IJMMR

International Journal of Management and Marketing Research

VOLUME 12 NUMBER 1 2019

CONTENTS

Can Belief in One's Capabilities, Ultimately, Promote Career Success? 1
M. Todd Royle

Environmental Innovation: Advancing the Resource-advantage Theory of Competition 23
Gricelda Juárez-Luis, Patricia S. Sánchez-Medina & René Díaz-Pichardo

Influence of Political Environment on Firms' Corporate Performance: Evidence from Selected Manufacturing Firms in Oyo State, Nigeria 37
Idowu Emmanuel Olubodun

Intrapreneur´s Competencies and Skills: Evidence from Mexico 51
Ana Isabel Ordóñez Parada, Irma Leticia Chávez Márquez, Carmen Romelia Flores Morales, Luis Raúl Sánchez Acosta & Carlos Cristian De la Rosa Flores

A Management Focused Tool for Developing Pro-forma Financial Statements 61
Terrance Jalbert

International Journal of Management and Marketing Research

Editor in Chief	Managing Editor
Terrance Jalbert	Mercedes Jalbert

Editorial Board

Jeff Anstine
North Central College
Raymond Cairo
University of Surrey
Peter Geczy
National Institute of Advanced Industrial Science and Technology (AIST)
Qiang Gong
Southwestern University of Finance and Economics
Azucena Leticia Herrera Aguado
Universidad Tecnológica de Puebla
Venus Ibarra
Ateneo de Manila University
Mark C. Johlke
Bradley University
Carmen Padilla-Lozano
Universidad Católica de Santiago de Guayaquil
Charles Rambo
University of Nairobi
Abhijit Roy
University of Scranton
Ya-Hui Wang
National Chin-Yi University of Technology
Janet L. Walsh
Birchtree Global, LLC

The International Journal of Management and Marketing Research, ISSN: 1933-3153 (print) and ISSN: 2157-0205 (online), publishes high-quality articles in all areas of management and marketing. Theoretical, empirical and applied manuscripts are welcome for publication consideration. The Journal is published once per year by the Institute for Business and Finance Research, LLC. All papers submitted to the Journal are blind reviewed. The Journal is distributed in print and through EBSCOHost, SSRN and RePEc.

The views presented in the Journal represent opinions of the respective authors. The views presented do not necessarily reflect the opinion of the editors, editorial board or staff of the Institute for Business and Finance Research, LLC. The Institute actively reviews articles submitted for possible publication. However, the Institute does not warrant the correctness of information provided in the articles or suitability of information in the articles for any purpose.

This Journal is the result of the collective work of many individuals. The Editors thank the members of the Editorial Board, ad-hoc reviewers and individuals that have submitted their research to the Journal for publication consideration.

All Rights Reserved. The Institute for Business and Finance Research, LLC

ISSN : 1933-3153 (print) and ISSN: 2157-0205 (online)

International Journal of Management and Marketing Research
Vol. 12, No. 1, 2019, pp. 1-22
ISSN: 1931-0269 (print)
ISSN: 2157-0698 (online)

IBFR
www.theIBFR.com

CAN BELIEF IN ONE'S CAPABILITIES, ULTIMATELY, PROMOTE CAREER SUCCESS?

M. Todd Royle, Valdosta State University

ABSTRACT

This research examines the relationship between self-efficacy, embeddedness in terms of fit with an organization's aims and required skills, linkages to others in the firm, feelings of affinity for the community (or the sense of sacrifice that might accompany leaving it) and both objective and subjective elements of career success. This research enhances organizational research by demonstrating the mediating effect of embeddedness on the self-efficacy and career success relationship. This research uses data from a convenience sample of 303 working adults to test its hypotheses. The findings indicated that embeddedness differentially mediated the self-efficacy – career success relationship. This research takes the information and discusses its implications for practice and theory, its relevant strengths, weaknesses and future research directions.

JEL: M10, M12

KEYWORDS: Self-Efficacy, Embeddedness, Career Success

INTRODUCTION

This research is intended to inform those of us who have blindly clicked on links related to self-help advice or casually surfed late-night television programs extolling the virtues of positive thinking. Perhaps some readers happened upon infomercials about motivational speakers at a local convention center near them soon, who can get them to believe in their abilities and enhance their employment potential. These appeals beg a fundamental question; can belief in oneself (i.e., generalized self-efficacy, Bandura, 1977; 1997) enhance career success? Naturally, when individuals enter situations with very low expectations of success (i.e., a self-fulfilling prophecy), it is clear from prior research (e.g., Merton, 1948; Darley & Gross, 2000) that they are likely to underachieve (both in an objective and subjective sense). Nevertheless, this paper concentrates on what effect positive beliefs in our capabilities might have on career success and what intervening variable might influence this outcome. This work combines three disparate, but not entirely incongruous variables: self-efficacy, embeddedness and both objective and subjective career success. Fundamentally, this work attempts to answer the following question: would we enhance our careers, both in terms of our earning potential and value satisfaction, if we have confidence in our abilities and integrate ourselves into the fabric of our jobs, firms and communities? This research hypothesizes that these variables are sequentially linked such that beliefs in capabilities help establish individuals in organizations and, thus, promote career success. This research proceeds as follows: first, it presents a review the current state of the literature related to this study's variables. Next, it discusses the data, the methods and the results. It concludes by discussing the results of data analysis, the practical and theoretical implications of the findings, their strengths and limitations as well as possible avenues for future research.

LITERATURE REVIEW

Self-efficacy

Self-efficacy describes individuals' beliefs that they can draw upon the internal capacities necessary to achieve desired goals within specific organizational contexts (Bandura, 1977; 1997). Self-efficacy, thus, influences both what goals individuals choose as well as how they try to achieve them (Bandura, 1977; 1997). Bandura (1977; 1997) contended that individuals demonstrate "coping" self-efficacy. He conceptualized of this as a broad set of beliefs about one's capabilities. Self-efficacy can be specific to a particular task or situation, although that is not the level of analysis used this research. Generally, those with higher levels of coping self-efficacy persist for longer periods of time and across different organizational contexts because they believe their prior accomplishments and experiences will help them avert future failure. Furthermore, they believe what future set-backs might occur are temporary in nature (Bandura, 1977; 1997).

Although much of human functioning is *autonomic* (e.g., things, like heartbeats, that we do not volitionally direct), Tolman (1951), contended, however, that we pay disproportionate attention to those things we think we can control. Furthermore, we carefully consider our actions and the possible outcomes (both positive and negative) (Tolman, 1951). In essence, individuals calculate what they think is in their best interests and do that which enhances the possibility of attaining desired outcomes. Concomitantly, as expectancy theory predicts, we avoid things that lead to negative anticipated consequences (Tolman, 1951; Vroom, 1964). Tolman (1951) proposed that highly functioning, cognitive, species, (e.g., this study's respondents) for the most part, understand their situations and engage in behaviors that, based on prior experience, they believe will benefit them. In terms of established management theory, findings indicated that employees' behaving accordingly constitute a potent mechanism by which both organizations and employees achieve desired goals, if coupled with desired rewards (Vroom, 1964; Luthans & Kreitner, 1985; Dickinson & Poling, 1996).

Bandura (1977; 1997; 2001) contended that efficacy expectations differ across three dimensions: magnitude, strength and generality. Furthermore, each of these dimensions predicts different motivational consequences. Magnitude purports individuals' efficacy expectations are a result of task difficulty. As such, successes on complex tasks have a stronger bearing on individuals' levels of self-efficacy than easy ones (Bandura, 1977; 1997; 2001). The strength dimension of self-efficacy contends that those who believe strongly that they can overcome obstacles, persevere longer than others who do not. The third dimension of self-efficacy describes individuals' differing notions of generality. For example, coping with very straining experiences (e.g., the professional difficulties of single parenthood, the loss of a job, the death of a spouse and divorce) promotes generalized efficacy whereas dealing with less complicated situations (e.g., fixing a computer problem) promotes the more limited notion of task-specific self-efficacy (Bandura, 1977; 1997; 2001).

Contemporary scholars are somewhat at odds about what best promotes self-efficacy. According to Bandura (1977; 1997; 2001), content mastery most directly promotes self-efficacy. As such, skill acquisition is likely to bolster beliefs of future skill acquisition/mastery which could continue indefinitely. Theoretically then, assessing self-efficacy must relate to task measurement (Weigand & Stockham, 2000). As such, self-efficacy changes based on both environment and task. However, Weigand and Stockham (2000) contended that only a portion of individuals' efficacy expectations, carry over between specific tasks. Other researchers contended that self-efficacy is a trait-like feature which remains stable and predicts individuals' behaviors for long periods of time and in different contexts (Chen, Gully, Whiteman, & Kilcullen, 2000; Chen, Gully, & Eden, 2001). Because of both the extended time periods and multitude of potential contextual engagements common to contemporary careers, this research utilizes the general notion "coping" self-efficacy when testing its hypotheses.

Social learning theory proposed that observing others and the outcomes of their behaviors can enhance self-efficacy (Bandura, 1977; 1997; 2001). In fact, observing coworkers completing tasks, particularly when they are rewarded, promotes individuals' beliefs that they could perform similarly (Weiss, 1990; Blau, 1964). Another way to affect self-efficacy is to provide feedback. Whether positive or negative, the important sources of feedback at work are usually coworkers or supervisors (Weiss, 1990). Although not uniformly positive, feedback is particularly potent for new or inexperienced employees who use it as a point of reflection for many of their initial behaviors. That has important implications for ensuing levels of self-efficacy (Merton, 1968; Darley & Gross, 2000). In fact, this initial information can form the basis of a self-fulfilling prophecy (Merton, 1968).

Recent findings related to social cognitive behavior noted that self-efficacy lies at the root of transformational, adaptive, human development and harmful impulse control (Ayub, Kokkalis, & Hasan, 2017: Wright, 2004). Furthermore, it promotes leadership potential. A key element of institutional fit, self-efficacy and social cognitive behaviors relate to the development of "self-leadership". This is a process of self-influence, self-direction and self-motivation needed for optimal functioning within the organizational context (Goldsby, Kuratko, Hornsby, Houghton, & Neck, 2007; Neck & Houghton, 2006). Self-leadership involves self-talk, intrinsic motivation, gauging one's beliefs or assumptions and imagining successful performance (Furtner, Rauthmann, & Sachse, 2010). Ayub et al (2017), found that self-leadership predicted better employee performance and institutional fit. Because individuals' ruminations about how to succeed in their workplace is also influenced by what they see others doing, it makes sense that self-efficacy and self-leadership affect their expectancies. Due to the potential of enhanced institutional fit, social cognitive theory shapes what people value from their work (i.e., valence), what behaviors they engage in because they anticipate a positive outcome (i.e., expectancy) and how fitting in promotes future rewards or alleviates uncertainties (i.e., instrumentality) (Ayub et al., 2017; Vroom, 1964). Savicakas (2005) offered another contemporary contribution to the vocational development literature, the Career Construction Theory (CCT). It is primarily concerned with how we *contextualize* (i.e., a view that stresses the meaning of any given statement or question is derived from its environmental surroundings) vocational development across organizations and time.

Much of the research using CCT involves the study of how employees draw upon their self-regulatory stores in order to cope with perceived current or future vocational demands (Duffy, Douglass, & Autin, 2015; Savickas & Porfeli, 2012). It stresses, career adaptability (i.ie., individuals' coping resources for vocational tasks). Duffy et al. (2015) contended that adaptability is a set of strengths that affects how employees navigate their working environments. Career adaptability is comprised of four distinct factors: curiosity, control, confidence, and concern (Savickas, 2005). Concern relates to how willing employees are to prepare for their future careers. Control describes the amount of responsibility employees believe they have for shaping their future careers. Curiosity involves self-exploration and environmental scanning for future potential occupational choices. Lastly, confidence describes the degree to which individuals believe they can overcome vocational barriers (Savickas & Porfeli, 2012). Theoretically then, CCT is also driven by self-efficacy. If individuals believe they have no control, will not explore, do not think they will achieve, or do not care about their working futures, it is unlikely they will try hard and, thus, appropriately embed within originations. Furthermore, lacking that embeddedness, it is doubtful that they would experience much career success.

Traditional and Contemporary Definitions of Career Success- Objectivity versus Subjectivity

Traditionally, organizational success was defined by an "individual's relationship to an employing organization" (Sullivan & Baruch, 2009). This view of success is basically monolithic in that it emphasized upward progression in return for high levels of commitment between the employee and the employer. This employment relationship might be described as both a relational a psychological contract (Herriot & Pemberton, 1966; Rousseau, 1995). Historically, employees wanted security and

predictability and were willing to pledge loyalty, perseverance and commitment to the organization in return (Baruch, 2004). This traditional model supposes a narrow definition of career success that prioritizes achievement in terms of steady vertical hierarchical mobility, and the accumulation of personal wealth and/or other extrinsic rewards (Zaleska & Menezes, 2007). These types of rewards can easily be quantified and, thus, objectively defined. This view of career success imbued both the popular ethos and academic career literature in the years following the second world war. Indeed, most organizational structures at the time also facilitated it (Sullivan, 1999). This relatively stable model of careers helped define and promote objective career success. Objective success as it typically pervaded the western developed economies of North America and Europe, was bounded by the attainment of organizationally provided and constrained rewards (e.g., relatively good base pay, job security, incremental increases and promotions) (Nicholson, 2000).

By contrast, Hall and Foster (1977) proposed that new career models redefine success and emphasize psychological responses to work which involve multiple measures of achievement (e.g., career success). That fundamentally shifts the dimensions of success from strictly objective to somewhat subjective. Since the early 1980s, globalization, diminishing job security, the decreasing influence of labor unions, corporate downsizings and changing definitions of proper career management have combined to alter what employees think success is (Sullivan & Baruch, 2009). A hallmark of this change relates to movement away from longer-term oriented contracts (i.e., psychological and relational contracts) to more short-term ones (i.e., transactional contracts). A transactional contract alters the relationship between the employee and employer drastically in that instead trading commitment for stability, workers must be flexible in order to build their own skills to meet changing organizational needs as well as to remain viable in the labor market (Herriot & Pemberton, 1966; Baruch, 2004; Greenhaus, Callanan, & Godshalk, 2010). Concomitant changes in these contracting styles forged new perspectives on career management and understanding of what constitutes success. The two most widely recognized of these frameworks are the *protean* and *boundaryless* career conceptualizations (Greenhaus et al., 2010).

The boundaryless perspective emphasizes that careers take a "range of forms" rather than any single (Arthur & Rousseau, 1996). As such, careers are not bounded by a single standard of excellence and have less hierarchical coordination and stability (Arthur & Rousseau, 1996). Thus, the boundaryless career places the ownership of careers primarily in the hands of individuals rather than organizations. It also involves frequent inter-organizational mobility/assignment (Parker & Arthur, 2000). Parker and Arthur (2000) further suggested that de-emphasizing extrinsic and objective measures altered conceptualizations of career success. The protean career is conceptually similar to the boundaryless career (Hall, 1996). The protean orientation describes a mindset related to careers where individuals' values drive their career behaviors (Briscoe & Hall, 2006). By contrast, the boundaryless model involves boundary-crossing behaviors. For example, boundaryless organizations try to eliminate barriers like functional silos (e.g., the lack of cross training and communication between operations and marketing) and to reduce the distinctions between the firm and its environment (e.g., moving employees between a parent company and joint venture or subsidiary) (Ashkenas, Ulrich, Jick, & Kerr, 1995: Baruch, 2004). The protean career requires a self-directed and values-driven approach to career management (Briscoe & Hall, 2006). In other words, protean employees seek jobs that fulfill multiple internal, subjectively important values. Ultimately, under these circumstances, individuals must be accountable for managing their own careers. Specifically, they evaluate competing options, plan their working engagements and make the subsequent decisions as necessary (Hall & Mirvis, 1996). The protean careerist's choices and search for self-fulfillment are the essential drivers of psychological success. Success in this respect comes from skill accumulation and the experiences gained in multiple organizational and occupational contexts that span many different jobs (Baruch, 2004).

Arthur and colleagues proposed that three pillars, they called career competencies, predict success in a boundaryless organization (DeFillippi & Arthur, 1994; Arthur, Hall, & Lawrence, 1997). DeFillippi and

Aurthur (1994) defined these competencies as marketability of skills (knowing-how), career motivation and proper identification of fields and career (knowing-why) and career-related networking (knowing-whom). Further, employees in the boundaryless career should maintain a high degree of flexibility in managing their careers and should strive to make decisions based on their value system (Arthur, Hall, & Lawrence, 1996). If they can do this, then in multiple organizations, some of their own, they are likely to find what they value and, thus, defines their success.

Job Embeddedness

Job embeddedness constitutes a wide range of employee behaviors and situations that both predict individuals' centrality and mobility as well as their proclivity/vulnerability to turnover (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001). Embeddedness contains three distinct components. They are the *links* individuals have to other and their organizations/communities, the degree to which they *fit* in those firms and their jobs and the degree to which they believe they would *sacrifice* if they moved from their current circumstance into another. These dimensions can relate to both communities or organizations. Links can be both formal and informal connections between individuals and others or their organizations (Lee, Mitchell, Sablynski Burton, & Holtom, 2004; Mitchell et al., 2001). Linkages exist between employees, family members and community organizations. Links are somewhat analogous to network associations. The greater numbers of links between individuals and others in the network, the more they can exercise position power and the higher their level of continuance commitment (Lee et al., 2004; Mitchell et al., 2001). Prior research suggested individuals also experienced considerable normative pressure (i.e., feelings that individuals should remain committed out of a sense of obligation) to stay at a job. The sources of that pressure are mostly family members, friends and other close confidants at work (March & Simon, 1958; Maertz, Stevens, & Campion, 2003).

Indeed, this is a key component of both how organizations and individuals define what it means to be socially integrated (O'Reilly, Caldwell, & Barnett, 1989). Meyer and Allen (1997) and Abelson (1987) contended that linkages form the basis of continuance commitment. In other words, multiple, strong, linkages, incline individuals to stay where they are due a sense that they must or they stand to lose out because another job/community risks what they already have and value. Specifically, those who are married, older, have more organizational tenure and who have kids are less likely to leave their jobs or communities voluntarily (Abelson, 1987; Meyer & Allen, 1997). Job embeddedness constitutes a notable social influence on employee retention and, further, promotes to careers in both an objective and subjective sense. To the extent that self-efficacy aids individuals define/complete goals on novel tasks, it promotes more linkages because organizations value those contributions and, thus, enhances career success (Sparrowe, Liden, Wayne, & Kraimer, 2001). Objective career success increases by upward progression and subjective career success by the accumulation of marketable knowledge, skills and abilities.

Hypothesis 1a: Embeddedness-links mediates the relationship between self-efficacy and objective career success.

Hypothesis 2a: Embeddedness-links mediates the relationship between self-efficacy and subjective career success.

Fit describes employees' similarity to others in the firm (e.g., in terms of values and priorities), organizational compatibility and congruence within the environment (Mallol et al., 2007; Lee et al., 2004). Furthermore, employees' terminal career goals (i.e., end state) and intermediate goals (i.e., intervening steps) must "fit" the corporate culture to achieve objective career success (Mallol, et al, 2007; Greenhaus et al., 2010; Royle, 2015). Naturally, individuals also consider attributes of the community and environment as a whole. The theory of job embeddedness postulates that the tighter the fit between

individuals and their organizations the less voluntary turnover occurs and the more quickly those who do not fit resign (O′Reilly, Chatman, & Caldwell, 1991; Schneider, Goldstein, & Smith, 1997). Other authors noted this relationship also exists with involuntary turnover and fit (e.g., Chatman, 1991; Chan, 1996; Villanova, Bernardin, Johnson, & Dahmus, 1994). In other words, those who do not fit are the most likely to be terminated. Thus, individuals' fit with theirs jobs and the organizations constitute a set of attachments that promote career advancement, if for no other reason than it is impossible to have a career without holding a job first.

Mitchell et al. (2001) contended that fit also applies to the notion of community. Individuals differentially evaluate how well they like the weather or cultural amenities in an area in addition to their work and organizations (Mallol, et al., 2007; Mitchell et al., 2001). Furthermore, local politics, lifestyle choices (e.g., a love of outdoor activities), religious affiliations and entertainment vary by location but matter to individuals (Mitchell et al., 2001; Callanan, 2003). The assessment of one's fit with the community, however, can be independent of either person-job or person-environment fit (e.g., I enjoy being a professor but I do not enjoy summers in Georgia). Relocation usually requires employees to reassess this dimension of fit, but it is not necessarily a detriment to either community fit (e.g., they might be better suited to their new locations) or either subjective or objective career success (Baruch, 2004; Greenhaus et al., 2010; Royle, 2015). As noted above, self-efficacy enhances both person-job fit and person-organization fit. Employees tend to better like and readily accept others who fit (e.g., O'Reilly et al., 1991). That has powerful implications for what kinds of outcomes those who fit should expect vis-à-vis those who do not. For example, those who fit likely have better promotion, training and earning opportunities (Dulebohn, Wu, & Liao, 2017). These opportunities directly promote objective career success. Feelings of belonging and involvement might also enhance subjective career success, to the extent that individuals value being members of the organization and maintaining social affiliations therein.

Hypothesis 1b: Embeddedness-fit mediates the relationship between self-efficacy and objective career success.

Hypothesis 2b: Embeddedness-fit mediates the relationship between self-efficacy and subjective career success.

Sacrifice captures the perceived cost of material or psychological benefits individuals might forfeit by leaving their jobs or communities. For example, leaving an organization likely intones perceived personal losses (e.g., giving up colleagues, interesting projects or desirable perquisites). The more employees give up when leaving, the more difficult it is to sever ties with the organization (Shaw, Delery, Jenkins, & Gupta, 1998). Furthermore, losing some non-portable benefits (e.g., stock options or defined benefit pension plans) also involve sacrifices. These latter factors related negatively to turnover, in that employees were less likely to seek other employment (Gupta & Jenkins, 1980). Other potential individual sacrifices for vacating one's position, included reduced opportunities for job stability and advancement (Shaw et al., 1998). Naturally, this notion of sacrifice also strongly correlates with concept of continuous commitment (Mitchell et al., 2001).

