medical and recreational use, this market has seen an exponential growth over the past decade. As of 2019, 33 states as well as the District of Columbia have legalized some form of cannabis use. While this growth is certainly exciting, it is important to build a regulatory system that encourages growth, innovation and accessibility for all players. It appears states are adopting this notion by implementing social equity programs. These programs put an increased importance on industry accessibility for “social equity” applicants. These applicants are generally defined as those from low-income neighborhoods with disproportionately high prior cannabis arrests, or in a more general sense, those that have been adversely affected by the war on drugs. While this is certainly a noble endeavor, this vision of equity is likely flawed when viewed through the lens of current market trends. Large barriers to accessibility, specifically vertical integration and patent protections, pose a threat to the viability of these efforts. While compensating those adversely affected by the war on drugs is important, I argue the emerging cannabis industry can also be used to compensate additional categories of people. This presentation stipulates that family farmers, adversely impacted by inefficient patents in the agricultural sector, can also benefit from increased access to the cannabis industry. Expanding upon the concept of social equity applicants, this presentation combines traditional social equity applicants and family farmers into a single group labeled “craft stakeholders.” Effective regulatory structures are vital to ensuring accessibility for these stakeholders. There is room for both corporate and craft firms within this industry. However, careful thought must be put into regulations if states want both to flourish.

BUSINESS IDENTITIES IN ONLINE SPACES: A NIGERIAN WOMAN ENTREPRENEUR PERSPECTIVE

Joy Enyinnaya, Colorado State University

Abstract

Nigerian women's engagement in commercial activities dates back to pre-colonial and post-colonial era (Halkias, Nwajiuba, Harkiolakis, & Caracatsanis, 2011). In the Eastern part of the country specifically, these contributions span across salt production, pottery, cloth-weaving, mat-making, as well as trading goods and services in the markets (Chuku, 1995). A more recent contribution to Nigerian economy is the fashion industry. Nigerian fashion industry is diverse in that it showcases different religions, ethnic groups and cultures in the country. As Nigerian women fashion designers utilize several online platforms as marketing tools, there is a need to explore how they are creating personal and business online identities. Nigerian women designers face gender and family-based issues in their businesses which are rooted in the patriarchal ideology that suggest women prioritize their roles as wives and mothers over their desire for upward mobility in the world of business (Mordi, Simpson, Singh, & Okafor, 2010). African and gender feminist scholarship argues that there is a need to center African women's issues from a uniquely African standpoint in order to correctly represent their reality (Oyèwùmí, 2005). While there is not much scholarship in this area, my goal is to develop theoretical frameworks through dynamic, multidimensional and heterogenous methodological approaches that are adjusted for contextual validity. Therefore, relying on previous scholarship, this study poses the following research questions.

RQ1: What forms of technology are Igbo women fashion designers using to brand and market their businesses in online spaces?

RQ2: What kinds of business and personal identities are Igbo women fashion designers creating in online spaces?

RQ4: How is their Igbo-centric culture reflected in their fashion pieces?

RQ5: What forms patriarchal challenges do Igbo women face within their businesses and home front?

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Innovative Pedagogy

Add Some Zip, Zest and Zing to your Zoom.

Title: Add some zip, zest and zing to your Zoom.

We've all been teaching with Zoom for some time, but many of us are still using very basic techniques. Zounds, it's time for an upgrade!

General Area for Best Practice:

All disciplines can use these techniques -- Accounting, Finance, Entrepreneurship, Marketing, Technology

Objectives:

Come to this session to learn about, experience and share innovative techniques

We'll also talk about some of the thornier issues we have dealt with including political posters, smoking and drinking online, attendance and cameras on/off.

SBI Innovative Pedagogy session:

We will lead the group through several FUN AND ENGAGING Zoom techniques and activities that we have been experimenting with including roll playing, interactive chats, fun with backgrounds, interactive whiteboards, outside polling apps and more! Zowie, your students will be glad you came to this!

Miller School of Entrepreneurship - Summer Innovation Academy

East Carolina University's College of Business (COB) and its Miller School of Entrepreneurship hosted our inaugural Summer Innovation Academy for high school students nationwide.

The weeklong event, supported by COB faculty, Miller School partners and ECU students, is designed to teach high school students the basics of entrepreneurship, how to launch a business idea, and spark the spirit of entrepreneurship. Highlights of the academy include learning lean launch startup methodology, one-on-one feedback from local entrepreneurs and investors, and exploring different resources within the ECU entrepreneurial ecosystem.

The academy closes with a tradeshow-style event where student teams can present their ideas to parents, faculty, and Miller School stakeholders.

Over the previous 3 years, we have expanded our reach locally, regionally, nationally respectively. From 105 students receiving their certificate so far, it is clear an early stage entrepreneurial experience is quintessential to student's entrepreneurial mindset development. By seeing the potential in their community, and developing some of the basic mindset tools, we plant the seed for possibility about entrepreneurship and ECU.