The relationship between self-efficacy, embeddedness and career success is neither as clear nor straightforward in the case of sacrifice. Self-efficacy, as noted above, encourages behaviors that promote both fit and strong linkages. To the extent that those actions also put individuals in positions within the hierarchy where they could experience a loss by leaving, it would promote objective career success because employees then avoid being in between jobs. Periods of joblessness, by definition, inhibit upward advancement and higher wages and, as such, hinder objective career success. On the other hand, those same behaviors that led to employees' relative positions of importance (i.e., higher levels of embeddedness) also make them more attractive to the outside job market. Concomitantly, sacrifice might

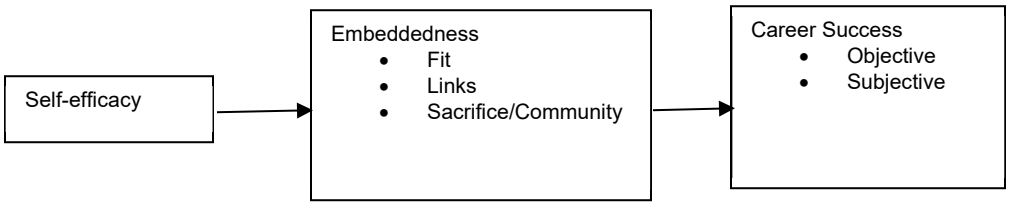
be desirable by protean employees because they make a risk v. reward comparison and believe that taking a chance on turning over might lead to better subjective opportunities for career success elsewhere.

Hypothesis 1c: Embeddedness-sacrifice mediates the relationship between self-efficacy and objective career success.

Hypothesis 2c: Embeddedness-sacrifice mediates the relationship between self-efficacy and subjective career success.

In Figure 1, the author illustrates and summarizes this study's hypothesized relationships.

Figure 1: Model of the Mediating Effect of Embeddedness on the Self-efficacy-career Success Relationship



DATA AND METHODOLOGY

The author collected these data in 2016. This is a convenience sample gathered form individuals with at least three years full-time working experience in multiple different organizations. The potential for contaminating effects caused by comparisons across organizational contexts and cultures cannot be entirely eliminated in this research (Schwab, 1999). Nevertheless, the potential tumult in the contemporary labor market, even in a time of low unemployment, might make these findings applicable to a wide variety of employees (Baruch, 2004; Greenhaus et al., 2010).

Participants and Procedures

These data come from a collection effort conducted by the researcher in the spring and summer of 2016. Students enrolled in courses in organizational behavior and human resource management received extra credit for participation. Students who had been working for the equivalent of three years of full time, could answer questionnaires. If students did not meet that criterion, they could solicit help from friends or family members to fill out a survey on their behalf. The author used Qualtrics to collect and analyze raw data. The author generated a web address for respondents to access in order to complete the survey. Of course, not all eligible students took part in this data collection, probably because they were either not interested in this study's topics or did not need any extra credit. The author recorded contact information, names, telephone numbers, employer information and work history (in order to hedge the risk that ineligible students participated). The author instructed respondents that he reserved the right to contact them or their employers to verify eligibility. When the researcher concluded the survey period, 360 individuals started the survey. Of those, 303 (84%) completed it. There were 180 female respondents (59%), the average age was 36 and the average organizational tenure was seven years. Respondent occupations included salespeople, nurses, teachers and managers.

Measures

First, the author conducted confirmatory factor analysis (CFA) to verify the expected dimensionality of the variables based on their predicted loadings (Pallant, 2013). This process ascertains that the number of

factors and the indicator variables do not deviate from expected parameters based on prior research (Pallant, 2013). CFA can also help address problems of multicollinearity (Tabachnik & Fidell, 2001). The author conducted the factor analysis using an oblique rotation and kept factors using the Kaiser criterion (i.e. keeping only those components with eigenvalues over 1.0) (Tabachnik & Fidell, 2001; Kaiser, 1974). The author used the oblique or "oblimin" rotation because he believed some of the constructs of interest are correlated. For example, it makes theoretical sense that individuals could be simultaneously linked to both their communities and organizations and would experience a sense of sacrifice should they leave due to both (e.g., Mitchell et al., 2001; Ferris & Kacmar, 1992).

The correlational analysis included in Table 1 supported the presumed factor structure. The scales used in this research indicated acceptable dimensionality. The results of analysis of CFA indicated a single factor structure for subjective career success (eigenvalue = 3.63, proportion of explained variance = 0.73), objective career success (eigenvalue = 1.96, proportion of explained variance = 0.65) and self-efficacy (eigenvalue = 2.51, proportion of explained variance = 0.50). As expected, the factor structure for embeddedness broke into three distinct eigenvalues over 1.0 due to the three factored structure of the construct. The first factor relates to fit (eigenvalue = 5.72, proportion of explained variance = 0.36), the second links (eigenvalue = 2.33, proportion of explained variance = 0.15) and the third sacrifice (eigenvalue = 1.74, proportion of explained variance = 0.11). Appendix 1 presents this information as well as noting these scales' original authors and coefficient alpha values. *Control variables.* This research includes several control variables intended to reduce the potential for spurious effects, thus, enhancing the findings. This research controlled for age, gender, ethnicity and organizational tenure. The author included these due to their long-observed contaminating potential for research in social and organizational science (Sheridan & Vredenburgh, 1978; Greenhaus et al., 2010).

RESULTS AND DISCUSSION

In this study, the researcher used Baron and Kenny's (1986) three-step regression procedure to test for mediation. This analysis requires researchers to conduct three lock step, sequential, regressions. Thus, the researcher must demonstrate a significant relationship before taking the next step. First, demonstrate that the mediating variable significantly relates to the independent variable (i.e., the three different dimensions of embeddedness, and control variables regressed on self-efficacy). Second, show that the dependent relates to the independent variable (i.e., controls, subjective and objective career success regressed on self-efficacy). In the last step, the mediating variable must significantly relate to dependent variable with the independent variable included in the equation (i.e., career success regressed on both self-efficacy and embeddedness). If, sequentially, these conditions hold, at least partial mediation is present (Baron & Kenny, 1986). If, in the final step, the independent variable becomes insignificant as noted by the standardized beta weight) but the mediator remains significant, full mediation exists. If the independent variable has a significant but a reduced standardized beta weight (especially if associated significance levels drop) in the third step and the mediator remains significant as well, then a case of partial mediation exists.

Table 1 contains the means, standard deviations and correlations between the study's variables. Not surprisingly, the largest single correlation was between age and organizational tenure ($r = 0.63$, $p < 0.001$). The author does not suspect problems of multicollinearity because no correlation, except the relationship noted above, exceeds Cohen, Cohen, West and Aiken's (2013) problematic 0.60 threshold.

Table 1: Means, Standard Deviations and Correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Age	36.49	13.42	---									
2. Gender	---	---	**-0.12**	---								
3. Ethnicity	---	---	**-0.19**	0.03	---							
4. Tenure	7.37	8.02	**0.63**	0.08	**-0.20**	---						
5. Self-Efficacy	3.97	0.69	-0.07	-0.03	0.03	**0.49**	---					
6. Embed (Fit)	3.95	0.91	**0.27**	-0.03	**0.18**	**0.38**	**0.19**	---				
7. Embed (Links)	3.75	1.02	**0.17**	-0.09	**0.18**	0.06	**0.30**	**0.3**	---			
8. Embed (Com)	3.80	1.07	**0.26**	-0.09	-0.06	0.07	**0.19**	**0.39**	0.03	---		
9. Sub. Success	3.71	0.82	**0.21**	-0.06	-0.01	-0.07	**0.23**	**0.51**	**0.27**	**0.37**	---	
10. Ob. Success	3.75	1.07	**0.16**	**-0.17**	**-0.17**	-0.03	**0.28**	**0.37**	**0.12**	**0.19**	**0.41**	---

Significance levels of all **bolded correlations are significant to at least the 0.05 level N = 303*

The researcher performed Baron and Kenny's (1986) the three-step regression analysis to test for mediation. In all steps, the author added control variables (i.e., age, ethnicity, organizational tenure and gender) to the regression equations in order to create a more stringent test of the hypotheses. Table 2a lists the results of the study's first step. Self-efficacy was significantly related to the fit dimension of embeddedness (b = 0.27, p < 0.001). Due to that finding, the researcher proceeded to the second step. The second panel indicated that self-efficacy is significantly related to the dependent variable (objective career success) (b = 0.24, p < 0 .001). Self-efficacy explained 24% of the variance in objective career success. In step three of Baron and Kenny's (1986) procedure, the mediating variable (i.e., embeddedness-fit) must be statistically significantly related to the dependent variable (objective career success) when the independent variable (self-efficacy) is added to the equation. The data indicated that embeddedness-fit was still a strong predictor (b = 0.31, p < 0.001) of objective career success, but that the influence of self-efficacy weakened but remained significant (b =0.16, p < 0.01). Baron and Kenny (1986) contended that when the standardized beta weight drops and/or fails to be significant, the relationship between the variables is partially mediated. Such is the case in this sample. Embeddedness-fit partially mediated the relationship between self-efficacy and objective career success.

The following mediated regression equation measured the relationship between self-efficacy, fit and objective career success.

$$Objecive\ Career\ Succes = \beta_1 age + \beta_2\ gender + \beta_3 tenure + \beta_4\ ethnicity + \beta_5\ fit + \beta_5\ objective\ success \quad (1)$$

Table 2a: Mediation Results for Self-efficacy and Embeddedness-fit on Objective Career Success

Step 1: Mediator Variable Regressed on the Independent Variable				
Variable	**F**	**df**	**Adjusted R^2**	**β (Standard)**
Mediator: Embed-fit	6.69***	5	0.09	
Self-efficacy				0.27***
Step 2: Dependent Variable Regressed on Independent Variable				
Dep. Var.: Ob Career Success	7.60***	5	0.10	
Self-efficacy				0.24***
Step 3: Dependent Variable Regressed on Mediator (Job Satisfaction) with the Independent Variable Included				
Dep. Var.: Ob Career Success	7.71***	6	0.18	
Embed-fit				0.31***
Self-efficacy				0.16**

**p<.05, ** p<.01. *** p<.001* N=303 *The panels of this table denote the steps suggested by Baron and Kenny (1986). The results suggest that the relationship between the self-efficacy and objective career success weakens substantially in the presence of embeddedness-fit, thus, partial mediation occurs.*

The first paned in Table 2b displays the results for the study's hypothesis that embeddedness-links mediates the relationship between self-efficacy and objective career success. Results indicated in the first step that embeddedness-links, was significantly related to self-efficacy (b = 0.30, p < 0 .001). Thus, the researcher takes the second step. The table's second panel indicated that self-efficacy is significantly related to the dependent variable (objective career success) (b = 0.24, p <0 .001). Self-efficacy, again, explained 24% of the variance in objective career success. Baron and Kenny's (1986) third step of the procedure requires the mediating variable (i.e., embeddedness-links) to be related to the dependent variable (objective career success) with the independent variables (self-efficacy and the statistical controls) included in the equation. The third step, indicated in the last panel of Table 2b, notes the results. Notably, embeddedness-links was a strong predictor (b = 0.52, p < .001) of objective career success, but self-efficacy still proved statistically insignificant (b = 0.07, p N/S) when entered in the equation. Baron and Kenny (1986) noted the lack of statistical significance in this step of the independent variable indicates a fully mediated condition. In other words, all of objective career success' demonstrated variance from self-efficacy channels through the links dimension of embeddedness.

$$Objecive\ Career\ Succes = \beta_1 age + \beta_2\ gender + \beta_3\ tenure + \beta_4\ ethnicity + \beta_5\ links + \beta_5\ objective\ success \quad (2)$$

Table 2b: Mediation Results for Self-efficacy and Embeddedness-links on Objective Career Success

Step 1: Mediator Variable Regressed on the Independent Variable				
Variable	**F**	**df**	**Adjusted R^2**	**β (Standard)**
Mediator: Embed-links	9.15***	5	0.13	
Self-efficacy				0.32***
Step 2: Dependent Variable Regressed on Independent Variable				
Dep. Var.: Ob Career Success	7.60***	5	0.10	
Self-efficacy				0.24***
Step 3: Dependent Variable Regressed on Mediator (Job Satisfaction) with the Independent Variable Included				
Dep. Var.: Ob Career Success	7.71***	6	0.34	
Embed-links				0.52***
Self-efficacy				0.07 N/S

**p<.05, ** p<.01. *** p<.001* N=303 *The panels of this table denote the steps suggested by Baron and Kenny (1986). The results suggest that the relationship between the self-efficacy and objective career success fails to be significant in the presence of embeddedness-links, thus, full mediation occurs.*

Table 2c lists the results of the first step. Self-efficacy was significantly related to the sacrifice dimension of embeddedness (b = 0.22, p < 0.001). Accordingly, the researcher proceeded to the second step. The second panel indicated that self-efficacy is significantly related to the dependent variable (objective career success) (b = 0.24, p < 0 .001). Again, self-efficacy explained 24% of the variance in objective career success. In step three of Baron and Kenny's (1986) procedure, the mediating variable (i.e., embeddedness-community) must be statistically significantly related to the dependent variable (objective career success) when the independent variable (self-efficacy) is added to the equation. The data indicated that embeddedness-community sacrifice was still a strong predictor (b = 0.12, p < 0.05) of objective career success, but that the influence of self-efficacy weakened but remained significant (b =0.20, p < 0.01). As above, when the standardized beta weight drops and/or fails to be significant, the relationship between the variables s partially mediated. Such is the case in this sample. Embeddedness-community/sacrifice partially mediated the relationship between self-efficacy and objective career success.

$$Objecive\ Career\ Succes = \beta_1 age + \beta_2\ gender + \beta_3\ tenure + \beta_4\ ethnicity + \beta_5 sacrifice + \beta_5\ objective\ success \quad (3)$$

Table 2c: Mediation Results for Self-efficacy and Embeddedness-sacrifice on Objective Career Success

Step 1: Mediator Variable Regressed on the Independent Variable				
Variable	**F**	**df**	**Adjusted R^2**	**β (Standard)**
Mediator: Embed-com	7.32***	5	0.10	
Self-efficacy				0.22**
Step 2: Dependent Variable Regressed on Independent Variable				
Dep. Var.: Ob Career Success	7.60***	5	0.10	
Self-efficacy				0.24***
Step 3: Dependent Variable Regressed on Mediator (Job Satisfaction) with the Independent Variable Included				
Dep. Var.: Ob Career Success	7.71***	6	0.11	
Embed-com				0.12*
Self-efficacy				0.22**

**p<.05, ** p<.01. *** p<.001* N=303 *The panels of this table denote the steps suggested by Baron and Kenny (1986). The results suggest that the relationship between the self-efficacy and objective career success weakens in the presence of embeddedness-com, thus, partial mediation occurs.*

Table 3a lists the results of the hypothesis that fit mediated the relationship between self-efficacy and subjective career success. Self-efficacy was significantly related to the fit dimension of embeddedness (b = 0.27, p < 0.001). Due to that finding, the researcher proceeded to the second step. The second panel indicated that self-efficacy is significantly related to the dependent variable (subjective career success) (b = 0.30, p < 0 .001). Self-efficacy explained 13% of the variance in subjective career success. In step three of Baron and Kenny's (1986) procedure, the mediating variable (i.e., embeddedness-fit) must be statistically significantly related to the dependent variable (subjective career success) when the independent variable (self-efficacy) is added to the equation. The data indicated that embeddedness-fit was still a strong predictor (b = 0.30, p < 0.001) of subjective career success, but that the influence of self-efficacy weakened yet remained significant (b =0.20 p < 0.01). As noted above when the standardized beta weight drops and/or fails to be significant, the relationship between the variables s partially mediated (Baron & Kenny, 1986). This is the case in these data. Embeddedness-fit partially mediated the relationship between self-efficacy and objective career success.

$$Subjective\ Career\ Succes = \beta_1 age + \beta_2\ gender + \beta_3\ tenure + \beta_4\ ethnicity + \beta_5\ fit + \beta_5\ subjective\ success \quad (4)$$

Table 3a: Mediation Results for Self-efficacy and Embeddedness-fit on Subjective Career Success

Step 1: Mediator Variable Regressed on the Independent Variable				
Variable	**F**	**df**	**Adjusted R^2**	**β (Standard)**
Mediator: Embed-fit	6.69***	5	0.09	
Self-efficacy				0.27**
Step 2: Dependent Variable Regressed on Independent Variable				
Dep. Var.: Sub Career Success	9.30***	5	0.13	
Self-efficacy				0.30***
Step 3: Dependent Variable Regressed on Mediator (Job Satisfaction) with the Independent Variable Included				
Dep. Var.: Sub Career Success	7.71***	6	0.18	
Embed-fit				0.46***
Self-efficacy				0.20**

**p<.05, ** p<.01. *** p<.001* N=303 *The panels of this table denote the steps suggested by Baron and Kenny (1986). The results suggest that the relationship between the self-efficacy and subjective career success weakens in the presence of embeddedness-fit, thus, partial mediation occurs.*

Table 3b displays the results for the study's hypothesis that embeddedness-links mediates the relationship between self-efficacy and subjective career success. Results indicated in the first step that embeddedness-links, was significantly related to self-efficacy (b = 0.30, p <0 .001). Thus, the researcher takes the second step. The table's second panel indicated that self-efficacy is significantly related to the dependent variable (subjective career success) (b = 0.29, p <0 .001). Self-efficacy explained 13% of the variance in subjective career success. Baron and Kenny's (1986) third step of the procedure requires the mediating variable (i.e., embeddedness-links) to be related to the dependent variable (i.e., objective career success) with the independent variables (self-efficacy and the statistical controls) included in the equation. The third step, indicated in the last panel of Table 3b, notes the results. Embeddedness-links predicted b = 0.37, p < .001) of subjective career success self-efficacy still proved statistically non-significant (b = 0.18, p <0.01) when entered in the equation. Again, in these data, embeddedness-links partially mediated the relationship between self-efficacy and objective career success

$$Subjective\ Career\ Succes = \beta_1 age + \beta_2\ gender + \beta_3\ tenure + \beta_4\ ethnicity + \beta_5\ links + \beta_5\ subjective\ success \quad (5)$$

Table 3b: Mediation Results for Self-efficacy and Embeddedness-links on Subjective Career Success

Step 1: Mediator Variable Regressed on the Independent Variable				
Variable	**F**	**df**	**Adjusted R^2**	**β (Standard)**
Mediator: Embed-links	9.15***	5	0.13	
Self-efficacy				0.30***
Step 2: Dependent Variable Regressed on Independent Variable				
Dep. Var.: Sub Career Success	9.30***	5	0.13	
Self-efficacy				0.29***
Step 3: Dependent Variable Regressed on Mediator (Job Satisfaction) with the Independent Variable Included				
Dep. Var.: Sub Career Success	15.80***	6	0.24	
Embed-links				0.37***
Self-efficacy				0.18**

**p<.05, ** p<.01. *** p<.001* N=303 *The panels of this table denote the steps suggested by Baron and Kenny (1986). The results suggest that the relationship between the self-efficacy and subjective career success weakens considerably in the presence of embeddedness-links, thus, partial mediation occurs.*

Table 3c presents the results of the last hypothesized relationship. Self-efficacy related significantly to the community sacrifice dimension of embeddedness (b = 0.22, p < 0.001). Again, the researcher proceeded to the second step. The second panel indicated that self-efficacy is significantly related to the dependent variable (objective career success) (b = 0.30, p < 0 .001). Again, self-efficacy explained 13%

of the variance in subjective career success. The last step of Baron and Kenny's (1986) procedure, indicated that the mediating variable (i.e., embeddedness-community) was statistically significantly related to the dependent variable (subjective career success) when the independent variable (self-efficacy) is added to the equation. The data indicated that embeddedness-community was still a strong predictor (b = 0.12, $p < 0.001$) of subjective career success, and that the influence of self-efficacy weakened but remained significant (b =0.24, $p < 0.001$). As above, when the standardized beta weight drops and/or fails to be significant, the relationship between the variables s partially mediated. Such is the case in this sample. Embeddedness-community/sacrifice partially mediated the relationship between self-efficacy and subjective career success.

$$Subjective\ Career\ Succes = \beta_1 age + \beta_2\ gender + \beta_3 tenure + \beta_4\ ethnicity + \beta_5\ sacrifice + \beta_5\ subjective\ success \quad (6)$$

Table 3c: Mediation Results for Self-efficacy and Embeddedness-sacrifice on Subjective Career Success

Step 1: Mediator Variable Regressed on the Independent Variable				
Variable	**F**	**df**	**Adjusted R^2**	**β (Standard)**
Mediator: Embed-com	7.32***	5	0.10	
Self-efficacy				0.22***
Step 2: Dependent Variable Regressed on Independent Variable				
Dep. Var.: Sub Career Success	9.30***	5	0.13	
Self-efficacy				0.30 ***
Step 3: Dependent Variable Regressed on Mediator (Job Satisfaction) with the Independent Variable Included				
Dep. Var.: Sub Career Success	12.47***	6	0.20	
Embed-com				0.29***
Self-efficacy				0.24***

**p<.05, ** p<.01. *** p<.001* N=303 *The panels of this table denote the steps suggested by Baron and Kenny (1986). The results suggest that the relationship between the self-efficacy and subjective career success weakens in the presence of embeddedness-sacrifice, thus, partial mediation occurs.*

Theoretical Implications

This work enhances three different but not incongruent constructs: career success, embeddedness and self-efficacy. Currently little research linked self-efficacy to embeddedness and how its different factors (i.e., fit, links and community/sacrifice) interrelate to promote both objective and subjective career success. These data indicated that, indeed, self-efficacy promoted all three dimensions of embeddedness. Prior research on self-efficacy (e.g., Royle, 2010) noted its relationship to the self-concept. This is the view that individuals have of themselves as social, physical and spiritual beings. The self-concept consists of two distinct dimensions; self-esteem and self-efficacy (Brockner, 1988). As such, showing embeddedness's relationship to self-efficacy and its potential to promote career well-being uniquely and informatively bolsters the construct of the self-concept and its utility.