This year, while many continued to shelter in place during the COVID-19 pandemic, East Carolina University's Summer Innovation Academy expanded its reach, albeit virtually. For the first time in its three-year history, the academy welcomed students from across the country – as far west as California – for a week of building their entrepreneurial skills. The summer academy doubled its registrations from the previous two years, welcoming potential future ECU Pirates from Virginia, Florida, and Colorado.

Those out-of-state participants made up a pool of 50 middle and high school students that received training in the basics of entrepreneurship from Miller School of Entrepreneurship instructors and mentors. This is a prime example of discovering that there is a problem and creating a solution that adds value, each year the academy has created its own theme related to how we grow as entrepreneurs. This year was no different. Being able to adapt to change – like moving the in-person camp to a virtual format – is a defining feature of an entrepreneur.

Jimena Nunez, 15, learned about the academy from an Instagram story posted by one of her school's Future Business Leaders of America officers. Nunez, who lives in Colorado, did not hesitate to apply to the academy.

The team of Go Green Coolers led by 8th grade students August Meyer, and Cooper Sutton, were named the winners of the academy's end-of-week pitch competition. The trio put together the idea to develop an environmentally friendly cooler that dispenses ice

We learned, you cannot replace the experience we have given in the past by getting students to physically walk on campus, but there are still ways they can experience ECU virtually.

University alumni, stakeholders, and mentors worked with the students all week long. This all feeds into the entrepreneurial ecosystem we are creating, showing ECU is not only a 'viable' option for their education, but a top tier competitor who cares about the future of our students.

Another great take away is we were able to bring in more virtual mentors. It is something we could not have done with a face-to-face academy because of the professionals' time schedule. In the future, I think more online components are imperative.

Universities moving forward attempting to creating a community based entrepreneurial ecosystem can learn from the impact COVID-19 had on our summer innovation academy and

how to positively react creating a better alternative for young entrepreneurs. This year we created a low cost option for students and the program, a more time convenient alternative that cut our days almost in half, recordable lectures students (and future students) can watch at their leisure, and a convenient method of engagement for ECU stakeholders.

E-Portfolios for Graduate Programs: One Tool for High-Impact Practices, Student Self-Reflection, Instructional Scaffolding and Program Assessment

Authors: Melissa Brode, University of West Florida
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Abstract

E-portfolios provide a multifaceted electronic tool to assist academic programs faced with increasing demands to demonstrate student learning and assessment practices. The Association of American Colleges and Universities (Watson et al., 2017) has updated its original list of ten high impact practices to include e-portfolios. The Master of Business Administration (MBA) at the University of West Florida (UWF) employs an e-portfolio requirement for all of its students, not only as a high impact practice, but as a platform for student self-reflection, a tool to demonstrate increased learning throughout the program, and a mechanism for program assessment. For this presentation, we will share how the UWF MBA program e-portfolio is utilized as a high impact practice, a tool for student learning self-reflection, a demonstration of increased learning across the curriculum (scaffolding), and an instrument for assessment. Best practices for designing and implementing the e-portfolio will be discussed as well as some common pitfalls and impediments.

Keywords: e-portfolio, high-impact practices, assessment

Introduction

The concept of a portfolio has ancient origins with Olson (1991) describing the historical meaning of a container to carry (port) pages (folio) of work typically associated with the fine arts. Over time, the meaning of a portfolio shifted to an accumulation of one's highest-quality work and best example of abilities from any discipline (Batson, 2002; Meeus et al., 2006; Yancey, 2001). As instructional technologies have evolved, e-portfolios now provide a multifaceted electronic tool to assist academic programs faced with increasing demands to demonstrate student learning and assessment practices.

The Association of American Colleges and Universities (Watson et al., 2017) has updated its original list of ten high impact practices to include e-portfolios. High impact practices are pedagogical activities that promote deeper learning and create higher engagement with course content for students (Kuh, 2008). Growing research demonstrates the efficacy of e-portfolios as high impact practices that provide students with active engagement in the responsibilities of their learning, learner reflection opportunities, and outcomes driven results for program assessment (Watson et al., 2017).

The Master of Business Administration (MBA) at the University of West Florida (UWF) employs an e-portfolio requirement for all of its students, not only as a high impact practice, but also as a platform for student self-reflection, a tool to demonstrate increased learning throughout the program, and a mechanism for program assessment. Throughout their curriculum, UWF

MBA students are required to develop an e-portfolio that includes an executive summary, four industry based-research papers with grading rubrics, and a reflection evaluation statement.

The MBA e-portfolio consists of industry-based research papers across the main functional areas of business: business analytics, economics, financial management, and marketing management. In their initial semester, students are given direct instruction on the layout of the e-portfolio, as well as requirements for the industry-based research papers. In the semesters that follow, students conduct in-depth, industry-based research based on the course's subject matter, and then share their findings in four different papers. Faculty then assess the submissions for content, critical thinking skills, research skills, and written communication skills. This approach provides a scaffolding learning experience as students document their feedback in the e-portfolio and use this information to improve their performance each semester (Doo et al, 2020). Coined by Wood et al. (1976), scaffolding is an offshoot of Vygotsky's (1978) Social Development Theory describing the use of different instructional techniques to move students progressively toward a deeper understanding of concepts and mastery of skills.

As a final semester graduation requirement, students submit their e-portfolios to include all four industry-based research papers with grading rubrics, an executive summary, and a reflection learning statement. Not only does this process deliver a high impact practice experience, it also provides a platform for the student to articulate how the MBA e-portfolio gave them a new perspective, challenged a point of view, and introduced new techniques, skills, and processes. In preparation for this reflection, students review their work to see how their research, writing, and critical thinking skills have increased. Last, faculty use the e-portfolio to assess two key program-learning outcomes: 1) to synthesize complex information to make business decisions and; 2) to integrate advanced theories across business disciplines using approved rubrics.

For this presentation, we will share how the UWF MBA program e-portfolio is used as a high impact practice, a tool for student learning self-reflection, a demonstration of increased learning across the curriculum (scaffolding), and an instrument for assessment. Best practices for designing and implementing the e-portfolio will be discussed as well as some common pitfalls and impediments.

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Empowering Growth Through Innovation and Entrepreneurship in Rural Businesses

David H Mayo, East Carolina University

This session explores best practices and lessons learned from Accelerate Rural NC a grant-funded rural business accelerator in eastern North Carolina. Accelerate Rural is an intensive ten week accelerator program that teaches innovation and entrepreneurship principles to rural, main-street businesses. Participants focus heavily on new market development, e-commerce, and strategy to develop new high-value niche segments. Elements of the accelerator include daily classroom sessions, mentoring, prototype development coaching, and targeted assistance from interns skilled in rapid prototype development, e-commerce, and marketing. Anticipated outcomes of the program include a 20 percent increase in monthly e-commerce sales and development of new products that serve new customer segments.

Awakening the S.O.U.L. of African American Entrepreneurship through Innovative Teaching, Scholarship, and Service at the University of Kentucky Lewis Honors College

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University of Kentucky
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The 2021 Small Business Institute 46th Annual Conference
February 25-26, 2021

The philosophy and practice of entrepreneurship awakens many opportunities to explore the historical intersection of racial inequality and free enterprise systems. African Americans have a rich history of entrepreneurship. From Free Frank to Samuel Frances and Jeremiah Hamilton, African Americans soon learned that they could amass more wealth by merely trading their services and products to multiple consumers than by obtaining employment. Within two decades of the emancipation, African Americans established several thousand successful businesses that thrived in African American communities (*Black Entrepreneurship in the United States*, 2020). Although African Americans surpass Caucasian-Americans in entrepreneurial attempts, Blacks trail Whites in entrepreneurial success (Walker, 1999). This pedagogical best practice workshop will: 1) examine factors that affect racial inequality in free enterprise systems; 2) establish a rationale for the infusion of teaching, scholarship, and service that incorporates the African-American entrepreneurial struggle to obtain access to capital, compete and participate equitably in entrepreneurial ecosystems; 3) demonstrate the benefits of four innovative rubrics designed to “Awaken the S.O.U.L.” of college and university courses and curriculum that critically examines African American perspectives in entrepreneurship and free enterprise; and 4) provide examples and measurable outcomes of innovative teaching, scholarship, and service that contribute to a republic of ideals on college campuses, builds inclusive academic communities, and influences the decision-making of corporate sponsors who support the design of a multi-path forward that champions the value and contributions of African American entrepreneurship in the academy and beyond.

Connect the Dots: A Card Game for Teaching Cognitive Frameworks and Uncertainty in Opportunity Recognition

Introduction

This card game simulates and immerses students in Baron’s “connect the dots” model of opportunity recognition (2006). In Baron’s model opportunities emerge from a complex pattern of changing conditions—changes in technology, economic, political, social, and demographic conditions - that come into existence at a given point in time because of a juxtaposition or confluence of conditions which did not exist previously but is now present (Baron, 2006).

The game simulates the complex pattern of changing conditions through cues from specific instances of external occurrences represented in thematically framed playing cards. Each player draws a random card depicting a specific event, trend, or change provides specific information about one of these occurrences (we’ll call them “topic” cards to keep the naming simple). The player interprets the information about the specific occurrence on the topic card and thinks up potential problem/opportunity “idea sets” (Hill & Birkinshaw, 2010) associated with the occurrence and crafts a new idea for a business opportunity (Baron, 2006). Players repeat this process twice in subsequent turns by drawing one or more additional topic cards and refining their idea sets each turn. A “Player Judge” then evaluates the quality of the ideas in terms of their desirability, feasibility, and viability and “awards the round” to the player with the highest score. The player judge role is a mechanism for resolving outcomes in games where evaluations are based more on qualitative than quantitative merits (Engelstein & Shalev, 2020), such as in popular games like “Cards Against Humanity.”