This research also bolsters the state of organizational studies related to the global facet of self-efficacy. The data suggest that not only did self-efficacy enhance career engagement and, ultimately, success, that relationship is also either wholly or partially mediated by embeddedness (Kim, Jang, Jung, Puig, & Lee, 2012; Royle, 2015). The influence of these two variables (i.e., self-efficacy and embeddedness) on both objective and subjective career success suggested that, individually, they both enhanced career success. Specifically, however, self-efficacy alone will not predict objective career success if individuals are not structurally linked tightly with others. This finding reinforces tradition models of career success (Baruch, 2004; Greenhaus et al., 2010). In all cases, at least partial mediation occurred in these data which indicates that, indeed, belief in one's capabilities can directly bolster earnings, organizational stores of power and the enjoyment gleaned from work (i.e., objective and subjective success).

Managerial Implications

These findings are relevant to employees in a variety of occupations. These data reaffirm the potency of self-efficacy as a promoter of proactive work and career-related behaviors (e.g., Bandura, 1997; Weiner, 2012; Royle, 2015) and further engage individuals in their organizations. This research further affirms choice theory (Glasser, 2010) which posited that assessing employees' abilities and providing them with opportunities to deploy and augment them can be more effective in enhancing employment potential than relying pay or promotion. This helps further validate the utility of contemporary career perspectives (e.g., the Protean and boundaryless framework) because individuals usually pursue interests across functional boundaries, both within and between, organizations throughout their careers and, thus, promote subjective career success (Arthur & Rousseau, 1996, Greenhaus et al., 2010).

Kim et al. (2012), noted that employees with high self-efficacy and significant tenure in a single organization, objectively enhanced their careers when offered occupational counseling and career camps. To the extent that such information and experiences relate to skill development and deployment, this research indicates that they are essential to objective career success. Indeed, this contention is based on the fully mediated regression model described previously. Put simply, these data suggest that those who believe in their abilities (with reason), are given training to enhance their skills, will achieve greater objective career success (i.e., better earnings, more position power and loftier levels in the hierarchy).

A practical concern for educators preparing students to go into the working world as well as interviewers, relates to these findings and Raccanello's (2015) work on the relationship between self-efficacy and the employment interview. Her findings indicated that both generalized self-efficacy and job market experience influenced emotional reactions to job interviews (Racanello, 2015). They were linked to more consistent expression of positive emotions and feelings of capability while, simultaneously, suppressing displays of hostility or mistrust (Racanello, 2015). Interviewers should remain aware of the relative inexperience of some candidates and select techniques that help bolster self-efficacy. If the intent of the interview is to select and place a person who fits, who might become linked and could feel embedded in the organizational community, there might be some better practices in interviewing. Specifically, use unstructured interviews for experienced employees familiar with the work, use situational or semi-structured interviews for eager novices and match new entrants based on structured interviews (e.g., Rue, Ibrahim, & Byars, 2011). These approaches are likely to enhance self-efficacy, increase the probability that new employees will fit, be linked and feel a sense of community. If practitioners do this, it will likely bolster the careers of those employees.

Limitations and Future Research

Steelman, Hammer and Limayem (2014) noted the unrelenting pressure to publish created a glut of researchers who compete for limited data collection opportunities. Obviously, however, an amenable student population might be available (Steelman et al., 2014). As early as Campbell and Stanley's (1963) work, researchers treated student samples with suspicion due a perceived lack of generalizability (i.e., "*ecological validity*") and because they feared students might differ meaningfully from the population as a whole. This data set, admittedly, contains some student respondents. However, the impact of student responses in these data was not likely strong given that there were very few and those who were included also worked full-time for a period of at least three years. The probably dampens most threats to the ecological validity of the results. Nevertheless, these effects cannot be entirely ruled out. Despite ongoing, legitimate, concerns about generalizability Gordon, Slade and Schmitt (1986) noted that a preponderance of social psychology research, nearly 75% of publications, used student respondents. For research purposes, Greenberg (1987) subsequently contended that in most cases student respondents did not meaningfully differ from the population at large. One potentially confounding issue with this study relates to the level at which self-efficacy it measured. Bandura (1977, 1997; Weiner, 2012) noted the

difference between collective efficacy and personal efficacy. Personal efficacy relates to individuals' calculations about the likelihood of success for their intended behaviors. Collective efficacy connotes group beliefs about the potency of joint behaviors. Britner and Pajares (2006) postulated that group success occurs mostly in conditions of high collective efficacy. These data consist of measures of personal-self efficacy. It is likely that individuals work in groups at times, for better or worse, and that might impact the degree to which they become embedded, or which of those dimensions is most affected. For example, if high personal self-efficacy predicts links and, thus, objective career success (as has been demonstrated here), would high levels of collective self-efficacy promote links in a similar fashion? In other words, would collective self-efficacy be necessary to engender linkages to others the enable objective career success? It is likely. Naturally, more research on employees working collectively, rather than individually in insular jobs, would be necessary.

Prior research indicated that that self-efficacy might not work uniformly across cultures (Heine, Kitayama, Lehman, Takata, Ide, Leung, & Matsumoto 2001; Hofstede, 2003). These authors contended that individuals in collectivist cultures (i.e., those which prioritize group interests over those of individuals) might place a subordinate value on personal self-efficacy (Heine et al., 2001; Hofstede, 2003). For example, the study subjects from a collectivist country (i.e., Japan) who initially underperformed on assignments, persisted longer than those succeeded when given the same task (Heine et al., 2001). Their findings indicated that underperforming employees in the United States and Canada spent less time attempting to catch up to their successful peers than the floundering Japanese employees spent pursuing to theirs (Heine et al. 2001). This suggests that Japanese employees prioritize and adjust to performance decrements (as defined by supervisors) more readily. Ostensibly, they do so in order to fit better in their organizations. Given these differing cultural constraints, future research should attempt to further describe how self-efficacy behaves cross-culturally. It seems clear from Heine et al., (2001) that personal v. collective self-efficacy works differently. As such, it would be interesting to examine if personal self-efficacy or collective efficacy better predicts fit or links in organizations in collectivist cultures (e.g., China and Japan). Given the propensity of collectivist cultures to value life-time employment and retirement security (Kato, 2001; Baruch, 2004), it would be interesting to see if those with higher levels of personal self-efficacy or collective self-efficacy would progress more quickly in their careers and whether that would necessarily be objective or subjective success.

Another possible avenue for future investigation involves studying those who do not prioritize being embedded in organizations. Royle and Fox (2016) noted that self-efficacy promoted informally answering for others in their firms and that those individuals were more career engaged. That connotes building linkages as well possibly enhancing fit and feelings of community. In these data embeddedness partially mediated self-efficacy's influence on subjective career success. However, not all respondents could be categorized as "lone wolves". These individuals demonstrate less commitment to organizations and focus on what they want their own careers to be, rather than what might necessary benefit their firms (Griffeth, Gaertner, & Sager, 1999). It is possible that this type of employee might behave differently with respect to self-efficacy and embeddedness. Prior research examined the relationships between lone-wolves in sales jobs and task performance, citizenship behaviors, job satisfaction and turnover intentions (Mulki, Jaramillo, & Marshall, 2007). Their work indicated that lone wolves engaged in fewer citizenship behaviors which, in turn, reduced supervisor ratings of task performance. That is likely to hinder objective career success, but it is not clear that it would negatively affect subjective career success. For example, if lone wolves value their independence or individuality more than social belonging or potential income, they might believe that successive similar jobs in different organizations promotes their subjective definition of career success.

CONCLUDING COMMENTS

This research used a convenience sample of 303 full time employees mostly from Florida, Georgia, South Carolina and Tennessee in the southeast United States. There were 180 female respondents (59%), the average age was 36 and the average full-time working experience was seven years. The sample included nurses, sales professionals, financial service employees and service managers. The data contained some student responses but only those that came from individuals currently working with three years of full-time experience. Of course, there are limitations to this study's conclusions. For example, based on cultural context, measuring personal self-efficacy rather than collective self-efficacy could belie important differences that predict both subjective and objective career success. Under these circumstances, self-efficacy might differentially predict the dimensions of embeddedness (i.e., fit, links or sacrifice/community) and that could change the metrics of career success. Future research should attempt to better describe these boundary conditions and explore potential moderators. For example, perhaps career engagement (e.g., Kim et al., 2012) might moderate the relationship between self-efficacy and embeddedness. If so, would that have subsequent implications for career success? The objective of this research was to describe the potentially mediating effects of embeddedness on the self-efficacy and career success (both subjective and objective) relationship. This study proffers some modest but important managerial and theoretical contributions. These data indicated self-efficacy predicted embeddedness which, at least partially, enhanced higher self-reported levels of career success.

BIOGRAPHY

M. Todd Royle (Ph.D. Florida State University) is a professor of management and healthcare administration at Valdosta State University. He teaches courses in international management, organizational behavior and human resource management. His main research interests are organizational politics, accountability, personality and career management.

APPENDIX

Scales, Sources, Reliabilities and Factor Analyses

Variable Name	Scale Author	Coefficient A	Eigenvalue of the 1st Factor	Variance Explained By 1st Factor (and Subsequent)
Subjective Career Success	Greenhaus, Parasuraman, Wormley, (1990)	0.90	3.63	0.73
Objective Career Success	Abele & Spurk (2009)	0.73	1.96	0.65
Embeddedness	Mitchell, Holtom, Sablynski, & Erez (2001)	0.91	5.72 (2.33) (1.74)	0.36 (0.15) (0.11)
Self-efficacy	Schwarzer & Jerusalem (1995)	0.70	2.51	0.50

The table conveys information related to this study's variables and the original authors of the scales. Additionally, it specifies the Cronbach's alpha values for each scale in the sample. Additionally, the Eigenvalue of the first extracted factor and the amount of variance that it accounts for. Note- For multidimensional factors (i.e., embeddedness), all major factors (3) are extruded. All scales utilize a five-point Likert response format anchored by "strongly disagree" and "strongly agree".

REFERENCES

Abele, A. E., & Spurk, D. (2009). How do objective and subjective career success interrelate over time? *Journal of Occupational and Organizational Psychology, 82,* 803-824.

Abelson, M. A. (1987). Examination of avoidable and unavoidable turnover. *Journal of Applied Psychology, 72*, 382–386.

Arthur, M. B. (1994). The boundaryless career: A new perspective for organizational inquiry. *Journal of organizational behavior*, *15*, 295-306.

Arthur, M. B., Hall, D. T., & Lawrence, B. S. (1989). *Handbook of Career Theory.* New York: Cambridge University Press.

Arthur, M. B., & Rousseau, D. M. (1996). *The boundaryless career: a new employment principle for a new organizational era*. Oxford: Oxford University Press.

Ashkenas, R., Ulrich, D., Jick, T., & Kerr, S. (1995). *The Boundaryless Organization.* San Francisco: Josey-Boss.

Ayub, A., Kokkalis, P., & Hassan, M. (2017). Institutional and social cognitive behavior resulting in self-leadership development: A framework for enhancing employee performance in corporate sector in Pakistan. *International Journal of Business and Society, 18,* 617-640.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215.

Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, *52*, 1-26.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Baruch, Y. (2004). Transforming careers: From linear to multidirectional career paths: Organizational and individual perspectives. *Career Development International, 9*, 58-73.

Blau, P. (1964). *Exchange and power in social life*. New York: Wiley.

Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior, 69*, 4-18.

Britner, S. L., & Pajares, F. (2006). Sources of science self-efficacy beliefs of middle school students. *Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching*, *43*, 485-499.

Brockner, J. (1988). *Issues in organization and management series. Self-esteem at work: Research, theory, and practice.* Lexington, MA.

Callanan, G. A. (2003). What price career success? *Career Development International, 8,* 126-133.

Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. *Handbook of research on teaching*, 171-246.

Chan, D. (1996). Cognitive misfit of problem-solving style at work: A facet of person-organization fit. *Organizational Behavior and Human Decision Processes, 68*, 194–207.

Chatman, J. A. (1991). Matching people and organization: Selection and socialization in public accounting firms. *Administrative Science Quarterly, 36*, 459–484.

Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational research methods*, *4*, 62-83.

Chen, G., Gully, S. M., Whiteman, J. A., & Kilcullen, R. N. (2000). Examination of relationships among trait-like individual differences, state-like individual differences, and learning performance. *Journal of Applied Psychology, 85,* 835-847.

Cohen, J., Cohen. P, West, S. G., & Aiken, L. S. (2013). *Applied multiple regression for the behavioral sciences* (3rd ed). Mahwah, NJ: Lawrence Erlbaum.

Darley, J. M., & Gross, P. H. (2000). A hypothesis-confirming bias in labeling effects. In C. Stangor (Ed.), *Stereotypes and prejudice: essential readings* (p. 212). New York: Psychology Press.

DeFillippi, R. J., & Arthur, M. B. (1994). The boundaryless career: A competency-based perspective. *Journal of Organizational Behavior, 15,* 307-324.

Dickinson, A. M., & Poling, A. D. (1996). Schedules of monetary reinforcement in organizational behavior management: Latham and Huber (1992) revisited. *Journal of Organizational Behavior Management*, *16*, 71-91.

Duffy, R. D., Douglass, R. P., & Autin, K. L. (2015). Career adaptability and academic satisfaction: Examining work volition and self efficacy as mediators. *Journal of Vocational Behavior*, *90*, 46-54.

Dulebohn, J. H., Wu, D., Liao, C. (2017). Using Meta-analysis to enhance our understanding of human resource management, *Human Resource Management Review*, 27, 149-166.

Ferris, G. R., & Kacmar, K. M. (1992). Perceptions of organizational politics. *Journal of management*, *18*, 93-116.

Furtner, M. R., Rauthmann, J. F., & Sachse, P. (2010). The Socioemotionally intelligent self-leader: Examining relations between self-leadership and socioemotional intelligence. *Social Behavior and Personality, 38,* 1191-1196.

Goldsby, M. G., Kuratko, D. F., Hornsby, J. S., Houghton, J. D., & Neck, C. P. (2007). Social cognition and corporate entrepreneurship: a framework for enhancing the role of middle-l level managers. *International Journal of Leadership Studies, 2,* 17-35.

Gordon, M. E., Slade, L. A., & Schmitt, N. (1986). The "science of the sophomore" revisited: From conjecture to empiricism. *Academy of Management Review*, *11*, 191-207.

Greenberg, J. (1987). The college sophomore as guinea pig: Setting the record straight. *Academy of Management Review*, *12*, 157-159.

Greenhaus, J. H., Callahan, G. A., & Godshalk, V. M. (2010). *Career Management.* (4th ed). Thousand Oaks, CA: Sage Publications.

Griffeth, R. W., Gaertner, S., & Sager, J. K. (1999). Taxonomic model of withdrawal behaviors: The adaptive response model. *Human Resource Management Review, 9,* 577-590.

Glasser, W. (2010). *Choice Theory: A new psychology of personal freedom* (pp, 283-308). New York: Harper-Collins.

Gupta, N., & Jenkins, G. D. (1980). *The structure of withdrawal: Relationships among estrangement, tardiness, absenteeism, and turnover*. Springfield, VA: National Technical Information Service.

Hall, D. T. (1996). Protean careers of the 21st century. *Academy of Management Executive, 10,* 8-16.

Hall, D. T., & Foster, L. W. (1997). A psychological success cycle and goal setting: Goals, performance, and attitudes. *Academy of Management Journal, 20,* 282-290.

Hall, D. T., & Mirvis, P. H. (1996). The new protean career: psychological success and the path with a heart. In D. T. Hall (Ed.), *The career is dead - Long live the career* (pp. 15-45). San Francisco: Jossey-Bass.

Heine, S. J., Kitayama, S., Lehman, D. R., Takata, T., Ide, E., Leung, C., & Matsumoto, H. (2001). Divergent consequences of success and failure in Japan and North America: an investigation of self-improving motivations and malleable selves. *Journal of personality and social psychology*, *81*, 599.

Herriot, C., & Pemberton (1966). Contracting careers. *Human Relations, 49,* 760.

Hofstede, G. (2003). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.

Kato, T. (2001). The end of lifetime employment in Japan? Evidence from national surveys and field research. *Journal of the Japanese and International Economies*, *15*, 489-514.

Kim, B. Jang, S. H., Jung, S. H., Puig, A & Lee. S. M. (2012). A moderated mediation model of planned happenstance skills, career engagement, career decision self-efficacy, and career decision certainty. *Career Development Quarterly, 62,* 56-69.

Lee, T., Mitchell, T., Sablynski, C., Burton, J., & Holtom, B. (2004). The effects of job embeddedness on organizational citizenship, job performance, volitional absences and voluntary turnover. *Academy of Management Journal, 47*, 711–722.

Luthans, F., & Kreitner, R. (1985). Organizational Behaviour Modification and Beyond: An Operant and Social Learning Approach. *Glenview, IL: Scott, Foresman*.

Maertz, C. P., Stevens, M. J., & Campion, M. A. (2003). A turnover model for the Mexican maquiladoras. *Journal of Vocational Behavior, 63*, 111–135.

Mallol, C. M., Holtom, B. C., & Lee, T. L. (2007). Job embeddedness in a culturally diverse environment. *Journal of Business Psychology, 22,* 35-44.

March, J. G., & Simon, H. A. (1958). *Organizations.* New York: Wiley.

Merton, R. K. (1948). The self-fulfilling prophecy. *Antioch Review, 8,* 193-210.

Merton, R. K. (1968). *Social Theory and Social Structure.* New York: Free Press.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application.* Thousand Oaks, CA: Sage.

Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablynski, C., & Erez, M. (2001). Development of a model of job embeddedness. *Academy of Management Journal, 44*, 1102–1121.

Mulki, J. P., Jaramillo, F., & Marshall, G. W. (2007). Lone wolf tendencies and salesperson performance. *Journal of Personal Selling & Sales Management*, *27*, 25-38.

Neck, C. P., & Houghton, J. D. (2006). Two decades of leadership theory and research: Past developments, present trends, and future possibilities. *Journal of Managerial Psychology, 21,* 270-295.

Nicholson, N. (2000). Playing to win: Biological imperatives, self-regulation, and trade-offs in the game of career success. *Journal of Organizational Behavior, 26,* 137-154.

O′Reilly, C. A., Caldwell, D. F., & Barnett, W. P. (1989). Work group demography, social integration and turnover. *Administrative Science Quarterly, 34*, 21–37.

O′Reilly, C. W., Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to person-organization fit. *Academy of Management Journal, 34*, 487–516.

Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education (UK).

Parker, H., & Arthur, M. B. (2000). Careers, organizing, and community. In M. A. Peiperl, M. B. Arthur, R. Goffee, & T. Morris (Eds.), *Career frontiers: New conceptions of working lives* (pp. 99-121). Oxford: Oxford University Press.

Raccanello, D. (2015). Students' expectations about interviewees' and interviewers' achievement emotions in job selection interviews. *Journal of Employment Counselling, 52,* 50-64.

Rue, L. W., Ibrahim, N. A., & Byars, L. L. (2011). *Human Resource Management* (p. 135). New York: McGraw-Hill Education.

Rousseau, D. M. (1995). *Psychological contracts in organizations*. Thousand Oaks, CA: Sage Publications.

Royle, M. T. (2010). An empirical investigation of the mediating role of organization-based self-esteem. *International Journal of Management and Marketing Research, 3,* 33-52.

Royle, M. T. (2015). Theoretical drivers of success for new market entrants. *International Journal of Marketing and Management Research, 8,* 31-56.

Royle, M. T., & Fox, G. (2016). The interactive effects of self-efficacy and informal accountability for others on career engagement. *International Journal of Marketing and Management Research, 9,* 29-46.

Savickas, M. L. (2005). The theory and practice of career construction. *Career development and counseling: Putting theory and research to work*, *1*, 42-70.

Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, *80*, 661-673.

Schneider, B., Goldstein, H. W., & Smith, D. B. (1997). The ASA framework: An update. *Personnel Psychology, 48,* 747-773.

Shaw, J. D., Delery, J. E., Jenkins, G. D., & Gupta, N. (1998). An organization-level analysis of voluntary and involuntary turnover. *Academy of Management Journal, 41*, 511–525.

Sheridan, J. E., & Vredenburgh, D.J. (1978). Usefulness of leader behavior and social power variables in predicting job tension, performance, and turnover of nursing employees. *Journal of Applied Psychology, 63,* 89-95.

Sparrowe, R. T., Liden, R. C., Wayne, S. J., & Kraimer, M. L. (2001). Social networks and the performance of individuals and groups. *The Academy of Management Journal, 44*, 316-325.

Steelman, Z. R., Hammer, B. I., & Limayen, M. (2014). Data collection in the digital age: Innovative alternatives to student samples. *Journal of Consumer Psychology*, *23*, 212-219.

Sullivan, S. E. (1999). The changing nature of careers: a review and research agenda. *Journal of Management, 25, 457-84.*

Sullivan, S. E., & Baruch, Y. (2009). Academic careers: The limits of the 'boundaryless approach' and the power of promotion scripts. *Human Relations, 64,* 971-996.

Tabachnick, B. G., & Fidell, L. S. (2001). Principal components and factor analysis. *Using multivariate statistics*, *4*, 582-633.

Tolman, E. C. (1951). *Purposive behavior in animals and men*. Berkeley, CA: University of California Press.

Villanova, P., Bernardin, H., Johnson, D., & Dahmus, S. (1994). The validity of a measure of job compatibility in the prediction of job performance and turnover of motion picture theater personnel. *Personnel Psychology, 47*, 73–90.

Vroom, V. (1964). *Work and motivation.* New York: John Wiley and Sons.

Weigand, D. A., & Stockham, K. J. (2000). The importance of analyzing position-specific self-efficacy. *Journal of Sport Behavior, 23*, 61-69.

Weiner, B. (2012). An attributional theory of motivation. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology, (1),* (pp. 135-155). Washington D.C.: Sage.

Weiss, H. M. (1990). Learning theory and industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (pp.75-169). Palo Alto, CA: Consulting Psychologists Press.

Wright, B. E. (2004). The role of work context in work motivation: a public sector application of goal and social cognitive theories. *Journal of Public Administration Research and Theory, 4,* 59-78.

Zaleska, K. J., & Menezes, L. M. (2007). Human resources development practices and their association with employee attitudes: Between traditional and new careers. *Human Relations, 60,* 987-1018.

BIOGRAPHY

Dr. M. Todd Royle, Valdosta State University can be contacted at Langdale College of Business, Valdosta State University, Valdosta, GA 31698-006. Phone: (229) 245-3875 Fax: (229) 259-5504

International Journal of Management and Marketing Research
Vol. 12, No. 1, 2019, pp. 23-36
ISSN: 1931-0269 (print)
ISSN: 2157-0698 (online)

IBFR
www.theIBFR.com

ENVIRONMENTAL INNOVATION: ADVANCING THE RESOURCE-ADVANTAGE THEORY OF COMPETITION

Gricelda Juárez-Luis, Instituto Politécnico Nacional
Patricia S. Sánchez-Medina, Instituto Politécnico Nacional
René Díaz-Pichardo, South Champagne Business School & Université de Technologie de Troyes

ABSTRACT

The Resource-Advantage Theory of Competition states that a comparative advantage in resources leads to a competitive advantage in the marketplace. This research aims to expand this theory by including the role of innovation, particularly environmental innovation, as a moderating variable in the relationship between resources and competitive advantages. Empirical evidence of this moderating effect is obtained through factor and regression analyses with survey data collected from 130 small agricultural businesses located in Oaxaca, Mexico. This is a traditional sector in an emerging economy. Theoretical implications include the importance of environmental issues in competition as well as the applicability of this framework to the agricultural sector. Practical implications for small agricultural businesses are related to the effectiveness of environmental innovation in the enhancement of competitiveness through both cost reduction and value added.

JEL: M21, O00, O13, Q56

KEYWORDS: Environmental Innovation, Small Agricultural Businesses, Competition, Resources

INTRODUCTION

Competitive advantages are defined as conditions in which competitors cannot replicate or acquire benefits that the company obtains through its competitive strategies (Chang, 2011). This study examines resources as antecedents of competitive advantages within the framework of the resource advantage theory of competition (R-A theory). R-A theory proposes that a comparative advantage in resources will yield marketplace positions of competitive advantage (Hunt, 1995, 2012; Hunt & Morgan 1996). This theory also emphasizes innovation as endogenous to the process of firms' competing (Hunt, 2011a). Innovations enable firms to deliver more value to customers than their competitors and are fundamental to business success (Hunt & Duhan, 2002). Then, innovation can have an intervening effect on the relationship between resources and competitive advantages. Although R-A theory refers to innovation in general terms, Hunt (2011b) makes important contributions to the theory from the environmental field, noting that positioning a company as environmentally committed produces a more valuable market offering to consumers. Forsman (2013) stated that, like any innovation, environmental innovation creates value for customers and superiority over competition.

Environmental innovation allows for a more efficient use of resources by generating benefits such as reduced costs for the company. The environment can be seen as a competitive opportunity (Porter & Van der Linde, 1995) and environmental innovation can be a win–win solution for the conflict between competitiveness and environmental protection (Chang, 2011). An evolution or extension of the resource advantage theory towards a broader consideration of the environmental issue occurs. In the field of

environmental care, previous studies have not specifically analyzed the moderating role of environmental innovation in the relationship between resources and competitive advantages. Therefore, this study proposes the relationship between resources and competitive advantages becomes stronger when small agricultural businesses implement environmental innovations to a greater degree.

This study was developed in the Mexican context of small agricultural businesses dedicated to the production of greenhouse tomatoes. This context was selected because in Mexico, and in other developing countries, the agricultural sector has substantial productive potential and constitutes an important economic engine (Instituto Nacional de Estadística y Geografía (INEGI) [National Institute of Statistics and Geography] 2007; Macías-Macías, 2013). Agriculture is closely linked to the use of natural resources, and its operations generate significant negative impacts on the environment. Small agricultural businesses operate within a market economy where the demands linked to environmental care have caused them to increasingly consider environmental issues in the development of their operations. This paper contributes to the literature in two ways: first, by highlighting the importance of an evolution or extension of R-A theory towards a broader consideration of environmental issues, and; second, by providing empirical evidence in the context of small agricultural businesses in an emerging economy. This is important given that R-A theory has had a strong theoretical development but empirical research has been scarce. Additional empirical studies are necessary to confirm the fundamental structure of the theory and emphasize the importance of the proposed variables in different contexts. It is particularly important to include less traditional contexts such as the agricultural sector, by incorporating environmental issues in its structure and foundations. This paper has the following structure. The next section of the paper provides a literature review. The third section presents the methodology, data collection. The fourth section analyzes the research findings. Fifth and final section state the conclusions, suggestions and implications

LITERATURE REVIEW

Competitive advantages are the key to the success of firms in the market. A company achieves a competitive advantage when, through its offering(s), it creates more value for its customers relative to its competitors (Kaleka, 2002). R-A theory proposes that as part of the competitive process, firms constantly struggle among themselves for a comparative advantage in the resources at their disposal that will yield a competitive advantage and, thereby, superior financial performance (Hunt, 1995, 2011b, 2012; Hunt & Morgan, 1996). A comparative advantage in resources exists when a firm's resources enable it to produce a market offering that, relative to extant offerings by competitors, (1) is perceived by some market segments to have superior value and/or (2) can be produced at lower costs (Hunt & Morgan, 1995). For R-A theory, resources are heterogeneous and imperfectly mobile and are classified as financial, physical, legal, human, organizational, informational and relational (Hunt, 1995, 2011a, 2012). The first two classifications constitute the tangible resources of the company, while the rest are considered intangible resources. R-A theory also argues that business success depends crucially on innovations that allow firms to offer customers more value than their competitors (Hunt & Duhan, 2002). Competition is seen as a disequilibrium-provoking process in which innovation acts as a means to neutralize and/or leapfrog rival firms (Hunt, 2011a). In the search to improve competitiveness, firms attempt to innovate by imitating resources, finding an equivalent resource, or finding (or creating) a superior resource (Hunt, 2011a, 2011b; Hunt & Morgan, 1997) to deliver more value to customers than their competitors (Hunt & Duhan, 2002). Then, product innovation and process innovation have an effect on the efficiency and effectiveness of firms and therefore on their competitiveness (Hunt & Morgan, 1995).

Although R-A theory refers to innovation, it does not specifically consider environmental issues. Hunt (2011b) makes important contributions to the theory in this field, specifically with respect to sustainable marketing. The author argues that many of the concepts, strategic approaches and discussions, of sustainable marketing are consistent with the structure and foundations of R-A theory. R-A theory maintains that competitive processes do not occur throughout the industry but rather by market segments.

Therefore, the "green consumer" can be considered as a market segment. In addition, although it assumes the primary objective of the firms is to obtain superior financial performance, achieving it may also allow pursuit other goals, such as those emphasized in sustainable marketing (for example, environmental care). Furthermore, positioning a firm as environmentally committed produces a market offering more valuable to consumers with respect to competitors, not only because it is intrinsically more "green," but also because it is produced by a "green" production process (Hunt, 2011b). From this perspective, environmental product innovation and environmental process innovation play important roles in the creation of competitive advantages. Therefore, it is important that R-A theory evolves towards a broader consideration of environmental issues and, in this case, the specific topic of environmental innovation. In this sense, it is possible to consider environmental innovation, which, like the innovation proposed by R-A theory, is also endogenous and results from the process of competition.

R-A theory has been used to explain the actions of large companies in industrialized countries. Companies that can afford significant investments to acquire resources and/or adopt environmental innovations can obtain competitive advantages and remain in the market. In contrast to large companies, small businesses in emerging markets tend to operate in conditions of scarce resources (Sánchez-Medina, Díaz-Pichardo, Bautista-Cruz, & Toledo-López, 2015; Viswanathan, Sridharan, & Ritchie, 2010). Despite their limited resources, particularly physical and financial resources, small agricultural businesses in developing economies have been able to create competitive advantages that allow them to survive and grow in the market. Small agricultural businesses make use of their resources to create offerings of superior value. For example, some small agricultural businesses have ventured into export processes where it must produce offerings at lower costs and/or offer differentiated products such as organic products. Small agricultural businesses also often have changes in their products and processes adopting environmental innovations to improve their competitiveness.

Resources and Competitive Advantages

R-A theory defines resources as the tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively provide a market offering that has value for some market segment(s) (Hunt, 1995; Hunt & Morgan, 1995). R-A theory postulates that comparative advantages in resources will yield a marketplace position of competitive advantage (Hunt, 1995, 2011a; Hunt & Morgan, 1996). Previous literature establishes a direct and positive relationship between resources and competitive advantages of a firm. For example, Omerzel and Gulev (2011) found that knowledge is a source of competitive advantage since it is an intangible resource that adds value to the company and cannot be easily imitated. Kaleka (2002) showed that tangible and intangible resources are strategic. However, the author noted that possession of intangible resources was more important when it came to obtaining competitive advantages. Another study identified the importance of developing superior resources based on the company's relationship with the natural environment as a source of competitive advantage in costs (Christmann, 2000).

In small agricultural businesses, available resources can be a source of competitive advantages. Small agricultural businesses that have more tangible and intangible resources are more likely to generate offers of higher value and lower costs than their competitors. Increasing levels of resources are associated with increasing levels of competitive advantages (see Figure 1). Therefore, based on these arguments, we posit the following hypothesis:

> *Hypothesis 1 (H1): Resources have a positive and significant impact on the competitive advantages of small agricultural businesses in emerging economies.*

Moderating Role of Environmental Innovation

R-A theory considers that competition causes firms to be involved in a constant learning process to achieve leadership in market segments. A clear manifestation of this learning process are innovations (Hunt 2012). R-A theory views innovation as endogenous to the competition process of firms and is an important factor for its growth (Hunt 2011b). As with innovation, environmental innovation is also an outcome of the process of competition. Environmental innovation refers to new and improved processes, equipment, products, technology, and management systems for preventing or reducing damage to the environment (Forsman, 2013; Kemp, Arundel, & Smith, 2001; Liao, 2016). Previous empirical studies show that environmental innovations are studied from two dimensions: environmental product innovation and environmental processes (Chiou, Chan, Lettice, & Chung, 2011; Liao, 2016; Van den Berg, Labuschagne, & Van den Berg, 2013).

Environmental innovation influences competitive advantages of low costs by improving the reasonable use of raw materials, the reduction of waste and reduction in fines or severe punishments (Liao, 2016). Environmental innovation also helps generate value-added products and improve the company's image (Chiou et al., 2011; Liao, 2016). In this sense, Porter and Van der Linde (1995) stated that environmental innovation could increase the productivity of resources even more and make companies more competitive. However, previous studies have not specifically analyzed the moderating role of environmental innovation in the relationship between resources and competitive advantages in small agricultural businesses.

Small agricultural businesses generate significant negative environmental impacts (e.g., due to the use of agrochemicals); however, studies on environmental innovation are scarce. Due to the demands of institutional and market environments and motivated by the need to remain and grow in the market, small agricultural businesses are beginning to implement environmental innovations that involve the adoption of greener farming techniques. Environmental innovations affect the reduction of costs (due to the high costs of chemical products) and the obtainment of differentiated products (such as organic products), which lead to better opportunities to compete in the market. We propose that when the level of adopted environmental innovation is high, the relationship between resources and competitive advantages is stronger. When environmental innovation is low, this relationship is weaker (see Figure 1). Therefore, we posit the following hypothesis:

> *Hypothesis 2 (H2): Environmental innovation moderates the relationship between resources and the competitive advantages of small agricultural businesses in emerging economies.*

Figure 1 shows the model of resources, environmental innovation and competitive advantages in small agricultural businesses. The proposed model contends that resources influence competitive advantages. However, the magnitude of competitive advantages is moderated by the degree to which small agricultural businesses implement environmental innovations. Size, age and technological level of the greenhouse are included as control variables.

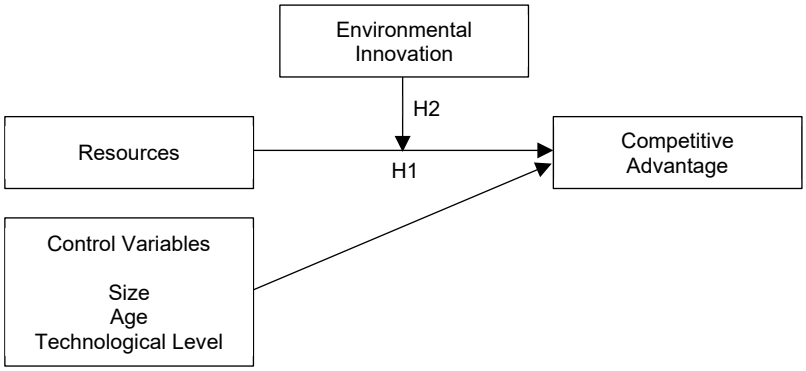
DATA AND METHODOLOGY

Survey Instrument

The survey instrument is composed of several Likert-type scales used to measure variables included in the model. It was developed over a three-step revision process. In the first step, based on existing scales, a semi-structured questionnaire was designed and applied in 10 small agricultural businesses to identify the resources, environmental innovations and competitive advantages. The results served to obtain feedback based on experience and sector knowledge to improve the clarity of the items, to use the appropriate terminology and avoid the omission of items used to measure the variables. In the second step, a structured

questionnaire, was applied to 30 owners and managers of small agricultural businesses to test validity and reliability. In the third and final step, the final survey instrument was designed upon the results of the previous step. The questionnaire asked about the availability of resources, the environmental innovations implemented and the competitive advantages achieved by small agricultural business.

Figure 1: Hypothetical Model



The proposed model analyzes the direct relationship between resources and competitive advantages of small agricultural businesses and the moderating role of environmental innovation. It is predicted that a higher level of environmental innovation will reinforce the positive relationship between resources and the competitive advantages of these businesses. Size, age and the technological level of the greenhouse are included as control variables.

Sample

Data come from a collection effort conducted between June and December of 2016. The survey instrument was applied, face to face, in Spanish, to owners and/or managers of small agricultural businesses with at least one year of experience in the production and commercialization of greenhouse tomatoes in the Valles Centrales and Mixteca regions of the State of Oaxaca, México. Only owners and/or managers were surveyed to ensure greater information accuracy. The sampling method was non-probabilistic due to the lack of a formal database that indicates the number and location of existing small agricultural businesses. To reduce the implicit bias of this type of sampling, specific routes were established in the two regions so that small businesses would have a similar probability of being included in the sample. When a small agricultural business was located on the route, the owner and/or manager was identified.

The objective of the research was explained to the owner and/or manager who were then invited to participate by responding to the questionnaire. The questionnaires were applied to those who agreed to be surveyed due to some distrust that owners and/or managers had about the information use. During the routes, 136 small agricultural businesses were located. However, data from six small agricultural businesses could not be obtained because the owners and/or managers were not present in the business. Therefore, the sample consisted of 130 small agricultural businesses (96%). There were 123 male respondents (95%). In terms of literacy, 95 respondents only attended primary school (73%). The age (years of operation) of the 130 surveyed small businesses ranges from 1 to 11 years. The average age of these businesses was 6.3 years, with a standard deviation of 1.5 years. The size of the small agricultural business varies between 400 m^2 and 6 hectares, with an average size of 6003 m^2 and a standard deviation of 1794 m^2.

Measures

Resources. A second-order factor was defined as the degree to which the small agricultural business has tangible and intangible assets for the development of environmental care actions and for the generation of

greater ecological value of its products. These advantages enable the firm to efficiently and/or effectively produce a market offering that has value for some market segment(s) (Hunt, 2011a). Tangible and intangible resources were the two dimensions taken from previous studies (Hunt & Morgan, 1995; Li, 2014; Richey, Musgrove, Gillison, & Gabler, 2014). Respondents were asked about their available resources. The items were scaled on a five-point Likert-type scale from one (nothing) to five (substantial). Table 1 provides the items used to measure this variable.

Competitive advantage: A second-order factor was defined as the degree of superiority achieved by the small agricultural business over its competitors by offering lower prices for equivalent benefits and/or offering unique benefits that justify a higher price (López-Gamero, Molina-Azorín, & Claver-Cortés, 2009). The variable was measured based on scales and dimensions of low cost and differentiation competitive advantages that were used in previous studies (Chiou et al., 2011; Liao, 2016; López-Gamero et al., 2009; López-Gamero, Molina-Azorín, & Claver-Cortés, 2010; Murray, Gao, & Kotabe, 2011) and adapted to the context of this research. Respondents were asked about the degree to which their business obtains benefits related to low costs and/or differentiated products compared to their competitors. The items were scaled on a five-point Likert-type scale from one (much lower) to five (much higher). Table 2 provides the items used to measure this variable.

Environmental innovation: A second-order factor was defined as the degree to which the small agricultural business has adopted new ideas in order to preserve the environment (Sánchez-Medina et al., 2015). The variable was measured based on scales and dimensions of environmental product innovation and environmental process innovation that were used in previous studies (Chang, 2011; Chen, 2008; Chiou et al., 2011; Liao 2016; Van den Berg et al., 2013) and adapted to the context of this research. Respondents were asked about the degree to which small agricultural businesses have made changes in terms of products and processes to care for the environment. The items were scaled on a five-point Likert scale from one (strongly disagree) to five (strongly agree). Table 3 provides the items used to measure this variable.

Control variables: Three control variables were included: size, age and the technological level of the greenhouse. To measure the agricultural business size, the area in square meters of the greenhouse used for production was considered. To measure the age, the number of years of operational experience was used. To measure the technological level, a scale of 1 to 5 was used considering the five technological levels proposed by Rijk (2008), who evaluated the typology, equipment, and technology of greenhouses.

For each variable in the model, the content validity and discriminant validity were tested. Discriminant validity was assessed by checking that (at a confidence interval of 95%) the correlation between each pair of items did not contain the value 1. In the confirmatory factor analysis, we observed that each item was loaded on one and only one of the factors. A Kaiser–Meyer–Olkin (KMO) sampling adequacy test that detects cross-loadings between items of different factors was included. The KMO test can demonstrate the discriminant validity between different constructs. To test the reliability of the instrument, a confirmatory factor analysis was performed, and Cronbach's Alpha was calculated. According to Nunnally (1967), constructs Cronbach's alpha values above 0.6 indicate high reliablility (see Tables 1, 2 and 3). The second-order structures of the three factors were confirmed.

Table 1 shows the results of the factor analysis of resources. The first column reports the items that measured the variable. The results in bold in Columns 2 and 3 show the factor loadings greater than 0.5 for each dimension. The table also shows the percentage of variance explained for each dimension. The Cronbach's alpha values suggest that the constructs are highly reliable and the KMO test demonstrates the discriminant validity between the constructs.

Table 1: Factor Analysis of Resources

To What Extent Did Your Small Agricultural Business Have:	1	2	Communality
1. Tangible Resources			
Complete and quality protection equipment	0.709	0.256	0.568
Sufficient water for operations	0.747	0.371	0.696
Quality farm land	0.670	0.328	0.557
Quality agricultural inputs	0.757	-0.110	0.585
Financing of private banks	0.713	0.389	0.660
Government subsidies	0.767	0.330	0.697
2. Intangible Resources			
Regular education of employees in aspects of environmental management	0.270	0.836	0.771
Qualified technical staff	0.223	0.792	0.677
Information about less polluting production techniques	0.248	0.853	0.789
Information about the damages that pesticides cause to health and the environment	0.337	0.787	0.733
Information about the correct disposal of waste	0.378	0.825	0.824
Information about the production techniques and products of the competition	0.058	0.777	0.607
Percentage of variance	30.203	37.824	
Cronbach's alpha	0.859	0.921	
KMO coefficient	0.858		

Rotation method: Varimax with Kaiser Normalization. The rotation has converged on three iterations. Extraction method: principal component analysis. This table contains information about the items used to measure the variable (first column). Coefficients in bold show the factor loadings greater than 0.5 for each dimension. In addition, Cronbach's alpha coefficient is reported, which in both cases is greater than 0.6, indicating that the constructs are considered highly reliable. KMO test demonstrate the discriminant validity between the constructs. The scale anchors for the items were 1, nothing, and 5, substantial.

Table 2 shows results of the factor analysis of competitive advantages. The first column reports items that measured the variable. The results in bold in Columns 2 and 3 show the factor loadings greater than 0.5 for each dimension. The table also shows the percentage of variance explained for each dimension. The values of Cronbach's alpha suggest that the constructs are highly reliable and KMO test demonstrate the discriminant validity between the constructs.

Table 2: Factor Analysis of Competitive Advantages

In Comparison with Its Main Competitor:	1	2	Communality
1. Competitive Advantage of Low Cost			
Costs of agricultural inputs	0.732	0.280	0.615
Costs of production per unit (kg)	0.832	0.193	0.729
Savings in recycling and reuse actions	0.779	0.059	0.610
Sales price to customers	0.797	0.343	0.753
Margin of the distribution channel	0.678	0.344	0.577
2. Competitive Advantage of Differentiation			
Product image	0.256	0.927	0.925
Knowledge of the product in the market	0.256	0.937	0.943
Loyalty of current clients and/or the attraction of new ones	0.248	0.944	0.953
Percentage of variance	39.024	37.285	
Cronbach's alpha	0.857	0.970	
KMO coefficient	0.868		

Rotation method: Varimax with Kaiser Normalization. The rotation has converged on three iterations. Extraction method: principal component analysis. This table contains information about the items used to measure the variable (first column). Coefficients in bold show the factor loadings greater than 0.5 for each dimension. In addition, Cronbach's alpha coefficient is reported, which in both cases is greater than 0.6, indicating that the constructs are considered highly reliable. KMO test demonstrate the discriminant validity between the constructs. The scale anchors for the items were 1, much lower, and 5, much higher.

Table 3 shows the results of the factor analysis of environmental innovation. The first column reports the items that measured the variable. The results in bold in Columns 2 and 3 show the factor loadings greater than 0.5 for each dimension. The table also show the percentage of variance explained for each dimension. The values of Cronbach's alpha suggest that the constructs are highly reliable and KMO test demonstrate the discriminant validity between the constructs.