The game immerses players in both the processes of drawing from their own unique cognitive frameworks they use to perceive connections between seemingly unrelated changes or events (Baron, 2006) and in dealing with uncertainty about the topic, their idea, and the judge’s preferences. In short, this game immerses students in the cognitive processes of opportunity recognition under an array of uncertainty contexts experienced by entrepreneurs in actual practice.

This card game is appropriate for high school and post-secondary settings, as well as for ideation training in corporate workshop settings. Because neither Baron’s nor other broadly accepted models of opportunity recognition (e.g., Ardichvili & Cardozo, 2000; Shane, 2000) specify contexts for opportunity recognition, the game designer is free to tailor the learning experience by selecting from different social phenomena or problem spaces that may be of particular topical or social interest for a particular setting.

Detailed Description of the Exercise

Connect the Dots is a competitive stylized card game that incorporates phenomena-cognitive frameworks for opportunity recognition (e.g., Ardichvili & Cardozo, 2000; Baron, 2006). Players create new idea sets from the information prompts presented on randomly drawn “topics” cards and their own related education and experience related to the topic (Baron, 2006; Shane, 2000).

Players are especially encouraged to focus on applying their own unique knowledge and experiences to the topic cards they randomly draw to create a unique idea for solving a problem posed in the card.

Materials required for this game are: one or more decks of “Connect the Dots” Topics cards; dozens of Idea Sets cards, dozens of scorecards for Player Judges. My decks of Topic cards are organized under the topics of Ageing, Millennials, Sports, and News & Media and color-coded by Topic. Each Topic card has a description of a unique and recent trend, event, or change reported by authoritative outlets like the Pew Research Center. The Pew Research Center is a “nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping the world” (PewResearch.org, 2020).

Gameplay is based on accumulated scores from a “round,” which consist of three turns. One player is appointed Judge for the round, and the other players “connect the dots” as they draw one or more cards each turn and process them into possible problem/solution ideas. Players modify and refine their idea sets with the addition of new topic cards drawn in subsequent turns and present a “final” idea for a business opportunity written on an idea card to the player judge at the end of a round. The player judge evaluates each of the final idea cards in terms of her or his perceptions of the idea’s desirability, feasibility, and viability in a business context. The player whose idea has the highest score in these categories wins the round. The sequence of steps unfolds as:

1. The instructor describes the game and its rules to the players (3 minutes).
2. Each player is given several “Idea Sets” cards to write down their ideas (could be a 3x5 card to a sheet of paper), and Topics cards are made available face down in sets (e.g., ageing, news and media, etc.; 1 minute)
3. Each player draws one Topics card and writes an idea for a potential opportunity on an Idea Sets card or sheet (5 minutes); this step is repeated twice to result in three turns for each play in one round. Players keep the Topics cards from previous turns in a round.
4. At the end of the third turn, players give their Idea Sets cards or sheets and the Topics cards they drew to the Player Judge. The Player Judge scores the desirability, feasibility, and viability of each player’s final idea card and determines a winner for that round (5 minutes).
5. Play is repeated until every player has served once as a Player Judge (i.e., an “n” number of players will participate in an “n” number of rounds to constitute a full game).

Key Discussion Questions

How did you combine your own unique knowledge with the information presented on the Topic card? This main mechanism of the game - forcing players to create new problem/solution ideas from an event, trend, or change trigger based on their own knowledge - is the main mechanism of opportunity recognition in theory and practice. Participants experience this mechanism and can practice building this skill using these cards.

How can you embrace uncertainty instead of fearing it? Many people regard changes to the status quo like a significant rules change, dramatic event, or a burgeoning new trend as threats (looking at you economists) because they add new uncertainty to perception and decisions. In

contrast, entrepreneurs embrace the uncertainty of a problem and ruminate over the aspects of the problem until they identify a promising solution. This framework requires players to view these external actions as opportunities to solve new problems and, by extension, lets players experience how new uncertainties can lead to new opportunities. This is a major component of the so-called “entrepreneurial mindset” needed for 21st-century workers.

Lessons Learned or Teaching Tips

In games that use a Player Judge to determine the winner of a turn, round, or game, the judge can sometimes be biased by factors not related to the stated outcome criteria (e.g., being a spouse or close friend of a fellow player). Instructors should point this possibility out and advise players of the importance of “unbiased subjectivity” to keep the game based on combining new types of information into new ideas. Another way to “keep judges honest” is to allow players to bet on who the judge will select for any turn; games like *Say Anything* that incorporate this mechanism also keep players more involved in the game (Engelstein & Shalev, 2020).

The instructor can add elements of uncertainty to the card game by allowing players to bet, bluff, and build card decks over several turns as is done in card games like Poker (Engelstein & Shalev, 2020). The additional uncertainty introduced by allowing players to bet and bluff can cause players to doubt the value of their own idea sets and withdraw from competing in a turn, even when they are superior to those of the bluffer.

Conclusion

Most models of opportunity recognition incorporate an individual’s education and experiences with the occurrence of an external event that triggers new insights into a situation. Teaching this concept of turning external events into entrepreneurial opportunities in different contexts of uncertainty can be a challenge in the classroom through traditional methods. *Connect the Dots* has been classroom-tested with hundreds of students and is ready for wide dissemination to innovative entrepreneurship educators.

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Games Mentioned

Apples to Apples (Kirby & Osterhaus, 1999)

The Big Idea (Ernest, 2000)

Cards Against Humanity (Dillon, Dranove, Halpern, Hantoot, Munk, Pinsof, Temkin, & Weinstein, 2009)

Say Anything (Crapuchettes & Pillalamarri, 2008)

SBI Best Practices

Student Start-ups as an SBI Pipeline

With the notion that service-learning is a high impact educational practice, universities should create many opportunities for students to enroll in these types of courses. The added benefit for doing this in rural serving university communities is that such opportunities can serve the dual role of educational experience and increasing the organizational capacity of host sites. Slightly more than 20 percent of the U.S. population lives in rural areas (Ratcliffe, Burd, Holder, & Fields, 2016). Defining rural areas is complex and often controversial. Concepts like population thresholds, density, land use, and distance are typical components of the classification (Ratcliffe, Burd, Holder, & Fields, 2016). Brain drain and population decline create workforce talent deficits in rural communities. Losing population matters because it erodes the local tax base which funds schools and community amenities and it is also a proxy for market share and customer base.

However defined, some rural communities are succeeding despite dim predictions. These places have strong cultural connections, shared histories, and even some of the highest rates of upward mobility nationwide (Lettieri, 2017). But to boost competitiveness, rural communities must find ways to level the playing field regarding available public infrastructure, access to broadband connectivity, and lessening the educational attainment gap as compared to more urban regions. One strategy to accomplish these things is to attract emerging entrepreneurs to rural communities.

In doing so, young adults can take advantage of the social connections, sense of community, and even desperation for success that define rural places. With the right combination of community vision, social and investment capital, and innovative ideas rural entrepreneurship can be a game changer for small towns across America. Arguably, one of the most critical steps in this proposed model is providing opportunities for emerging entrepreneurs to see, experience, and learn about rural places. Universities can assist in doing this by offering service-learning courses focused on connections between students and student entrepreneurs.

This is the novelty of our approach. We are using our student start-ups as a pipeline of clients for the SBI course at East Carolina University. We have created a model where students support students. Two critical issues for most SBI programs are vetting clients and the extension of the relationship after the student project is complete. By using students as clients, we have an intimate understanding of their business (or concept) and can co-create an impactful scope of work with them. Also, we can better prepare our student entrepreneurs for the transition into small business owners in the local community. The process not only involves student consulting but also the introduction to community advisors, mentors, and resources.

Over the past 5 years we have invested heavily in creating a strong entrepreneurial culture on our campus. This includes the launch of the Miller School of Entrepreneurship and multiple curricular programs including a BS degree in Entrepreneurship and Entrepreneurship Certificate. Additionally, we have focused our attention on developing high impact co-curricular programs and competitions like the Pirate Entrepreneurship Pitch Competition. Since its inception in 2018,

this competition alone has included almost 300 entrepreneurial teams from 50 different majors across the campus and provided more than \$200k in cash and in-kind prizes. Some of these businesses have moved into the startup phase or actually launched during this time frame. And like many external business clients in the region they often need extra assistance to successfully launch or move into the growth phase.

As we develop these “home grown” businesses it provides a natural pipeline for our SBI course. It provides them additional resources and incentives to consider locating in eastern North Carolina. Also, an added potential long-run benefit is the likelihood of charitable giving. This program provides a mechanism to interact with potential donors without having the gift be a topic of conversation. A potential donor often overlooked in these situations is the student. An experiential and impactful education experience leads to a higher likelihood of a financial gift once the student graduates. More engaged students can help overcome the narrative that they are consumers only and faculty can help reinforce this by helping students frame their college experiences differently (Wastyn, 2009).

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Roundtables

Career and Technical Education in COVID-19: A New Beginning?

Roundtable

Louise Underdahl, PhD, MPA, MSLS, University of Phoenix
Irene Chen, EdD, University of Phoenix
Elizabeth Isele, Founder and CEO, Global Institute for Experienced Entrepreneurship
Matt Knight, DBA, Walden University
Norris Krueger, Jr., PhD, University of Phoenix
Ronald Leach, PhD, MLS, University of Phoenix
Jean Perlman, JD, DBA, University of Phoenix

Success shouldn't be measured
by the color of your collar.