Table 3: Factor Analysis of Environmental Innovation

The Small Agricultural Business Takes the Following Actions	1	2	Communality
1. Environmental Product Innovation			
Chooses materials that produce the least amount of contamination or toxicity for the planning and production of the product	**0.804**	0.390	0.798
Chooses the least amount of materials that produce the least amount of contamination for the planning and production of the product	**0.852**	0.258	0.793
Analyzes if the product is easy to reuse and decompose for the planning and production of the product	**0.764**	0.372	0.723
Improves and designs environmentally friendly packaging	**0.833**	0.342	0.811
2. Environmental Process Innovation			0.761
The production process effectively reduces the emissions of hazardous substances and wastes	0.397	**0.777**	0.799
The production process reduces the consumption of water, electricity, gasoline, etc.	0.366	**0.815**	0.804
The production process reduces the use of raw materials	0.246	**0.862**	0.681
Recycles, reuses and remanufactures the materials used in the production process	0.385	**0.730**	0.716
Uses cleaner technologies to save and prevent pollution	0.301	**0.791**	0.431
Percentage of variance	40.496	36.027	
Cronbach's alpha	0.905	0.913	
KMO coefficient	0.886		

Rotation method: Varimax with Kaiser Normalization. The rotation has converged on three iterations. Extraction method: principal component analysis. Rotation method: Varimax with Kaiser Normalization. The rotation has converged on three iterations. Extraction method: principal component analysis. This table contains information about the items used to measure the variable (first column). Coefficients in bold show the factor loadings greater than 0.5 for each dimension. In addition, Cronbach's alpha coefficient is reported, which in both cases is greater than 0.6, indicating that the constructs are considered highly reliable. KMO test demonstrate the discriminant validity between the constructs. The scale anchors for the items were 1 strongly disagree, and 5, strongly agree.

RESULTS

Table 4 provides the mean, the standard deviations and the partial correlations (controlling for size, age and technological level) between the dimensions of the study variables. The results indicate that dimensions of resources are positively correlated with dimensions of competitive advantages of small agricultural businesses. The largest correlation between resources and competitive advantage in this sample is between tangible resources and competitive advantage of low costs (r=0.807, p<0.01).

Table 4: Partial Correlations

Variable	M	SD	1	2	3	4	5	6
1. Tangible resources	2.535	0.963	---					
2. Intangibles resources	3.033	0.922	0.458**	---				
3. Competitive advantage of low costs	2.852	0.869	0.807**	0.604**	---			
4. Competitive advantage of differentiation	2.546	1.515	0.749**	0.373**	0.386**	---		
5. Environmental product innovation	2.956	0.860	0.711**	0.660**	0.733**	0.532**	---	
6. Environmental process innovation	3.057	0.974	0.466**	0.937**	0.578**	0.377**	0.638**	---

*Control variables: size, age and technological level. ** Correlation is significant at levels equal to or less than 0.01. N= 130.*

A regression model (Model 1) was developed to explore and quantify the relationship between resources and competitive advantages and test hypothesis 1. To test Hypothesis 2, hierarchical regression analysis was used. For each analysis, the variables were introduced in three different models. The first model examined the control variables (Model 2), the second included the independent variable and the moderator variable (Model 3) and the third examined the interaction terms (Model 4). Variance-inflation factor (VIF) values are below the usual cut-off value of 10 (O´brien, 2007), thus indicating limited effects of multicollinearity. The following regression equation was used to estimate the direct effect of resources on competitive advantages (Hypothesis 1):

$$Competitive\ advantages = \beta_1(Size) + \beta_2(Age) + \beta_3(Technological\ level) + \beta_4(Resources)$$

The following hierarchical moderated regression equation was used to estimate competitive advantages (Hypothesis 2):

$$Competitive\ advantages = \beta_1(Size) + \beta_2(Age) + \beta_3(Technological\ level) + \beta_4(Environmental\ innovation) + \beta_5(Resources) + \beta_6(Environmental\ innovation\ x\ Resources)$$

Table 5 describes the simple regressions results. Model 1 show that resources are positively and significantly associated with competitive advantages (b = 0.820, p <0.01). Resources represent 0.844 of the total variance in the model. This result indicates that resources are a crucial factor in obtaining competitive advantages in small agricultural businesses. Therefore, Hypothesis 1 is supported.

Table 5: Result of the Direct Effects on Competitive Advantage and Moderating Analysis

	VIF	Direct Effect	Moderating Effect		
		Model 1	Model 2	Model 3	Model 4
Size	2.502	0.225**	0.470 **	0.205**	0.202**
Age	2.407	-0.069	0.145	-0.053	-0.064
Technological level	1.563	-0.003	0.071	-0.026	-0.039
Resources	7.869	0.820**		1.162**	0.836**
Environmental innovation	6.963			-0.358**	-0.673**
Resources x Environmental innovation					0.645*
t value		18.842			
R^2		0.844	0.399	0.862	0.868
ΔR^2 (Change in R^2)				0.463**	0.006*
F		168.537	27.921	154.846	134.670

*N = 130. Significance levels are as follow: * p<0.05, and ** p<0.01 (two-tailed test). The standardized coefficients are reported. All results include size, age and technological level as control variables. The second column reports the VIF values that indicate limited effects of multicollinearity. To test hypothesis 1 (model 1) the following regression equation was used: Competitive advantages = $\beta_1(Size) + \beta_2(Age) + \beta_3(Technological\ level) + \beta_4(Resources)$. To test hypothesis 2 (model 2 to 4) the following hierarchical moderated regression equation was used: Competitive advantages = $\beta_1(Size) + \beta_2(Age) + \beta_3(Technological\ level) + \beta_4(Environmental\ innovation) + \beta_5(Resources) + \beta_6(Environmental\ innovation\ x\ Resources)$.*

Table 5 also describes the stepwise regression results (Model 2 to 4). The results indicated the resources x environmental innovation interaction term predicted competitive advantage (b = 0.45, p<.05; ΔR^2=0.006). Resources x environmental innovation represent 0.868 of the total variance in Model 4. The moderation hypothesis (Hypothesis 2) was also supported. The results suggest that environmental innovation moderates the relationship between resources and competitive advantages. Resources exert a greater effect on competitive advantages when environmental innovation is high. When environmental innovation is weak, competitive advantages are non-significantly improved, although there is an increase in resources. Results show that effects of resources on competitive advantages can be different depending on the level of environmental innovation.

Table 6 summarizes the results of the direct effect and the moderating regression analysis by the dimensions of the variables studied. The third column shows that resources are more positively and significantly associated with competitive advantages of low cost (b = 0.897, p <0.01). The results of the last column indicated that, individually, interaction terms (resources x environmental product innovation and resources x environmental process innovation) did not significantly predict the competitive advantage.

Table 6: Results of the Direct Effect and Moderating Regression Analysis by Variable Dimensions

	Direct Effect			**Moderating Effect**	
	Competitive Advantage	**Competitive Advantage of Low Cost**	**Competitive Advantage of Differentiation**	**Independent / Moderator Variable**	**Interaction Term**
Resources	0.820**	0.897**	0.629**		
Tangible resources	0.858**	0.859**	0.704**		
Intangible resources	0.490**	0.611**	0.333**		
Resources				0.741**	0.536**
Environmental product innovation				0.090	-0.083
Resources x Environmental product innovation					0.368
R^2				0.846	0.848
ΔR^2 (Change in R^2)				0.447**	0.002
Resources				1.221**	1.040**
Environmental process innovation				-0.452**	-0.609**
Resources x Environmental process innovation					0.337
R^2				0.894	0.896
ΔR^2				0.495**	0.002

*N = 130. Significance level ** p<0.01 (two-tailed test). The standardized coefficients are reported. All results include size, age and technological level as control variables. To test the moderating effect of the environmental innovation dimensions two hierarchical moderated regression equations were used. 1) Competitive advantages = β_1(Size) + β_2(Age) + β_3(Technological level) + β_4(Environmental product innovation) + β_5(Resources) + β_6(Environmental product innovation x Resources). 2) Competitive advantages = β_1(Size) + β_2(Age) + β_3(Technological level) + β_4(Environmental process innovation) + β_5(Resources) + β_6(Environmental process innovation x Resources).*

DISCUSSION AND CONCLUSIONS

The aim of this research was to study the impact of resources on competitive advantages of small agricultural businesses and the moderating role of environmental innovation in the relationship. The research was based on the core arguments from R-A theory. In the literature, R-A theory insufficiently considers environmental issues. Therefore, this paper proposed the need for an extension or evolution of the theory towards the consideration of environmental issues. Environmental innovation was considered as a moderator of the relationship between resources and competitive advantages.

The study results demonstrate the structure of factors of R-A theory in the context of the research by finding that a comparative advantage in resources yields a marketplace position of competitive advantage, according to Hunt and Morgan (1995, 1996). This implies that, as in conventional companies, small agricultural businesses having more tangible and intangible resources have greater competitive advantages in the market. This result is consistent with previous results (Kaleka, 2002; Omerzel & Gulev, 2011). However, contrary to these earlier studies, this research found that although both types of resources have significant influences, tangible resources are more impactful on the competitive advantages of small agricultural businesses. This context is characterized by limited access to tangible resources (physical and financial). So, small agricultural businesses that have more infrastructure, equipment and financing are more productive and can generate offers of higher value and lower costs than their competitors. Resources were found to have a greater influence on competitive advantages of low costs. This result indicates that

although resources influence both types of competitive advantages, given the nature of agricultural products, they have a greater influence on reducing costs than on obtaining differentiated products.

Although the R-A theory has had a strong theoretical development, the incorporation of environmental issues in its foundations is barely noticeable. This research offers empirical evidence supporting the approach of Hunt (2011b), who argued that many concepts, strategic approaches and discussions of the field of environmental management, such as sustainable marketing, are consistent with the structure and the fundamentals of R-A theory. R-A theory refers to innovation as a key factor in the competitive processes of firms (Hunt, 2011a; Hunt & Duhan, 2002).

The results provide evidence suggesting that environmental innovation moderates the relationship between resources and competitive advantages. The supported argument states that, like any innovation, environmental innovation also creates value for customers and superiority over competitors (Forsman, 2013). Both types of innovation are an outcome of the process of competition and also an outcome of the process of competition. Further, considered as a general theory of competence, R-A theory encompasses diverse knowledge where environmental issues have a place. This suggests that environmental innovation can further increase the productivity of resources and make companies more competitive, as stated by Porter and Van der Linde (1995). The results imply the relationship between resources and competitive advantages is enhanced when the implementation of environmental innovations is high.

Small agricultural businesses must strive to obtain greater and better resources and competitive advantages, but they must also implement environmental innovations to be more competitive in the market. The findings here reveal the applicability of R-A theory in less traditional contexts such as the case of the agricultural sector of a developing economy. The agricultural sector differs in structure and functionality from conventional companies in developed economies.

This study has a number of limitations, which also represent fertile directions for future research. First, the sample was not random due to the lack of a formal database indicating the specific location of the greenhouses. By having access to this information, future research could use it to determine a random sample. Second, because the surveys were specifically applied in the context of small agricultural businesses producing greenhouse tomatoes, the generalization of the results may be limited. Therefore, to increase the generalization of results, it may be useful to conduct a comparative study between two or more different contexts. Third, perceptual measures were used to quantify the variables. Future studies could use complementary objective measures. Finally, the study uses cross-sectional data. Future studies can use multiple cross-sectional analyzes in different time frames to improve the generalizability of the results.

REFERENCES

Chang, C.H. (2011). The influence of corporate environmental ethics on competitive advantage: The mediation role of green innovation. *Journal of Business Ethics, 104(3)*, 361-370.

Chen, Y.S. (2008). The driver of green innovation and green image–green core competence. *Journal of Business Ethics, 81(3)*, 531-543.

Chiou, T.Y., Chan, H.K., Lettice, F., & Chung, S.H. (2011). The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transportation Research Part E, 47(6)*, 822-836.

Christmann, P. (2000). Effects of "best practices" of environmental management on cost advantage: The role of complementary assets. *Academy of Management Journal, 43(4)*, 663-680.

Forsman, H. (2013). Environmental innovations as a source of competitive advantage or vice versa? *Business Strategy and the Environment, 22(5)*, 306-320.

Hunt, S.D. (1995). The Resource-Advantage theory of competition toward explaining productivity and economic growth. *Journal of Management Inquiry, 4(4)*, 317-332.

Hunt, S.D. (2011a). Developing successful theories in marketing: insights from resource-advantage theory. *AMS review, 1(2)*, 72-84.

Hunt, S.D. (2011b). Sustainable marketing, equity, and economic growth: a resource-advantage, economic freedom approach. *Journal of the Academy of Marketing Science, 39(1)*, 7-20.

Hunt, S.D. (2012). The evolution of resource-advantage theory: Six events, six realizations, six contributions. *Journal of Historical Research in Marketing, 4(1)*, 7-29.

Hunt, S.D., & Duhan, D.F. (2002). Competition in the third millennium: efficiency or effectiveness? *Journal of Business Research, 55(2)*, 97-102.

Hunt, S.D., & Morgan, R.M. (1995). The comparative advantage theory of competition. *The Journal of Marketing, 59*, 1-15.

Hunt, S.D., & Morgan, R.M. (1996). The resource-advantage theory of competition: dynamics, path dependencies, and evolutionary dimensions. *The Journal of Marketing, 60*, 107-114.

Hunt, S.D., & Morgan, R.M. (1997). Resource-advantage theory: a snake swallowing its tail or a general theory of competition? *The Journal of Marketing, 61*, 74-82.

Instituto Nacional de Estadística y Geografía (INEGI) [National Institute of Statistics and Geography]. (2007). Censo agrícola, ganadero y forestal. Available at: www.inegi.org.mx

Kaleka, A. (2002). Resources and capabilities driving competitive advantage in export markets: guidelines for industrial exporters. *Industrial Marketing Management 31(3)*, 273-283.

Kemp, R., Arundel, A., & Smith, K. (2001). Survey indicators for environmental innovation (paper presented to conference *"Towards Environmental Innovation Systems"* in Garmisch-Partenkirchen).

Li, Y. (2014). Environmental innovation practices and performance: moderating effect of resource commitment. *Journal of Cleaner Production, 66*, 450-458.

Liao, Z. (2016). Temporal cognition, environmental innovation, and the competitive advantage of enterprises. *Journal of Cleaner Production, 135*, 1045-1053.

López-Gamero, M.D., Molina-Azorín, J.F., & Claver-Cortés, E. (2009). The whole relationship between environmental variables and firm performance: Competitive advantage and firm resources as mediator variables. *Journal of Environmental Management, 90(10)*, 3110-3121.

López-Gamero, M.D., Molina-Azorín, J.F., & Claver-Cortés, E. (2010). The potential of environmental regulation to change managerial perception, environmental management, competitiveness and financial performance. *Journal of Cleaner Production, 18(10)*, 963-974.

Macías-Macías, A. (2013). Introducción. Los pequeños productores agrícolas en México. *Carta Económica Regional, 25(111-112)*, 7-18.

Murray, J.Y., Gao, G.Y., & Kotabe, M. (2011). Market orientation and performance of export ventures: The process through marketing capabilities and competitive advantages. *Journal of the Academy of Marketing Science, 39(2)*, 252-269.

Nunnally, J.C. (1967). *Psychometric theory*. McGraw Hill. New York.

O'brien, R.M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity, 41(5)*, 673-690.

Omerzel, D.G., & Gulev, R.E. (2011). Knowledge resources and competitive advantage. *Managing Global Transitions, 9(4)*, 335-354.

Porter, M.E., & Van der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. *The Journal of Economic Perspectives, 9(4)*, 97-118.

Richey, R.G., Musgrove, C.F., Gillison, S.T., & Gabler, C.B. (2014). The effects of environmental focus and program timing on green marketing performance and the moderating role of resource commitment. *Industrial Marketing Management, 43(7)*, 1246-1257.

Rijk, P.M. (2008). *Evolución del sector de agricultura protegida en México*. FIRA–Agronegocios.

Sánchez-Medina, P.S., Díaz-Pichardo, R., Bautista-Cruz, A., & Toledo-López, A. (2015). Environmental compliance and economic and environmental performance: Evidence from handicrafts small businesses in Mexico. *Journal of Business Ethics, 126(3)*, 381-393.

Van den Berg, U., Labuschagne, J.P., & Van den Berg, H. (2013). The effects of greening the supplier and innovation on environmental performance and competitive advantage. *Journal of Transport and Supply Chain Management, 7(1)*, 1-7.

Viswanathan, M., Sridharan, S., & Ritchie, R. (2010). Understanding consumption and entrepreneurship in subsistence marketplaces. *Journal of Business Research, 63(6)*, 570-581.

ACKNOWLEDGEMENT

We are grateful to the National Polytechnic Institute (Instituto Politécnico Nacional - IPN) for financing the project SIP20180258.

BIOGRAPHY

Gricelda Juárez-Luis, corresponding author, is a doctoral student at the National Polytechnic Institute, Mexico Oaxaca CIIDIR unit. Her research interests are institutional environment, competitive strategies, and environmental management in SME´s. She can be contacted at Instituto Politécnico Nacional – CIIDIR Unidad Oaxaca, México, Santa Cruz Xoxocotlán, Oaxaca.

Patricia S. Sánchez Medina, PhD, is professor in the Management Department at National Polytechnic Institute –CIIDIR Oaxaca, Mexico. Her research interests are environmental management in subsistence business and fragmented industries. Within this research area, she has development and participated in several research projects. Her recent research is in the field of sustainability in family businesses. Dr.

Sánchez-Medina can be contacted at Instituto Politécnico Nacional – CIIDIR Unidad Oaxaca, México, Santa Cruz Xoxocotlán, 71230 Oaxaca.

René Díaz-Pichardo is Ph. D and professor at South Champagne Business School & Université de Technologie de Troyes, France. His research interests are business strategies, business management and marketing. Dr. Díaz-Pichardo can be contacted at South Champagne Business School, France, Troyes Cedex, France or at Université de Technologie de Troyes, Troyes Cedex, France.

International Journal of Management and Marketing Research
Vol. 12, No. 1, 2019, pp. 37-50
ISSN: 1931-0269 (print)
ISSN: 2157-0698 (online)

IBFR
www.theIBFR.com

INFLUENCE OF POLITICAL ENVIRONMENT ON FIRMS' CORPORATE PERFORMANCE: EVIDENCE FROM SELECTED MANUFACTURING FIRMS IN OYO STATE, NIGERIA

Idowu Emmanuel Olubodun, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria

ABSTRACT

The array of incidences of corporate failure and poor performance witnessed in the economy recently cannot be unconnected to the activities in the political environment surrounding business operations. Thus, the study focuses on the influence of the political environment on firms' corporate performance with evidence from selected firms in the manufacturing sector of the Nigerian economy. The study used research survey using questionnaire to elicit data from the middle and top managers about their perception of the effect of political environment measured by government regulations, legislation, policy and security on corporate performance using multiple regression techniques. The individual effect of each of the proxy for the independent variable on the dependent variable was mixed. The study reveals that political environment has a significant effect at $p < 0.05$ on corporate performance for the two objectives and hypotheses raised. The study concludes that government policy inconsistency should be minimised to aid its predictability and regulatory agencies enforcing compliance on regulations of business operations should be collapsed into an integrated body to reduce administrative burdens on firms. The study recommends more investment in security infrastructure to engender the safety of lives and property as a means to enhance business survival. Further studies are suggested to cover other sectors of the economy.

JEL: M100, M190

KEYWORDS: Political Environment, Corporate Performance, Manufacturing Sector

INTRODUCTION

Political environment uniformly affects and is affecting business because business usually is perceived as seeking its unchanging interest of protecting and creating value for itself (Oliver & Holzinge, 2008). However, Aplin and Hegarty (1980) established that critical challenges confronting businesses had their origin in external forces and constraints which result from changes in the external environment. Most often organizations consider the market environments such that comprise factors like interest rate, foreign exchange rate and so on to be of more importance to their operations than the non-market environments which capture the political environment (Boddewyn, 2003). Moreover, the activities in the political environment of any nation matter so much as to determine whether businesses survive or not. The government participates in the nation's economy via the political environment either through legislation, regulations, policies and other more; and these government activities could enhance the performance of businesses where management of organizations' pay attention to them. In any way whatsoever, organizations should design strategies to cope, adapt or influence this environment in order to experience continuous business operations. The political environment is crucial in any economy yet excessive and extensive government interventions can be detrimental to businesses' growth and prosperity thereby making their contributions to overall national economy deterred and difficult (Spencer & Gomez, 2003). For instance, excessive business regulations and government interventions often limit organizations'

strategic options and success except where enterprises are state-owned. Larger firms' inability to comply with demands of the political environment quickly become an obstacle to their success as the government often treat them as public examples because of their visibility, the example of the telecommunication industry in Nigeria.

Again, government interventions, political instability and corruption in the political environment of most developing economies always result in issues such as additional cost burden to organizations and weaken firms' capacity to enjoy improved performance. Often, firms may experience underutilization of their resources, which might escalate unemployment conditions due to poor political environment management of nation's economy. Its resultant effects in most cases are unpleasant activities like kidnappings, armed robbery, terrorism, youth restlessness, street crimes, and organized crime resulting to vandalization of national infrastructural facilities and disruptions of firms' operational activities. Insecurity is now a concern to businesses because firms desire the safety of personnel and facilities for guaranteed business operations and returns to shareholders. The alignment this takes is that organizations should endeavor to get themselves involved through their strategic decisions as a means to reduce potential adverse effects on performance. The aggregated effect of these issues form bureaucratic hurdles and constitute cost to organizations. This cost adds to the overall price charged on goods and services offered to customers. However, organizations may have to take some actions to ameliorate the effect on their operations as a means to improve performance.