Dr. Bart Taylor
Texas A&M University

Abstract

Economic, political, social, academic, public health, and philosophical dimensions of COVID-19 have catalyzed career and technical education (CTE) innovation. Risks and uncertainties associated with COVID-19 are complemented by unprecedented educational opportunity, progress, and new beginnings.

Economic, political, social, academic, public health, and philosophical dimensions of COVID-19 (Altoff, 2020; Boone, 2020; Ellman et al., 2020; Hollander & Carr, 2020; Ohannessian, Duong, & Odone, 2020; Smith et al., 2020; Wilkerson, 2020; Wirth, 2020) have catalyzed career and technical education (CTE) innovation. Risks and uncertainties associated with COVID-19 are complemented by unprecedented educational opportunity, progress, and new beginnings (Corlatean, 2020; Isele & DuBois, 2020; Onestini, 2020). This multiple case study highlights novel approaches to accelerating CTE development, experiential learning, pedagogy, and entrepreneurship in the COVID-19 environment (ACTE, 2020; CDE, 2020; Green, 2020; Isele et al., 2020; McNeel, 2020; Ozer, 2020; TEA, 2020):

- ACTE: High-quality CTE: Planning for a COVID-19-Impacted school year
- California Department of Education: CTE distance learning resources
- Chatham House: Skilling, reskilling, upskilling
- Edutopia: CTE and the demands of the moment
- Texas Education Agency: Approved 2020-2021 CTE programs of study
- Turkey: The contribution of the strengthened capacity of vocational education and training system in Turkey to the fight against Covid-19

Target audience

Innovative education, teaching, and pedagogy

Anticipated outcomes for participants

- Assess viability of selected CTE initiatives
- Identify best practices
- Recommend strategies to promote "a new beginning"

ACTE

- The most critical systems-level issue for remote instruction is connectivity.
- Several CTE educators have reported that their districts and institutions have been or will be providing computers and internet hotspots to learners who need them through distribution programs, or staging mobile or stationary hotspots using school buses or campus parking lots.
- In many places, allowances within this remote learning model are being made for small groups of students to return to campus or other facilities for lab work or extra supports (ACTE, p. 9)

California Department of Education: CTE Distance Learning Resources

- Curriculum, Media, and Online Courses for CTE
- Career Exploration Resources for Educators
- Career Exploration Resources for Students
- Adult Education Resources
- Professional Learning Resources
- Career Technical Student Organization (CTSO) COVID-19 Resources
- Community College Sector Specific Resources (California Department of Education, 2020)

Chatham House: Skilling, Reskilling and Upskilling

- Education is one of three pillars of Chatham House action plan for economic recovery post-Covid-19 for the G20 and G7 summits.
- Accelerate advances in women's workforce competencies through professional and vocational education (skilling, reskilling and upskilling).
- Barefoot College International, a Tilonia, India-based, not-for-profit social enterprise, developed a rural community training program to support the installation and maintenance of solar power systems in villages around the world.
- In the UK, the mayor of London allocated £9 million from the city's adult education budget to launch the Skills for Londoners COVID-19 Response Fund; initiative designed ensure Londoners can continue to access learning opportunities while classroom settings are closed, by supporting education providers to expand and enhance their online services and equipping them to reach learners at risk of digital exclusion.

- Intergenerational Incubator in Iota, Japan seek to leverage experience across generations in boosting individual self-reliance and economies locally and globally. The program is predicated on assumption that entrepreneurship is a mindset, and that no one is too old to be an entrepreneur. (Isele & DuBois, 2020)

Edutopia

George Lucas Educational Foundation

Dedicated to transforming K-12 education so that all students can acquire and effectively apply the knowledge, attitudes, and skills necessary to thrive in their studies, careers, and adult lives. Founded by innovative and award-winning filmmaker George Lucas in 1991, the Foundation takes a strategic approach to improving K-12 education through two distinct areas of focus: Edutopia and Lucas Education Research.

<https://www.edutopia.org/about>

Edutopia - Career and Technical Education

Provide students with pathways to postsecondary education and careers by integrating core academic knowledge with technical and occupational knowledge.

<https://www.edutopia.org/topic/career-technical-education>

Texas Education Agency (TEA)

- Statewide Programs of Study Resources (2020-2021 Updated PDF and Word Frameworks)
- Programs of Study Overview
- Programs of Study FAQ
- All Statewide Programs of Study Frameworks PDF File
- Editable Word Framework Documents
- Regional Programs of Study
- Archived Program of Study Frameworks (TEA, 2020)

Turkey

- ‘Coefficient regulation’ restricts access of VET (vocational education training) graduates to higher education lowered perceived value of VET and accelerated its transformation into a type of education that high performing students no longer prefer.
- VET emerged as important economic contributor in the fight against the Covid-19 pandemic in Turkey producing medical supplies to prevent the spread of the epidemic.
- Persistent challenge is considering this as an education problem, rather than recognizing implications of labor market. VET is shaped by the labor market, directly affected by the labor market, and gains value through access to higher education. To improve VET system, labor market must reward VET graduates with competitive salary and career opportunities (Ozer, 2020).

Conclusion

In April 2020, United Nations Educational, Scientific and Cultural Organization (UNESCO) data indicated COVID-19 had affected over 1.37 billion global learners or 80% of all those who study in an educational system (Corlatean, 2020; Wilkerson, 2020). Simultaneously, emerging trends suggest COVID-19 may trigger transformation (Corlatean, 2020):

- Generation of new learning models and didactic tools
- Innovation in apprenticeship and internships to optimize learning
- Transition from silos isolating older and younger people to intergenerational partnerships achieving swift and sustainable progress (Isele et al., 2020)

Dr. Bart Taylor, lecturer in Texas A&M University's Department of Teaching, Learning and Culture, articulates a clear call to action:

We need to blur the lines between college readiness and career readiness in secondary education, because inadvertently this allows society to place more importance on entry into college versus learning a skilled trade. Many CTE programs result in certifications, licensing or entry into apprenticeships that require the same amount of time and dedication to learning, but the perception of the college education over career education is a taboo that we still need to overcome. Success shouldn't be measured by the color of your collar. (Green, 2020, para. 11)

APPENDIX

Picturing a Future for Diagnostic Imaging Apprentices

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At a Glance

SUBJECT
Banner Health

How many experts does it take to repair an X-ray machine? No, this isn't the setup for a bad healthcare technology management (HTM) joke. For the experts at Banner Health, this question begged an answer more often than they'd have liked.

Consisting of more than two dozen hospitals and specialized facilities, Banner Health is the largest healthcare system in Arizona. Like many organizations of its size, the healthcare system turns to third-party contractors to help with the servicing and repairs of its countless medical devices. As a result of workforce shortages both internally and externally, diagnostic imaging devices have proven particularly troublesome. However, that's starting to change. In a remarkably short time span, Banner Health has managed to create an in-house imaging

particular meeting, our imaging team leadership had everyone's attention."

The team raised concerns that as the number of diagnostic imaging devices at Banner Health was increasing, the number of experts available to repair and maintain these devices remained the same. The assembled leaders were aware that Banner Health has a supply of more than 411,000 medical devices on hand, which leads to more than 320,000 work requests annually—and that number is always rising.

If the deficit was growing between specific devices demanding repairs and the number of technicians qualified to get the job done, Banner Health needed to bolster its technician numbers.

"And we needed to do it yesterday," added Perry Kirwan, vice president of technology

Stallard, B. (2020, December 19). Bright ideas: Picturing a future for diagnostic imaging apprentices. *Biomedical Instrumentation & Technology*, 54(6), 434–437.
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Creative Assignments to Engage your Students Part II

Has the pandemic drained you of creativity when it comes to engaging assignments? Are you looking for new and creative assignment ideas, or do you have a proven, creative and engaging assignment to share? Join us for a roundtable discussion where we will share some of our tried and true ideas and hear some of yours! We will be discussing how we use Jeopardy Labs, Chat Packs for ice breaking sessions, and an activity called “Everyone Needs Masks” that is adapted from the Ugly Orange role play and made relevant for current events. Assignments are cross disciplinary and can be used in any field.

Takeaway: Participants will get share a creative assignment or get new ideas to revise existing assignments.

Workshops

Human Resource Updates for 2021

LeAnne Coder, Western Kentucky University
John Hendon, University of Arkansas – Little Rock
Timothy Dunne, Small Business Institute

Workshop panelists and audience will discuss current human resource management trends for 2021.

Small Business and Entrepreneurship Publishing: Tips and Tricks for Getting Your Work Published

Workshop

William C. McDowell, Ph.D.
Bradley University

Raj V. Mahto, Ph.D.
University of New Mexico

Jerry Kudlats, Ph.D.
Jacksonville University

Eden S. Blair, Ph.D.
Bradley University

Workshop Information:

The workshop, *Small Business and Entrepreneurship Publishing: Tips and Tricks for Getting Your Work Published*, presented by journal editors, associate editors, reviewers, and consultants, focuses on providing expert ideas and suggestions for publishing in quality journals in entrepreneurship and small business. Specifically, this workshop will focus on:

- Identifying the right outlet for your manuscript
- Setting up your manuscript to move from the editor's desk to the reviewer's inbox
- Tips for successfully navigating the R&R submission
- Understanding how to leverage your accepted and published paper to further your career

The workshop discusses the process most journals follow, how to connect your research with that of others in the field, and understanding the best practices to help you get published.