The typical political environmental strategy firms' management often uses include cost accumulation, which does not have any enduring market impact except build relationship in managing the political actions of government about business activities of organizations. These political strategies include lobbying, advocacy advertising, constituency building, financial contributions/inducement, and coalition formation, which firms undertake to manage their political environment (Hillman & Hitt, 1999; Hillman, Keim, & Schuler, 2004 and Bonardi, Hillman, & Keim, 2005). The effort in this study, however, is geared towards investigating the influence of the political environment on corporate performance of organizations in the manufacturing sector. The political environment contributes to the success of businesses when managed effectively. However, no political environment can claim absolute predictability, especially in developing nations. Organizations engage in political activities either directly or otherwise to stay in business. Excessive regulations, government intervention in terms of diverse legislation, policies inconsistency and security insensitivity often raise the concern of organizations irrespective of size. The array of these issues taken together is what characterizes the political environment of most nations in the developing economies, including Nigeria. Levy and Spiller (1994) observe the importance of consistent government policies in the energy industry as a significant determinant of the success of organizations. This circumstance aids strategic decision of organizations that are in the sector because of no need to base any intending business decisions on speculation, which is usually attributable to the inconsistent policy environment. The situation explains the level of predictability in such an environment. Again, customer purchasing power suffers in an environment dominated by excessive regulations because all costs (e.g. bureaucratic hurdles to demonstrate compliance to regulations and policies) incur are passed to final users of products or services of organizations (Spencer & Gomez, 2003; Cheng & Wang, 2012).

Stakeholders' involvement in policy making can smoothen operations for industries depending on how critical the industry is to the economy and the level of interactions of players in such industry with policymakers. The importance of the manufacturing sectors to the economy counts significantly in this regard because of its role in terms of employment generation and gross domestic product (GDP) contributions to the overall economy. Recently in Nigeria, non-availability of foreign exchange (FX) to purchase raw materials that are not locally available for manufacturing sector compelled the Manufacturer Association of Nigeria (MAN) to demand unique FX window as a means to cushion effects of its scarcity and for them to continue in business. The circumstantial action display around it is reactive, but it expresses a cumulative effect of continued dependency of the nation on mono-product revenue source. Both the

government and the industry pay for this situation in economic recession with declining manufacturing sector capacity utilization. Organizations may either seek to relate to the government through compliances to its political actions only to protect or maintain future or current organizational assets (Oliver & Holzinger, 2008). However, the level of complexity and rate of changes in the political environment make it worthwhile for organizations to develop dynamic capabilities for influencing the environment by their strategic actions. Oliver and Holzinger (2008) identify four firm-level strategies which are reactive, defensive, proactive and anticipatory strategies for influencing the political environment. These all point to the fact that organizations that practice any of these strategies understand the political environmental situations. Hence, organizations should consider seeing the need to imbibe ahead of the game action as a path to follow. The need to investigate the influence of the political environment on corporate performance is necessary to deepen understanding of managers of the level of effects possible in order to craft improved policy and strategy for both government and organizations. The study considers survey responses from senior officials of the selected firms to know their managerial perceptions of the influence of the political environment on their corporate performance in Nigeria. The foregone has the potential of rubbing off on the competitive advantage of organizations (Porter, 1980).

The current study focuses on the overall influence that political environment has on corporate performance, which provides insight and help managers anticipate the required strategy needed in political environmental circumstances ahead of their occurrence. The study provides ground for business owners and investors to navigate political conditions prevalent in the nation's economy to aid business planning and actions. The result also exposes managers to the behavior of forces in the political environment and guides them to make provision for cushioning measures to salvage adverse effects.

In this study, the following research questions were raised: what is the effect of political environment factors on the sales growth of manufacturing firms? And what influence does political environment has on manufacturing firms' business survival? The general objective of the study is to investigate the effect of the political environment on firms' corporate performance of selected manufacturing firms in Oyo State, Nigeria. However, the specific objectives of the study are to: (i) determine the effect of political, environmental factors on sales growth of manufacturing firms; and (ii) examine the influence of the political environment on manufacturing firms' business survival. However, the following hypotheses were tested: (i) political environment does not have a significant positive effect on sales growth of manufacturing firms; (ii) Political environment does not have a significant positive influence on manufacturing firms' business survival.

LITERATURE REVIEW

The political environment is critical for organizations and businesses, whether for the profit-making or not-for-profit making establishments. In this environment, organizations often push for common interest, mainly where an industrial potential is in threat or solicit collectively for an incentive to strengthen and enhance overall capacity utilization of the industry. Individual firm's pursuit usually is costly and expensive, yet firms venture into it to gain a competitive advantage over rivals to avoid free riding. Political environment's instability might decrease investment and the economic development speed of any nation, particularly where there is uncertainty (Alberto, Sule, Nouriel, & Phillip, 1996). Organizations effort to ensure systematic political risk management can improve corporate performance. However, Richard, Devinney, George and Johnson (2009) refer to the political environment as the totality of all factors and issues resulting from the political actions of the government, which are capable of changing the expected outcome and value of a given economic entity by altering the probability of achieving business objectives. Besides, inactions of government in some instances can make organizations to initiate strategies as means of addressing the possible effects of government inactions or else their operations or existence might be threatened hence the need to investigate the effects through this research work.

Oliver and Holzinger (2008) explain political compliance strategies as firm-level actions undertaken to conform with political requirements and expectations for purposes of value creation and maintenance by anticipating or adapting to public policy. In this regard, government actions that come in the forms of policies, regulations, legislation and the creation of secured atmosphere (which is the general outlook of the political environment) affect firms' actions and performance. Organizations are to monitor these variables to know and understand their dynamics. The influence of these factors can have a combined effect on the performance of any organizations, no matter the size. Meanwhile, well-rounded information on each of these items in the environment can assist managers in making informed decisions that can improve corporate performance. The variables of interest in this study are subsequently explained.

Government policies play essential role in the industrial success of every sector of any nation, whether in the developed or developing economies because some decisions taken within specific industries are based on the policy conditions of the political environment. Managers often want to avoid uncertainty; however, they always make preferences for strategies that can help them cope in these types of situations; otherwise, firms' likelihood for long term thinking may suffer (Pindyck & Solimano, 1993). Organizations' understanding of the political environment matters in deciding the strategic decisions to carry out though this varies from one sector to another. In this regard, firms place prominence on the level of interactions they have with the government where the regular update in policies peculiar to their industry is feasible. Organizations tend to move into action where an understanding of the policy environment relating to their operations and industry is accessible in terms of interactions with policymakers, access to information before policy release, and a notice of enforcement (Spencer, & Gomez, 2003). Policies that address import restrictions and substitution, export promotions, foreign exchange restrictions and high taxes in national fiscal policy tend to affect firms' performance within the manufacturing industry. Murtha (1993) confirms that government policy inconsistencies often have a highly significant adverse effect on firms' strategic decisions in developing nations than developed countries which is due to overall confidence in the political environment and policies of the advanced nations.

Predictability and consistency of government regulations could be the source of encouragement to industry growth and development, but this phenomenon is only realistic in developed economies (Spencer & Gomez, 2003). Dess and Brown (1995) affirm that new firm entry into industries is deterred in tight environmental regulatory condition. Regulations suggest the extent of economic freedom available to firms in any economy. Regulation is defined, therefore as the use of legal instruments to enforce compliance and adherence to the social and economic framework set up by the government to implement social-economic policy objectives (Hertog, 1999). It is a set of constraints compelling individual firms to abide by government actions on industries activities to ensure the safety of consumers. However, Christainsen and Haveman (1982) posit that government regulations stiffen capital investment, which often slows down productivity. For instance, the cost of federal regulations annually in the United States account for an amount well over $1.75 trillion in 2008. In addition, every U.S. household would have paid an equal amount of $15,586 if the federal regulatory cost burden was shared among them (Crain & Crain, 2010). It is imperative to consider this phenomenon empirically as its implications on firm's performance abound. Reich (2009) affirms that there is a tendency for regulations signaling behavior to run the risk of blocking innovation or shifting it into its shadows and aiding complacency.

Legislation establishes the legitimacy of firms operations and existence. However, these laws enacted facilitate a framework for setting limits in the production, distribution and marketing of products of companies in the consumer goods industry. However, the multiple agency systems in Nigeria with responsibility for food control, safety and public health protection cut across federal, state and local governments. These legislative conditions impose numerous sectorial challenges such as duplication of functions, increased cost of doing business, several measures of effectiveness in enforcing control demands set by laws along the value chain (Omojokun, 2013). All these have some levels of impact on the performance of firms in the manufacturing sector. The efficiency and effectiveness of the sector might be

better enhanced if the single agency system model is adopted (Omojokun, 2013). However, the integrated system could engender above board confidence in stakeholders, particularly consumers if it is embraced, and this is possible with a vibrant political environment. However, information-based strategies such as an expert witness, technical report and providing a specific argument (Aplin and Hegarty, 1980) at influencing legislation can produce enhanced benefit for the economy more than using advocacy advertising, constituency building, financial contributions/inducement (Hillman & Hitt, 1999; Bonardi, *et al*, 2005).

Several insecurity incidences in the country raise concerns and worries to all and sundry which at a point called the competencies of security apparatus to questions because lives and properties are no longer guaranteed adequate safety. The anti-terrorism Act passed by the government in 2011 attested to effort to criminalized terrorism, yet the persisted high-level breach of security in the country does not portray the nation's business environment as conducive for business activities. This condition places Nigeria at a low rank in the Global Peace Index (GPI, 2012).Of recent, the country ranked 148th among the 163 nations surveyed. Ifeoma, Purity, and Anagbogu (2015) observed further that most business establishments in the Northeast, Nigeria had closed operations due to the prevalence and pervasiveness of insecurity. This concern creates fears and anxieties in investors' minds at both the local and foreign levels within the nation's business environment. People living in the area along with existing companies operating in that region relocated to neighboring states in Nigeria or to other African counties like Ghana because the tendency to lose lives and properties was high. Others reduced operational capacity to stay in business (Nwagboso, 2012). Hence, it is argued that in such conditions, when investments and economic activities suffer they might further deepen unemployment, poverty and level of uncertainty in the political environment (Nestle, 2010). Security further shows its relevance to economic growth and prosperity of a nation. Level of ammunition investment also determines the rate of conflicts in any country. This stance affects investment and expansion drive of business in such an economy, especially if the decision bothers on merger and acquisition (Ciobanu & Bahna, 2015). Reduction in street crime, organized crime and other types of business disruptive activities are essential issues for the government to focus on in order for businesses to operate competitively in the environment (Schiffer & Weder, 2002).

Corporate performance is anchored as the output of business enterprises premise on a combination of income-generating assets of any organization and usually made up of all the resources including man, material, money and methods in order to achieve dream and aspiration of an organization (Barney, 2002; Carton & Hofer, 2006). Mark and Nwaiwu (2015) posit that growth strategies may be driven after adequate steps have been taken to identify, measure and manage the risk that can easily facilitate entering of promising markets thereby improve performance of existing businesses. Performance of unlisted companies is not available publicly, and subjective estimates of managers can be reliable (Dess & Robinson, 1984; Robinson & Pearse, 1988 and Venkatraman & Ramanujam, 1987). The sales growth data were a self-reported assessment of the managers since the firms are privately held, so sales revenue data are not available publicly. The managers' observation of their firms' revenue stream over time and experiences also help their ability of what can account for such performance in any period. In this study, the proxy for corporate performance is sales growth defined as the change in sales over a particular period, expressed as the difference between sales last period and those of this period as a percentage of the sales last period (Richard et al., 2009). Business survival is measured with questions raised in the questionnaire. The questions of whether business survival is hampered or not by the activities in the political environment are observed in the literature because the environment is a source of large exogenous shocks leading to the closure of firms (Sokolov & Solanko, 2016). In this regard, the higher the value derived from analysis, the more political environment's threat is to business survival. Decreasing crude oil price, falling foreign exchange reserves, foreign exchange fluctuations and spate increase in insecurity dominated the investigated period.

Economy theory as proposed by Stigler (1971) is the theory base of this study and it states that organizations engage in political activities to capture or acquire industry benefits in terms of subsidies, entry barrier, price

fixation advantage over rivals, even control the rules in the industry. However, this tends to be direct involvement by giving inducements to influence political actions of policymakers all in an attempt to benefit. However, firms' strategic actions also can drive this anticipatorily and use it to lure government policy as a platform to gaining a competitive advantage over rivals and achieve growth either in sales or profit and so on. Stigler's central positions, in theory, are built on two primary premises: one, the fundamental asset controlled by the state is the power to coerce and any group that can control how this power is used can benefit from it. Second, since we are self-interested actors, we will seek to get the state's coercive power to support our interests. Efforts to do so, however, are costly. Organizations willfully are supposed to take conscious firm level-specific actions to their advantage in order to improve performance by leveraging on the understanding and better interpretation of the political environment. The deliberate action of organizations which is expressed in their decisions becomes the only way to get the state power to their benefit. However, these decisions can be in response to the situations in the political environment or foresighted ahead of time due to the understanding gained in the course of constant monitoring of the environment. The emphasis of the political environment points to the need to investigate the conditions surrounding business operations and activities to determine its influences.

Ogini and Adesanya (2013) affirm in their study that poor electricity infrastructural architecture, government policies and corruption as business environmental factors accounted principally for significant negative impact on the survival and growth of firms in the manufacturing sector in Nigeria. These circumstances in the political environment culminated to the exit of many of such firms from the shore of the nation to neighboring economies. Kigera (2016) asserts in the study of the influence of political environment on the performance of International Hotel Chains in Nairobi, Kenya that there is a positive influence of political environment on the performance of firms in Kenya. The findings support that in Kenya, factors in the political environment are stimulants that ease operations for firms which aid better business performance in the hospitality value chains businesses. Spencer and Gomez (2003) study how the political environment affected the performance of firms operating in the Latin America countries in which companies of focus experienced decreased sales growth due to obstacles posed by regulatory, government excessive intervention and extensive corruption in those countries. The study asserts that factors in the political environment have significant effects on the level of sales growth achieved by firms in those economies. Spencer, Murtha and Lenway (2005) explained that institutional structural framework is fundamental to firms' innovation matters because such framework either stimulates or mars business growth where it is compromised. This innovation often appears in managerial decisions, which manifests in dynamic organizational capabilities. The finding shows the effect of government policies on firms' innovation strategies, which can be displayed in political environment management through firm-level strategies in response to policy direction, thereby affecting performance.

Ciobanu and Bahna (2015) posit that the social, cultural and political factors affect the level of mergers and acquisitions in any economy as these factors influence the investors' perception towards investment. The findings show that social factors like public spending on health, literacy rate or people skills and abilities, cultural factors like the perception on the bureaucracy and new businesses and political factors like tax rates and democratic development are critical determinants of merger and acquisition decision. The effort in the study focuses on nations, but the current study's focus is corporate organization, and this establishes some level of specificity, which can help relate the political environment in Nigeria context. Mark and Nwaiwu (2015) affirm in the study of the impact of political environment on business performance of multinational companies in Nigeria where the findings show that there are significant negative impacts of frequent changes in government policies and political instability on the profitability of multinational companies in Nigeria. The study concentrated only on multinational companies with activities of the period boundary of 1999-2013 and only on quoted companies in the Nigerian Stock Exchange. However, the current study examines the influence of the political environment on corporate performance of selected manufacturing firms (See appendix 1 for conceptual framework).

DATA AND METHODOLOGY

Survey research design was employed in which manufacturing firms in Ibadan city, Oyo state were investigated to determine the influence of the political environment on their corporate performance. The questionnaire was designed to elicit data from the managerial and middle-level staff of the selected manufacturing organizations. The manufacturing companies (consumer goods category) in Ibadan, Oyo State constitute the population of this study. Oyo State and Ibadan, in particular, is the third city with a reasonable concentration of manufacturing companies being the regional hub of southwestern, Nigeria. The total number of fast-moving consumer goods (FMCG) companies in Ibadan, Oyo State is thirty-three (33) Manufacturer Association of Nigeria (MAN, 2018). Consumer goods companies offer products that torch basic human necessities (BHN) of our daily life. Hence, it is vital to know the influence of the political environment on their operations and performance. These firms selected have stood the test of time as they have existed and weathered different political environments in Nigeria. The respondents for the study are staff at the managerial and middle cadres of these organizations.

The sampling technique adopted for the study was random sampling, and the sample size was determined using Yamane's formula (1967) however, the prior interest of the companies were sorted by personal visit, email and phone calls in which only nine (9) indicated participating interest in the study. Also, personal visit and physical contact were the means employed to distribute the questionnaire to the respondents. The administration of instrument was done between September and December, 2018 in which analysis of data followed after data coding. The total number of managerial and middle-level staff in the nine firms were 545 (Research Field, 2018). The sample size was 231 respondents from the same staff and organizations selected to whom the designed questionnaire was administered and this represented 100 percent collection rate of the instrument. The sample size satisfied the condition that the smaller the population, the higher the percentage of the sample size (Paler-Calmorin & Calmorin, 2006). The selected firms resulted from the companies' interest to participate in the study to whom the questionnaire was distributed proportionally, and constant monitoring paid off as all the questionnaire distributed was successfully retrieved.

A questionnaire was used to collect data from the managers both at the top and middle management positions who understand the information around the organizations' performance. Questions relating to several regulatory cost that forms part of production cost which could later hit consumer purchasing power, duplicated laws at different government levels that could cause bureaucratic burden and cost, interrupted business operations due to security lapses in the some parts of the country among others were asked. Specifically, the staff of the Sales and Marketing department of each company also participated in the study because they provide data necessary for determining sales revenue estimate due to activities of the political environment. A five-point Likert scale questionnaire was designed to elicit data from the respondents. The responses range from the scale of (1) for strongly disagree to (5) for strongly agree. Empirically, Dess and Robinson (1984); Venkatraman and Ramanujam (1987) and Robinson and Pearce (1988) posit that estimating performance in percentage is reliable for companies' that are not available publicly. Literature also suggests that estimates of performance measures of interest can also be accessed using the perspective of organizational members (Duncan, 1972). In this regard, sales revenue growth is estimated in percentage using Likert format for the past five years in which questions raised on survival follows Likert pattern. There are two null hypotheses formulated for the study and the model specifications are hereby shown below: Political environment does not have a significant positive effect on sales growth of manufacturing firms.

SG = f (Pol Env)

Which turns out to become

$$SG = \beta_0 + \beta_1 GovtReg + \beta_2 GovtLeg + \beta_3 GovtPol + \beta_1 Secr + Ce \quad (1)$$

Where:

SG = Sales Growth;
β_0 = Slope of the equation;
$\beta_1 - \beta_4$ = Intercept, which accounts for a change in the beta coefficient that explains the increase/decrease in the value of the dependent variable.
GovtPol = Government Policy;
GovtReg = Government Regulations;
GovtLeg = Government Legislation;
Secr = Security;
Ce = Statistical Error Term.

The second hypothesis is thus, Political environment does not have a significant positive influence on manufacturing firms' Business survival. BSV = f (Pol Env) Which turns out to become

$$BSV = \beta_0 + \beta_1 GovtReg + \beta_2 GovtLeg + \beta_3 GovtPol + \beta_4 Secr + Ce \quad (2)$$

Where:

BSV= Business Survival;
β_0 = Slope of the equation;
$\beta_1 - \beta_4$ = Intercept, which accounts for a change in the beta coefficient that explains the increase/decrease in the value of the dependent variable.
GovtReg, GovtLeg, GovtPol, and Security (as earlier stated); Ce = Statistical Error Term

RESULTS

Hypothesis One

H_{o1}: Political environment does not have a significant positive effect on sales growth of selected manufacturing firms in Oyo State.

Model 1

Which turns out to become

$$SG = 3.723 - 0.251 GovtReg - 0.033 GovtLeg + 0.220 GovtPol + 0.097 Secr \quad (3)$$

Table 1 below indicates that model 1 shows the multiple regression coefficients of each of the proxy for the political environment with mixed effects on the dependent variable proxy by sales growth. Government regulations with a $\beta = -0.251$, $t = -2.567$ at $p < 0.05$ shows that for a unit increase in the value of government regulation, the sales growth decreases by -0.251. In this wise, government regulations have a significant negative effect on the sales growth of firms in the manufacturing sector. Also, government legislation with a $\beta = -0.033$, $t = -3.77$ at $p > 0.05$ demonstrates that for a unit increase in the value of government legislation, the sales growth reduces by 3.3%. Indicating that government legislation has a negative effect but not significant marginal influence on the sales growth of firms in the manufacturing sector. Government policy with a $\beta = 0.220$, $t = 2.358$ at $p < 0.05$ also reveals that for a unit increase in the value of government policy, the sales growth increases by 22%. In this wise, government policy has a significant positive effect on the corporate performance of firms in the manufacturing sector. Security with a $\beta = 0.097$, $t = 1.125$ at $p > 0.05$, meaning that for a unit increase in the value of the security, the sales growth increases by 9.7%. In this

wise, security has an insignificant positive effect on the corporate performance of firms in the manufacturing sector.

Table 1: Regression Estimates of Sales Growth

Model	Variable	Coefficient	t-stat	p-value	R^2	Adjusted R^2	F-stat	p-value
1	(Constant)	3.723	10.294	0.000	0.484	0.467	3.219	0.014**
	GovtReg	-0.251	-2.567	**0.011****				
	GovtLeg	-0.033	-0.377	0.706*				
	GovtPol	0.220	2.358	**0.019****				
	Secr	0.097	1.215	0.225*				

*The table shows the coefficients proxy of political environment, the t-statistics and the p-value that signifies the significance levels for each Coefficient: ***p <0.01, **p <0.05, *p <0.1; n = 231. Adjusted r^2 showed the variation accounted for in the dependent variable, and F-statistics demonstrated that the predicting model is fit for this study at significance level of **p <0.05.*

The multiple regression estimates shown in Table 1 above indicate that adjusted R square showed that 46.7 per cent variations in corporate performance proxy by sales growth are accounted for by the factors in the political environment while the 53.3% remaining variations are due to factors not covered in the model. All the proxies for the political environment had p <0.05 that is statistically significant, making it the best predictor of firms' corporate performance proxy by sales growth. However, the F-statistics (3.219) at p-value less than 5% shows that the simultaneous combination of the political environment proxies have a significant influence on the corporate performance of firms in the manufacturing sector in Nigeria and this is consistent with the findings of Spencer and Gomez (2003). Therefore, the null hypothesis was rejected while the alternative was accepted.

The implications however abound, government regulations stance on the activities of the sector is harsh, and these need to be minimized through efforts to collapse the multiple regulatory standards of the various government agencies in the country into the integrated standard. All of these agencies' demands tend to increase the cost of production of firms in the industry, which cause higher prices for the products offered in the sector, thereby making the sector not to be competitive. Government policy initiative paid off in recent time hence the result obtained from this study. However, the government need to consolidate her policy position to improve the productive capacity of the sector. For instance, the recent foreign exchange restriction to some items boost drive for local sourcing of raw materials that are once imported. Government improves upon her investment in security to create a more conducive business environment safe for business operations and human lives. Government at different levels also should harness their legislative apparatus in such a way that functions at a lower level of government is not duplicated at the next higher levels by that control measures become more productive.

Hypothesis Two

H_{o2}: Political environment does not have significant positive influence on manufacturing firms' Business survival

Model 2

Which Turns Out to Become

BSV = 0.980 -0.158GovtReg+0.208GovtLeg-0.249GovtPol-0.140Secr……...Equation 4 Table 2 below indicates that multiple regression coefficients shown in equation 4 account for several changes in the level of survival of the business operations in the manufacturing sector of the economy; this undoubtedly

confirms the relevance of political environment factors to the business survival rate. However, government regulations (with a value β = -0.158, t = -1.994 at p <0.05) show that for a unit increase in the level of government regulatory activities, business survival chances significantly decrease by -0.158. Again, government legislation has a significant positive effect on business survival in the manufacturing sector with β = 0.208, t = 2.949 at p <0.05 because a unit increase in the level of government legislation translates to increasing significantly business survival rate. By implication, the government legislative initiatives reflected in the ease of doing business laws reduce administrative burdens that make business registration smooth and easier among others. Also, government policy (with a value β = -0.249, t = -3.284 at p <0.05) reveals that for a unit increase in the level of government policy, the survival of business operations in the manufacturing sector diminishes significantly. The implication is that harsh policy stance on the importation of some important raw materials causes shutting down of factories in recent time (Oladeinde, 2018). Lastly, the political environment measured by security challenges poses a threat to business survival as corporate activities are slow down. In the study, security thus exerts significant effect (with a value β = -0.140, t = -2.164 at p <0.05) on corporate performance measured by business survival of firms in the manufacturing sector with its attendant negative influence. In this regard, for a unit increase in the incidence level of insecurity, there is a proportionate decrease in business survival rate by -0.140. This confirms that 148th rank position of the country among 163 nations surveyed by the Global Peace Index (GPI, 2012). Again, the continuous activities of the insurgency in the northeastern part of the country also attest to this finding

Table 2: Regression Estimates of Business Survival

Model	Variable	Coefficient	t-stat	P-value	R^2	Adjusted R^2	F-stat	P-value
2	(Constant)	0.980	3.711	0.000	0.378	0.367	34.398	.000**
GovtReg		-0.158	-1.994	0.047**				
GovtLeg		0.208	2.949	0.004**				
GovtPol		-0.249	-3.284	0.001**				
Security		-0.140	-2.164	0.032**				

*The table shows the coefficients proxy of political environment, the t-statistics and the p-value that signifies the significance levels for each Coefficient: ***p <0.01, **p <0.05, *p <0.1; n = 231. Adjusted r^2 showed the variation accounted for in the dependent variable, and F-statistics demonstrated that the predicting model is fit for this study at significance level of ***p <0.00.*

The multiple regression estimates shown in Table 2 above indicate that adjusted R square showed that 36.7 per cent variations in corporate performance proxy by business survival are accounted for by the factors in the political environment while the 63.3% remaining variations are due to factors not covered in the model. All proxies for the political environment had p <0.05 that is statistically significant, making it the best predictor of firms' corporate performance proxy by business survival. However, the F-statistics value of 34.398 at p-value less than 5% shows that the simultaneous combination of the political environment proxies have a significant influence on the corporate performance of firms in the manufacturing sector in Nigeria and this is consistent with the findings of Ogini and Adesanya (2013). Therefore, the null hypothesis was rejected while the alternative was accepted.

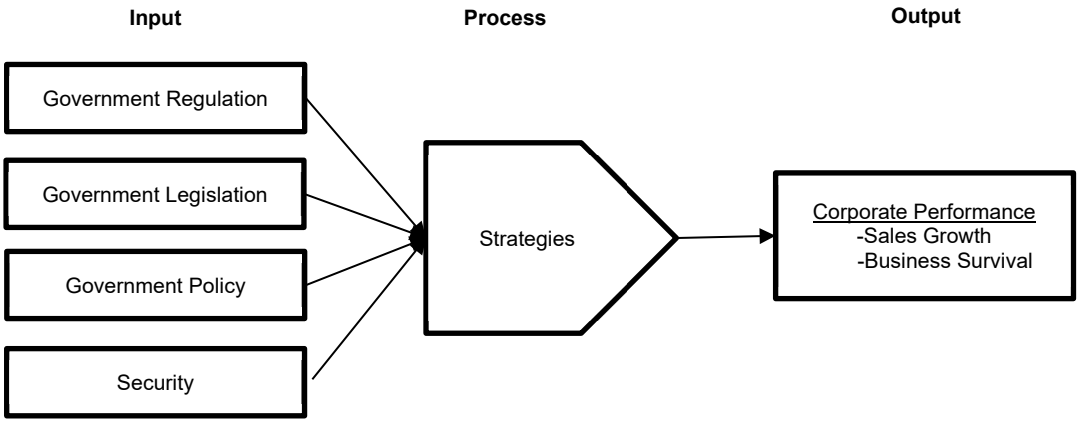
The implication of these results shows that the political environment measured by government regulations, government legislation, government policies and security had a significant effect on corporate performance measured by business survival. Recently, there were worrisome accounts of factories and businesses that closed operations due to activities in the political environment. In another case, many people lost their jobs due to the inability of these companies to access some critical input materials that are not locally available. Government's belt-tightening of a loose end in policy, regulations and legislative weakness without a local alternative to ease up the operations in this sector aggravated this circumstance. Capacity utilization of firms in the sector could not be optimized because of policy somersault and high insecurity events in some

part of the country. This condition further stiffens innovation, mainly when the political environment is unpredictable and full of inconsistency.

CONCLUSION

The study examines the influence of political environment on corporate performance of manufacturing firms in Nigeria. Primary data were collected from both the top and middle managers of the sampled firms. However, the propositions were tested using multiple regression models. The findings show that political environment has significant effect on corporate performance of firms in the Nigerian Manufacturing sector. The study reveals that the government needs to minimize her policies inconsistencies that often create a higher level of unpredictability around policy drive of the government. These efforts tend to reduce business failure rate and challenges that firm owners and managers face while reflecting on activity in the political environment. The study also concludes that the political environment measured by government regulations, legislation, policy and security has a significant effect on corporate performance measured by sales growth and business survival of firms in the manufacturing sector in Nigeria. The influence of political environment is mixed, as shown in the findings. However, there is room for constant monitoring by managers of these factors in order to minimize their effects on corporate performance of firms in the manufacturing sector. The government should carry out her regulatory activities using integrated standard rather than multiple agencies by which the cost of corporate compliance to regulatory demands can scale down astronomically. Policy formulation should be consistent with reality well ahead of time to encourage innovation and facilitate business growth. Investment in security infrastructure should be enhanced, thereby there will be improvement within corporate performance because age-long customers' retention is sustained more in an environment where safety is guaranteed for lives and properties at all times. Invariably, higher business survival becomes possible. The study only focused on manufacturing sector in Oyo State, Nigeria. However, consideration of southwest region to give more states chance to participate would have made the result more generalized than the present study area. Further studies in other sectors of the economy using the same proxies for the political environment is suggested, such as matching firm's political capability to factors in the political environment.

Appendix 1: Conceptual Framework



Source: Author's Conceptualization, 2019

REFERENCES

Alberto, A., Sule, O., Nouriel, R., & Phillip, S. (1996). Political Instability and Economic Growth. Journal of Economic Growth, vol.1 (2), p.189-211. (DOI:10.1007/BF00138862)

Aplin and Hegarty (1980). Political Influence: Strategies Employed by Organizations to Impact Legislation in Business and Economic Matters. The Academy of Management Journal, vol.23 (3), p. 438-450.

Barney, J. B. (2002). Gaining and sustaining competitive advantage: Upper Saddle River, New Jersey, Pearson Education.

Boddewyn, J. J. (2003). Understanding and advancing the concept of "nonmarket." Business and Society, vol.42 (3), September, p. 297–327.

Bonardi, J.-P., Hillman, A. J., & Keim, G. D. (2005). The attractiveness of political markets: Implications for firm strategy. Academy of Management Review, vol. 30(2), 397–413.

Carton, R. B. & Hofer, C.W. (2006). Measuring Organisational Performance: Metrics for Entrepreneurship and Strategic Management Research. MA, USA: Edward Elgar, Northampton.

Ciobanu, R & Bahna, M. (2015). The Social, Cultural and Political Factors that Influence the Level of Mergers and Acquisitions. International Journal of Academic Research in Accounting, Finance and Management Sciences, vol.5 (*3*), July, p.33–41. http://dx.doi.org/10.6007/IJARAFMS/v5-i3/1738

Cheng, F. & Wang (2012). Research on the Relationship among Government Regulations, Strategy Preference and Manufacturing Performance. Journal of Service Science and Management, vol. *5*, March, p. 37-43. http://dx.doi.org/10.4236/jssm.2012.51005

Christainsen, G.B. & Haveman, R.H. (1982). Government Regulations and Their Impact on the Economy. The Annals of the American Academy of Political and Social Science, vol. 459, January, p. 112-122

Crain, N.V. & Crain, W.M. (2010).The Impact of Regulatory Costs on Small Firms. SBA Office of Advocacy, 371:1-83.

Dean, T. J., & Brown, R. L. (1995). Pollution regulation as a barrier to new firm entry: Initial Evidence and Implications for future research. Academy of Management Journal, vol. 38(1), February, p. 288-30

Dess, G. G. & Robinson, B. R. (1984). Measuring organisational performance in the absence of the objective measure, Strategic Management Journal, *5* (3), July/Sept., p. 265-273.

Duncan R.B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. Administrative Science Quarterly, vol. 17(3), September, p. 313–327.

Hickson, D., Butler, R., Cray, D., Mallory, G. R., & Wilson, D. (1986).Top Decisions: Strategic Decision-Making in Organizations. San Francisco, Jossey-Bass.

Hertog, J. D. (1999). General Theories of Regulation, Economic Institute/ CLAV, Utrecht University, 223-270.

Hillman, A. J., & Hitt, M. A., 1999. Corporate political strategy formulation: A model of approach, participation, and strategy decisions. Academy of Management Review, vol. 24(4), p. 825–842.

Hillman, A.J., Keim, G. D., & Schuler, D. 2004. Corporate political activity: A review and research agenda. Journal of Management, vol. 30(6), November, p. 837–857.

Ifeoma, O.R., Purity, N. & Anagbog, T. (2015). Security Challenges and the Implications for Business Activities in Nigeria: A Critical Review. Journal of Policy and Development Studies, vol. 9 (*2*), February, p. 157-168.

Kigera, P.M. (2016). Influence of Political Environment on Performance of International Hotel Chains Operating in Nairobi, Kenya. School of the Business University of Nairobi, Kenya, 1-59.

Levy, B. & Spiller, R.T. (1994). The institutional foundation of regulatory commitment: A comparative analysis of telecommunications regulations. Journal of Law, Economic and Organisations, 10(2), October, p. 201-246.

Mark, J. & Nwaiwu, J.N. (2015). Impact of Political Environment on Business Performance of Multinational Companies in Nigeria, An International Multidisciplinary Journal, Ethiopia, vol. *9* (3), July. 1-10.

Murtha, T.P. (1993). Credible enticement: Can host governments tailor Multinational Firms' Organisations to suit national objectives? Journal of Economic Behaviour and Organisations, vol. 20 (2), February, p. 171-186.

Nestle Nigeria Annual Report 2010: https://www.nestle-cwa.com/sites/g/files/pydnoa346/files/asset-library/documents/nestle_annual_report_2010_.pdf

Nwagboso, C.I. (2012). Security Challenges and Economy of the Nigerian State (2007 – 2011), American International Journal of Contemporary Research, vol. *2*(6), June, p. 244-.258.

Ogini, B.O. & Adesanya, A.S. (2013). Business Environmental Factors: Implications on the Survival and Growth of Business Organizations in the Manufacturing Sector of Lagos Metropolis. Business and Management Research, vol.*2* (3), September, p.146-155.

Oladeinde, O. (2018, July 5).Why we are shutting down Agbara plant in Nigeria. Premium Times-P&G.

Paler-Carmorin, L. & Calmorin, M. (2006). *Methods of Research and Thesis Writing*. Quezon City, Philippines: Rex Book Store.

Schiffer, M. & Weder, B. (2002). Firm size and the business environment: Worldwide results. International Finance Corporate Discussion Paper No.43

Sokolov, V. & Solanko, L. (2016). Political influence, firm performance and survival. Bank of Finland, BOFIT Institute for Economies in Transition, Discussion Papers, 20:1-37.

Spencer, J.W. & Gomez, C. (2003). How Political Environment affects the Growth of Firms: Evidence from Small and Large Enterprises in Latin America. The Center for Latin America Issues, the George Washington University, Washington.

Spencer, J.W., Murtha, T.P. & Lenway, S.A. (2005). How Governments Matter to New Industry Creation. Academy of Management Review, vol. 30(*2*), April, p. 321-337.

Oliver, C., & Holzinger, I. (2008). The Effectiveness of Strategic Political Management: A Dynamic Capabilities Framework. Academy of Management Review 2008, 33(2), 496–520.

Omojokun, J. (2013). Regulation and Enforcement of Legislation on Food Safety in Nigeria. http://dx.doi.org/10.5772/54423.

Porter, M.E. (1980). Competitive strategy, Free Press, New York.

Reich, Robert B. (2009): Government in Your Business. Harvard Business Review, *87*(7/8), 94-99.

Richard, P. J., Devinney, T.M., George, S. Y. & Johnson, G. (2009).Measuring Organizational Performance: Towards Methodological Best Practices. Journal of Management, vol. 35(3), February, p.718-804
.
Robinson, R.B. & Pearce, J.A. (1988). Planned patterns of strategic behavior and their relationship to business unit performance. Strategic Management Journal, vol. 9(1), January/February, p. 43–60.

Stigler, G. J. (1971).The Theory of Economic Regulation. Bell Journal of Economics, *2*(1), 3-21.

Venkatraman N, & Ramanujam V. (1987). Measurement of business economic performance: an examination of method convergence. Journal of Management, 13: 109–122.

BIOGRAPHY

Idowu Emmanuel Olubodun is a Lecturer in the Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria. He can be contacted at the Department.

International Journal of Management and Marketing Research
Vol. 12, No. 1, 2019, pp. 51-60
ISSN: 1931-0269 (print)
ISSN: 2157-0698 (online)

IBFR
www.theIBFR.com

INTRAPRENEUR´S COMPETENCIES AND SKILLS: EVIDENCE FROM MEXICO

Ana Isabel Ordóñez Parada, Universidad Autónoma de Chihuahua
Irma Leticia Chávez Márquez, Universidad Autónoma de Chihuahua
Carmen Romelia Flores Morales, Universidad Autónoma de Chihuahua
Luis Raúl Sánchez Acosta, Universidad Autónoma de Chihuahua
Carlos Cristian De la Rosa Flores, Universidad Autónoma de Chihuahua

ABSTRACT

The investigation measures the competencies and abilities of intrapreneurism with a population sample of 235 students. The students attend a master's program in the Accounting and Administration Faculty (FCA) of the Autonomous University of Chihuahua (UACH). A survey was conducted in which the following constructs were evaluated: Opportunities Promoter, Proactivity, Flexibility, Business Driver and Risk Assumption. The methodological approach was of a mixed nature including an applied, field test with bibliographic support. The design was non-experimental, transactional and descriptive. Principal components analysis was used. Competencies and intra-entrepreneurial skills were classified into 5 levels. Results show *that 7.55% of the students surveyed had a very low level of competencies and intrapreneurial skills, 11.21% had a low level, 18.40% had a medium level, 22.59% had a high level and 40.25% had a very high level. This research is relevant since identifying intrapreneurial skills and competencies in workers generates new projects in organizations.*

JEL: D24, J24, M54, O31

KEYWORDS: Intrapreneurship, Skills, Competencies

INTRODUCTION

This research measures the capabilities and intrapreneurial skills of employees in organizations. The current literature indicates that an employee with intrapreneurial skills and abilities has the capacity to create, identify and exploit new opportunities, that create value, for the company. Moriano, Topa, Valero, Levy, (2009), found the level of individual autonomy, delegation of authority and responsibility, increases job satisfaction and performance of employees (Kuratko et al., 2005), and increases the competitiveness and effectiveness of organizations through innovation (Lumpkin, 2007).

Sung, Sebastián, Duarte, (2015) explore theories related to the profile of the entrepreneur and the research done on it in Latin America. The analysis indicates that entrepreneur primary qualities include "being innovative, creative people, who see opportunities where others only perceive routine, tolerance to failure, perseverance, need for achievement, motivation, optimism, hard work, concentration and enjoy being an entrepreneur." It also describes the importance of generating more research on entrepreneurs, with regard to external environment, the culture of each country and their different circumstances.

This study measures the skills and abilities of intrapreneurship in students who attend any of seven master's programs offered in the graduate school of business of the Faculty of Accounting and Administration (FCA) of the Autonomous University of Chihuahua (UACH). These programs are: Business Administration, Marketing, Human Resources Management, Public Administration, Taxes, Financial Management and

Auditing. We wish to identify the level of skills and intra-entrepreneurial competencies among students enrolled in any of the master's degrees.

This study begins with a literature review focused on the five constructs used in the survey instrument. The second section describes the methodological design used. The results section identifies the number of students with varying level of competencies and skills.

LITERATURE REVIEW

The term Intrapreneur refers to workers who combine ideas and use existing resources in the organization to promote new lines of business Pinchot III (1985). They seek sustainable economic benefits and help the organization renew from within, thereby improving their competitiveness in the market. The entrepreneurial concept has been examined by different fields of knowledge. Entrepreneurs are identified from their personal characteristics and various external factors that drive entrepreneurial activity. Schumpeter 1991 cited by Jaramillo et al. (2012), defined the entrepreneur as an "innovative person, who proposes and takes advantage of changes, basically in three areas; the introduction of new or better products and production methods; the opening of new markets; and the reorganization of the administrative process."

Intrapreneurship represents an entrepreneurial activity carried out within organizations (Trujillo and Guzmán, 2008, Antoncic and Hsrich, 2003), which generates the creation of new organizational projects, different from existing ones and new exchanges with other companies (Varela and Irizar, 2009). The intraentrepreneurial culture offers employees the chance to find new opportunities in innovation, as well as making them feel part of the company when creating internal projects (Garzón, 2004). In addition, innovation is stimulated by factors such as empowerment, teamwork and the freedom to express creative ideas (McLean, 2005). Innovation is the main component in entrepreneurship. It represents the origin of competitiveness and economic growth (Martínez and Rodríguez, 2013). The measurement instrument used in this research, works with five constructs to evaluate the skills and abilities of intrapreneurship in collaborators that are part of the organizations.

Opportunities Promoter: Are behaviors to identify, use, demonstrate to others, and reflect diligence about opportunities for new initiatives in the company. High intrapreneurs quickly explore the environment, to discover the early signs of new opportunities and threats. They seek those openings and try to convert threats into opportunities. These opportunities include change and often occur when information is scarce (Lombriser, 1994, p.207).

Proactivity: Behavior that induces one to act, which generate efforts to obtain new initiatives. According the Intrapreneurial Culture and Innovation research, Gálvez (2011) the intrapreneurship factor with the greatest effect on the innovation of companies, "is teamwork which reaffirms the importance of stimulating the synergy produced by combining the creative capacity of the collaborators of different levels or departments".

Flexibility : All behaviors aimed at being tolerant and involve a lack of attachment to rigid schemes and procedures. Freedom at work gives the collaborator autonomy and control over decisions. It is important to take workers into account, delegate authority and responsibility, and tolerate mistakes (Zahra et al., 1999). Productivity-based stimuli increase significant achievement and motivate employees to face new challenges (Kuratko, Hornsby, and Bishop, 2005).

Business Driver: This construct includes behaviors that reflect the individual's ability to integrate into the progress and support new initiatives. This can include, taking actions to convince other people. Strategy and organizational objectives are the foundation to manage innovation and change (Tushman and O'Reilly III, 1997) thereby establishing the context and requirements for innovation (Stewart and Fenn, 2006)

Risk Assumption: Accepting risks involves determining the priority of situations that may contain favorable rewards in case of success, but also severe results if the individual fails (Brockhaus, 1980). The intraentrepreneur ventures into unknown areas of the organization, without knowing the results that might occur (Covin and Slevin, 1991). Intrapreneurial capacities relate to different personal characteristics, such as achievement orientation, risk taking capacity, autonomy or personal initiative (Krauss et al, 2005, Sayeed and Gazdar, 2003).

"It is not enough to have the qualities of a successful entrepreneur; a minimally favorable context is also necessary for the development of these" (Bilbao and Pachano 2002). Ming (2013, p.442) states that "entrepreneurship today has become the most important process in strategic management, in particular, the ability of companies to increase profitability over time." On the other hand, Khakbaz, Kazemi & Zarei (2011) in their study on the municipality of Tehran in Iran, mention that companies recognize the need for entrepreneurship and business ideas have penetrated administrative structures. Dynamism and growth of modern organizations depend on the implementation of organizational entrepreneurship.

METHODOLOGY

The current research is mixed, applied, and field researched with bibliographic support. The design was non-experimental, transectional, descriptive. We applied the same instrument as the Technological Institute of Costa Rica, Dr. Tomás Vargas Halabí, Dr. Ronald Mora Esquivel, and Dr. Berman Siles Ortega (Vargas, Mora and Siles 2017). This approach is the result of the Intrapreneurial article on competencies development and validation of a measurement scale, published in the European Journal of Management and Business Economics, 2017. This approach reflects the traits of intrapreneurial competencies within the company; specifically, knowledge, skills and competencies that manifest behaviors associated with the disposition of the collaborator that contribute to the generation, development and creation of new business for the company.