The workshop presenters represent some of the leading journals in the field including *Journal of Small Business Strategy*, *Journal of Business Research*, *Journal of Small Business Management*, *International Entrepreneurship and Management Journal*, *Technological Forecasting and Social Change*, and others.

Online Entrepreneurial Training Materials
Small Business Institute – Workshop Submission

Jana Minifie, PhD
Texas State University

Gordon Daugherty
Co-Founder Capital Factory
Founder, Shockwave Innovation

This workshop will present various on-line entrepreneurial resources that have been used at Texas State as well as other universities such as: University of Texas at Austin, Concordia University, Baylor University, and St. Edwards University; as well as accelerators such as Capital Factory and Plan 9. The Founders Academy platform was used pre-pandemic in a flipped entrepreneurial implementation classroom with great success. The Founders Academy was then used during the pandemic to replace face-to-face Women Entrepreneurial Boot Camps. This workshop will demonstrate how to incorporate entrepreneurial resources in courses and how to incorporate in non-academic entrepreneurial programs.

About our speakers:

Gordon Daugherty has been advising startups for more than 20 years. During that time he has made more than 200 investments in early-stage companies as a venture fund manager and angel investor, and has been involved with raising more than \$80 million in growth and venture capital. From his 28-year career as an operator in high tech companies, he has an IPO and a \$200 million acquisition exit under his belt. Now, as co-founder and president of Austin's Capital Factory and through the content creation practice, he has the pleasure of spending 100 percent of his time educating, advising, and investing in startups. Gordon will be presenting the various materials that are currently available and those in production by Shockwave Innovation. Currently, a new mentor-based option is in development and will be presented during the workshop.

Jana Minifie, is a professor of entrepreneurship at Texas State University. She has over 20+ years of consulting and mentoring of startups and small business growth strategies. She was recognized as the Barshop Excellence Professor in Entrepreneurship 2015-2018. She is a qualified Angel investor and has invested in and started several businesses. She is the lead facilitator for the Texas State I-Corps Site for Entrepreneurship. As Director of the Service-Learning Excellence Program, she is responsible for experiential learning, across campus, of civic enrichment of academic courses with their local to global community partners. During the pandemic, she received a grant from the Texas Workforce Commission (TWC) to develop entrepreneurial webinars to assist new and current entrepreneurs with their businesses. Jana will present how the Founders Academy has been successfully implemented into an *entrepreneurial small business implementation* class as well how the material is being used for entrepreneurial training outside the academic credit course setting.

Workshop Premise:

Experiential learning is key to successful entrepreneurship. But not many colleges or universities have the necessary resources or content to replace the dreaded textbook with

something more modern, valuable and fun. That's why Founders Academy was created. Instructors and students now have access to content that can be incorporated into an entrepreneurship course or curriculum in a multitude of ways, including experiential.

It doesn't matter if your classes meet in-person or virtually, the Founders Academy video library and supplemental content can be used in a variety of ways to facilitate entrepreneurship education. An instructor's guide explains the most common use cases and provides various recommendations and curriculum roadmap templates to use as a starting point. The key content available within the Founders Academy framework include: Streaming Video Modules, Student Assignments, Lecture Presentations, 45 topic-specific streaming video modules, most in the 20-30 min range, PowerPoint slides that mirror the content in the video modules to be used for in-class lectures. The Founders Academy is used to foster experiential learning, students put their learning into action to assemble key elements of a business plan for funding.

This workshop is not a *sales* pitch for Founders Academy, but a presentation of how online video content can be incorporated successfully into both academic and non-academic learning environments.

Agenda for Workshop:

- | | |
|-----------------|--|
| 0 – 5 minutes | Introductions of Speakers and participants |
| 5 – 25 minutes | Demonstration of the various online materials |
| 25 – 45 minutes | Demonstration of how the online materials were used in an academic and non-academic setting. |
| 45 – 60 minutes | Hands-on exercise of building an online entrepreneurial academic and/or non-academic program; Q & A. |

How to Create and Run a Small Business Institute® (SBI) Program at Your University

Ron Cook, Rider University
Mike Harris, East Carolina University

This session will discuss the nuts and bolts of starting and operating a SBI program and the value it can bring to both you and your institution. The SBI program is noted for its highly engaging pedagogical approach as well as its ability to positively impact the local business community. SBI also provides an excellent way to demonstrate community engagement, which is Standard 9 in the new AACSB accreditation standards. Topics covered include the overall benefits associated with a SBI program, elements of a comprehensive project, program delivery options, necessary support and resources, connections with assurance of learning efforts, professional development opportunities, and institutional challenges. Additionally, various success stories will be shared along with best practices for branding the recognition and rewards that come from operating a SBI program. Participants will learn more about available resources and mentoring opportunities.