The questionnaire is composed of 20 items, which are classified into five dimensions. Data were coded as follows using the SAS statistical package; D1 = Promoter of opportunities, D2 = Proactivity, D3 = Flexibility, D4 = Impeller/business driver and finally D5 = Assumption to risk. Henceforth, the instrument is composed with different elements. In general each dimension is represented in the following way: D1 = 6 Ítems, D2 = 3 Ítems, D3 = 4 Ítems, D4 = 4 Ítems, D5 = 3 Ítems.

The number of individuals to be surveyed was determined by a simple random sampling. We obtaining data for 235 students of the postgraduate face-to-face classes in the Accounting and Administration Faculty (FCA) of the Autonomous University of Chihuahua (UACH). The students belonged to seven different master's programs in the economic-administrative area. Specifically, the programs were: Business Administration, Marketing, Human Resources Management, Public Administration, Taxes, Financial Management and Auditing.

Students were surveyed prior to the class start with some of their subjects in the classroom. We obtained a response rate of 100%. Prior to delivery of the measuring instrument, they emphasized the objective and the importance of the investigation. After obtaining the results of each student surveyed, an arithmetic average was obtained for each of dimension studied. We then generated a data matrix of 235 x 5, with the purpose of running an analysis of main components, thereby obtaining a new variable capable of summarizing the total variability of the twenty items used in the survey. We evaluate survey reliability through the calculation of Cronbach's Alpha for each of the five constructs. Data were calculated with the statistical package Minitab 17. The results are shown in Table 1.

Table 1 shows the values of Cronbach's Alpha for each of the five constructs of the survey. The values can oscillate between 0 and 1. Values higher than 0.7 indicate a good consistency in the different constructs or

dimensions that make up a questionnaire, thus granting a good level of reliability to the instrument used to Survey and collect information. The table shows the highest value was 0.8129, corresponding to the Opportunities Promoter construct. The lowest value was 0.7011, corresponding to the risk-taking construct. Measuring the 5 constructs in total produces a value of 0.9033. We conclude that, individually, as well as in a general way, the survey presents a high level of reliability.

Table 1: Cronbach's Alpha

Construct	Items	Cronbach's Alpha
Opportunities Promoter	6	0.8129
Proactivity	3	0.7976
Flexibility	4	0.7655
Business Driver	4	0.7522
Risk Assumption	3	0.7011
The total 5 constructs	20	0.9033

This table shows the values of Cronbach's Alpha for each of the five constructs of the survey. The values can oscillate between 0 and 1. Values higher than 0.7 indicate a good consistency in the different constructs or dimensions that make up a questionnaire, thus granting a good level of reliability to the instrument used to Survey and collect information. The table shows the highest value was 0.8129, corresponding to the Opportunities Promoter construct. The lowest value was 0.7011, corresponding to the risk-taking construct. Measuring the 5 constructs in total produces a value of 0.9033. We conclude that, individually, as well as in a general way, the survey presents a high level of reliability.

Table 2 shows the Eigenvalues obtained after running the SAS PRINCOMP procedure. A higher Eigenvalue indicates the main component to which it belongs and can summarize a greater proportion of the total variability explained by the set of all variables analyzed. The second column shows a high value for the first main component having an Eigenvalue 3.0353, which provides the basis for the value shown in Column 5 and summarizes the total variability of the study to be 72.21%. When representing such a high percentage of total variability, it is pertinent to consider the main component 1 as an index that allows us to build a scale of measurement of levels of intrapreneurship.

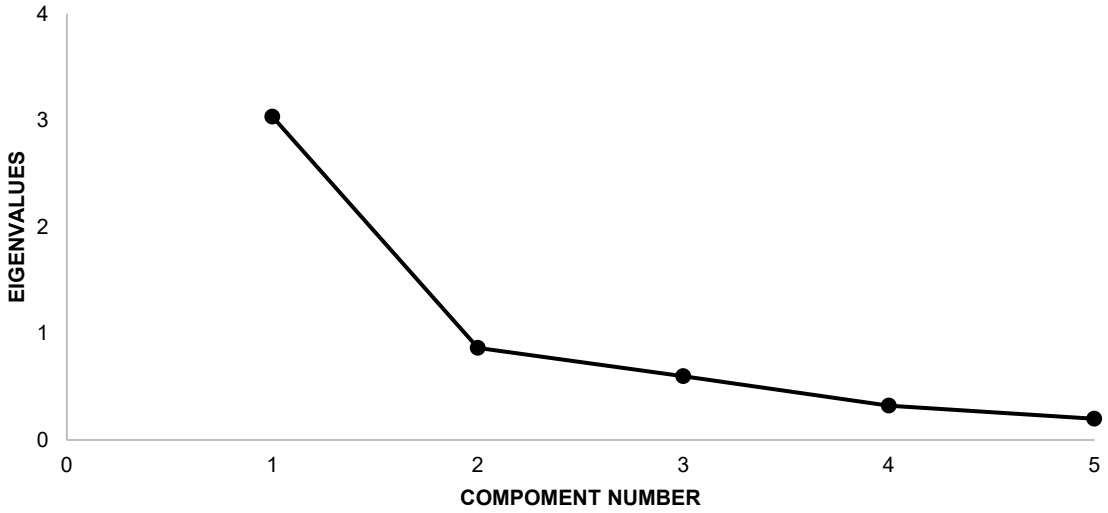
Table 2: Eigenvalues

Main Component	Eigenvalue	Difference	Proportion	Accumulated
1	3.0353	2.1707	0.7221	0.7221
2	0.8646	0.2661	0.1256	0.8477
3	0.5984	0.2760	0.1089	0.9566
4	0.3223	0.1233	0.0377	0.9943
5	0.1990	--	0.0057	1

This table shows the Eigenvalues obtained after running the SAS PRINCOMP procedure. A higher Eigenvalue indicates the main component to which it belongs and can summarize a greater proportion of the total variability explained by the set of all variables analyzed. The second column shows a high value for the first main component having an Eigenvalue 3.0353, which provides the basis for the value shown in Column 5 and summarizes the total variability of the study to be 72.21%. When representing such a high percentage of total variability, it is pertinent to consider the main component 1 as an index that allows us to build a scale of measurement of levels of intrapreneurship.

Figure 1 shows the high value of the first Eigenvalue obtained for the main component 1, which was 3.0353, representing 72.22% of the total variability. The other 4 Eigenvalues have lower values, representing the 27.78% remaining variability. This graphic allows visual appreciation of the magnitude and difference that exist between the various Eigenvalues belonging to the different main components. It allows us to corroborate that it is appropriated to use the data as an index that allows us to build some scale of measurement of the study phenomenon.

Figure 1: Eigenvalues Graph



This figure shows the high value of the first Eigenvalue obtained for the main component 1, which was 3.0353, representing 72.22% of the total variability. The other 4 Eigenvalues have lower values, representing the 27.78% remaining variability. This graphic allows visual appreciation of the magnitude and difference that exist between the various Eigenvalues belonging to the different main components. It allows us to corroborate that it is appropriated to use the data as an index that allows us to build some scale of measurement of the study phenomenon.

Table 3 shows values obtained for main component 1 in the students surveyed. Because the sample studied included 235 students, the information is summarized showing only the ten lowest values obtained on the left side of the table. On the right side of the table, the ten highest values obtained are presented. By obtaining each of these values, it is possible to determine which students have the lowest levels of intrapreneurship and which students present the highest.

Main component 1 that summarizes and orders all the information obtained based on the 20 items that make up the five constructs of the applied questionnaire. With these values, it is possible to appreciate that student 33 obtained the lowest value. Therefore, this student presents the lowest level of competencies and intrapreneurial skills. Student 177 presents the higher value, indicating the highest level of intra-mobile skills.

Table 4 shows a scale of measurement to classify different levels of intrapreneurship. To determine the level of intrapreneurship for each student surveyed, we createed an index divided into five scales depending on the value obtained for main component 1. Specifically we classify as follows: Very low (values less than or equal to -5), Low (values greater than -5 to values less than or equal to -2), Medium (values greater than -2 to values less than or equal to 1), High (values greater than 1 to values less than or equal to 4) and Very high (values greater than 4). The creation of this type of index allows classifications and segmentations that can facilitate the analysis of all the collected data.

Table 3: Values for the Main Component 1

Surveyed	Prin1	Surveyed	Prin1
Student 33	-6.4907	Student 92	0.7739
Student 123	-5.8338	Student 12	0.8466
Student 233	-4.1289	Student 188	1.4856
Student 39	-3.6017	Student 123	2.0355
Student 75	-2.7259	Student 134	2.9186
Student 101	-2.3803	Student 205	2.9541
Student 99	-1.9288	Student 166	5.2146
Student 208	-1.8170	Student 73	5.4009
Student 189	-1.7145	Student 55	5.5116
Student 42	-1.7138	Student 177	5.7909

This table shows values obtained for main component 1 in the students surveyed. Because the sample studied included 235 students, the information is summarized showing only the ten lowest values obtained on the left side of the table. On the right side of the table, the ten highest values obtained are presented. By obtaining each of these values, it is possible to determine which students have the lowest levels of intrapreneurship and which students present the highest. Main component 1 that summarizes and orders all the information obtained based on the 20 items that make up the five constructs of the applied questionnaire. With these values, it is possible to appreciate that student 33 obtained the lowest value. Therefore, this student presents the lowest level of competencies and intrapreneurial skills. Student 177 presents the higher value, indicating the highest level of intra-mobile skills.

Table 4: Levels of Intrapreneurship

Values Obtained in Main Component 1	Levels of Intrapreneurship
Less than or equal to -5	Very Low
Greater than -5 to values less than or equal to -2	Low
Greater than -2 up to values less than or equal to 1	Moderate
Greater than 1 up to values less than or equal to 4	High
Greater than 4	Very High

In Table 4, shows a scale of measurement to classify different levels of intrapreneurship. To determine the level of intrapreneurship for each student surveyed, we createed an index divided into five scales depending on the value obtained for main component 1. Specifically we classify as follows: Very low (values less than or equal to -5), Low (values greater than -5 to values less than or equal to -2), Medium (values greater than -2 to values less than or equal to 1), High (values greater than 1 to values less than or equal to 4) and Very high (values greater than 4). The creation of this type of index allows classifications and segmentations that can facilitate the analysis of all the collected data.

Table 5 shows Pearson´s correlation coefficients between the five variable constructs of the study and the main component 1. Pearson correlation values oscillate between 0 and 1, Values obtained, closer to -1.0, indicates a high level of negative relationship between 2 variables.

Table 5: Pearson´s Correlation of the Main Component 1 with the 5 Dimensions of Intrapreneurship

Variable	Prin 1
D1	0.744**
D2	0.717**
D3	0.897**
D4	0.868**
D5	0.721**

*Table 5 shows Pearson´s correlation coefficients between the five variable constructs of the study and the main component 1. Pearson correlation values oscillate between 0 and 1, Values obtained, closer to -1.0, indicates a high level of negative relationship between 2 variables. Values closer to 1.0, indicate a higher level of positive relationship between two variables. Results shows a strong positive correlation. On average correlations surpass a value of 0.7 with a p-value that indicates significance with a value lower than 0.05 (marked with **),*

Values closer to 1.0, indicate a higher level of positive relationship between two variables. Results shows a strong positive correlation. On average correlations surpass a value of 0.7 with a p-value that indicates significance with a value lower than 0.05 (marked with **), Such a high level of positive association increases the reliability for the use of the main component 1 as an index that allows comparison of the different levels of intrapreneurship.

CONCLUSIONS

The objective of this research was to measure the skills and abilities of intrapreneurship in students who attend to one of the seven face-to-face master programs: Business Administration, Marketing, Human Resources Management, Public Administration, Taxes, Financial Management and Auditing offered by the Faculty of Accounting and Administration (FCA) of the Autonomous University of Chihuahua (UACH). We achieved this objective by applying the survey called "entrepreneurship Competencies " by Vargas, Mora & Siles (2017), together with the statistical analysis of the main components. We applied the analysis of the main components to the data collected from the 235 students surveyed. A high value was obtained for Eigenvalue 1, allowing us to summarize the total variability of the twenty items that make up the five constructs of the questionnaire. We achieved a result of 72.22%. Therefore, it was possible to create an index that measured, in a general way, the level of intrapreneurship for each student surveyed. Based on the value assigned in main component 1 it was possible to classify them into five ability levels (very low, low, medium, high, very high level of skills and intrapreneur skills). When applying Cronbach's Alpha to the survey, it was possible to validate the internal consistency of the items used in each construct. We were also able to do so for the full instrument, which presented a high value of 0.9033, The foregoing shows that the instrument is capable of measuring the capacities and abilities of intrapreneurship in an individual.

The results of levels of intrapreneurism measurement were distributed as follows: 7.55% of the students surveyed presented a very low level of competencies and skills of intra-occupational tourism, 11.21% presented a low level, 18.40% presented a level medium, 22.59% presented a high level and 40.25% presented a very high level of these competences and skills evaluated. These results can measure efficiency of the different programs aimed at promoting and encouraging skills and intra-entrepreneurial competencies of students. It can also identify students who present a higher level of intrapreneurship with the purpose of potentiating their development in this area. It can also identify students who presented lower levels. These results reveal areas of opportunity that arise in the programs, as well as other areas of opportunity for this type of students.

This research was limited to postgraduate students, which come from different academic backgrounds, different types of professional activity and different labor sector, limiting the ability to generalize to a specific type of organization. To identify people who have the skills and competencies of intrapreneurship within an organization, this analysis proves to be a very powerful tool.

The results are valuable for many uses including the generation of new projects or improvement processes, identifying employees who already work within the company with the skills and competencies to participate in this type of activity, and may even represent an informational advantage in the development of the human capital of an organization. It can be of great impact to identify those skills and competencies that can potentiate strengths within the organization. Future research might apply this analysis in conjunction with the principal component’s analysis technique. Likewise, future research might replicate this analysis in public companies, since these organizations can benefit in a way similar to the private sector.

REFERENCES

Antoncic, B. y Hisrich, R. (2003). Clarifying the intrapreneurship concept. Journal of Small Business and Enterprise Development. 10(1), pp. 7–24.

Brockhaus, R. H. (1980). Risk taking propensity of entrepreneurs. Academy of Management Journal, 23, 509-520.

Bilbao, Arantza y Pachano, Susana. Rasgos y Actitudes de los emprendedores (2002) [En Línea]. [Consulta 4 de febrero del 2018]. Disponible en: <http://pac.caf.com/upload/pdfs/RasgosyActitudesInformeFinalVenezuelaCompetitiva.pdf> [Citado en el año 2002].

Covin, J. G. y Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. Entrepreneurship Theory and Practice, 16(1), 7-25.

Gálvez Albarracín, E. (2011). Cultura intraemprendedora e innovación: un estudio empírico en las MIPYME turísticas colombianas. Cuadernos de Administración, 27 (46), 103-114.

Garzón, M. A. (2005). Modelo intraemprendedor para la innovación. Bogotá, Colombia: Universidad del Rosario.

Jaramillo, José Luis, et al,2012. Perfil emprendedor de los pequeños empresarios agropecuarios en el Valle de Puebla, México. En: Entramado. Enero-junio 2012. vol. 8, no. 1, p. 44-57

Khakbaz, P.P., Kazemi, R.M. & Zarei, B. (2011). Identifying effective organizational factor son corporate entrepreneurship in Tehran municipality´s department of urban services. Recuperado el día 4 de febrero de 2019, de: .scielo.org.co/scielo.php?script=sci_arttext&pid=S1692-85632015000100006

Krauss, S. I., Frese, M., Fried rich, C. y Unger, J. M. (2005). Entrepreneurial orientation: A psychological model of success among southern African small business owners. European Journal of Work and Organizational Psychology, Vol. 14. No. 3, 315-344.

Kuratko, D. F., Hornsby, J. S. y Bishop, J. W. (2005). An Examination of Managers' entrepreneurial actions and job satisfaction. The International Entrepreneurship and Management Journal, 1(3), 275-291

Lombriser, Roman, 1994, "Top Entrepreneurs", The Financial Times, Londres, Pitman Publishing.

Lumpkin, G. T. (2007). Intrapreneurship and Innovation. En J. R. Baum, M.Frese y R. A. Baron (Eds.), The Psychology of Entrepreneurship (pp. 237-263). New Jersey: Lawrence Erlbaum.

Martínez, Sergio y Rodríguez, Luis Fernando.2013. Emprendedurismo social en México: hacia un modelo de innovación para la inserción social y laboral en el ámbito rural. En: Revista Estudios Agrarios. Mayo, P. 53-54.

McLean, L. (2005). Organizational culture´s influence on creativity and innovation: A review of literature and implications for human resource development. Advances in Developing Human Resources, 7(2), 226-246

Ming, L.T. (2013). The likelihood of corporate entrepreneurship in large corporations. Recuperado el día 4 de febrereo de 2019, http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S1692-85632015000100006

Moriano, J., Topa, G., Valero, E., & Lévy, J. (diciembre de 2009). Identificación organizacional y

conducta “intraemprendedora”. Recuperado el 16 de octubre de 2018, de http://www.redalyc.org/articulo.oa?id=16712958010.

Pinchot III, G. (1985). Intrapreneuring: Why you don't to leave the corporation to become an entrepreneur. New York: Harper & Row.

Sayeed, O. B. y Gazdar, M. K. (2003). Intrapreneurship: As seeing and Defining Attributes of Intrapreneurs. Journal of Entrepreneurship, 12, 75-89.

Stewart, I. & Fenn, P. (2006). Strategy: the motivation for innovation. Construction Innovation, 6(3), 173-185.

Trujillo, M. A. y Guzmán, A. (2008). Intraemprendimiento: Una revisión al constructo teórico, sus implicaciones y agenda de investigación futura. Cuadernos de Administración, 21 (35), pp. 37-63

Tushman, M. & O´Reilly III, C. (1997). Winning through innovation: A practical guide to leading organizational change and renewal. Boston: Harvard Business School Press.

Varela, J. y Irizar, I. (2009). Caracterización de los Intraemprendimientos en el Grupo Mondragón de España y en las empresas de Ibagué en Colombia, Recuperado el 21 de enero de 2011 de: http://www.clee2008.ufsc.br/31.pdf.

Vargas-Halabí, Tomás; Mora, Esquivel, Ronald & Siles, Berman (2017). "Intrapreneurial competencies: development and validation of a measurement scale". European Journal of Management and Business Economics, 26(1), 86-111, https://doi.org/10.1108/EJMBE-07-2017-006.

Zahra, S. A., Jenning s, D. F. y Kuratko, D. F. (1999). The antecedents and consequences of firm level entrepreneurship: The state of the field. Entrepreneurship Theory and Practice, Vol. 24, No.2, 45-66.

BIOGRAPHY

Ana Isabel Ordóñez Parada is a PhD in Public Administration from the International Institute of Law and the State. Associate professor at the Autonomous University of Chihuahua, in the Faculty of Accounting and Administration, assigned to the Chair of Technologies and Information Management, Research Methodology. She can be contacted at the Faculty of Accounting and Administration of the Autonomous University of Chihuahua, Circuito Universitario 1, Campus II UACH, Chihuahua, México.

Irma Leticia Chávez Márquez is a PhD in Public Administration from the International Institute of Law and the State. And PhD in Administration from the School of Accounting and Administration of the Autonomous University of Chihuahua. Associate professor at the Autonomous University of Chihuahua in the Faculty of Accounting and Administration, assigned to the Chair of Research Methodology. She can be contacted at the Faculty of Accounting and Administration of the Autonomous University of Chihuahua, Campus II UACH, Chihuahua, México.

Carmen Romelia Flores Morales holds a PhD in Administration from the School of Accounting and Administration of the Autonomous University of Chihuahua. Secretary of the Planning Unit of the Accounting and Administration School of the Autonomous University of Chihuahua. She can be contacted at the Faculty of Accounting and Administration of the Autonomous University of Chihuahua, Campus II UACH, Chihuahua, México.

Luis Raúl Sánchez Acosta holds a master's degree in Finance from the School of Accounting and Administration of the Autonomous University of Chihuahua. head of the School of Accounting and Administration of the Autonomous University of Chihuahua. He can be contacted at the Faculty of Accounting and Administration, Autonomous University of Chihuahua, Campus II UACH, Chihuahua, México.

Carlos Cristian De la Rosa Flores is a professor in Finance from the School of Accounting and Administration of the Autonomous University of Chihuahua. Currently the Coordinator of the Virtual Education Department at the Accounting and Administration School of the Autonomous University of Chihuahua. He can be contacted at the Faculty of Accounting and Administration of the Autonomous University of Chihuahua, Campus II UACH, Chihuahua, México.

International Journal of Management and Marketing Research
Vol. 12, No. 1, 2019, pp. 61-86
ISSN: 1931-0269 (print)
ISSN: 2157-0698 (online)

IBFR
www.theIBFR.com

A MANAGEMENT FOCUSED TOOL FOR DEVELOPING PRO-FORMA FINANCIAL STATEMENTS

Terrance Jalbert, University of Hawaii Hilo

ABSTRACT

Developing pro-forma financial statements and associated financial analysis is an important undertaking for new and existing business alike. This paper reports user experiences with a spreadsheet-based method for developing pro-forma financial statements as developed in Jalbert (2017). The paper also presents improvements and enhancements to the template. The forecasting approach reported on here requires users to simply enter their firm-specific figures. As such it is particularly useful for individuals without extensive training in finance. The tool does not require programming or the use of plug figures and does not result in circular references which are all common to other tools. The template provides a powerful tool for entrepreneurs and for teaching management, accounting and finance courses. The tool is suitable for both novice and advanced users.

JEL: A2, G31, M13, M41

KEYWORDS: Financial Statements; Pro-Forma Financial Statements, Forecasting, Entrepreneurship, Small Business Finance, Accounting for Small Businesses

INTRODUCTION

Creating pro-forma financial statements and comprehensive financial analysis constitutes an important step in business planning. Users can become overwhelmed by complexity of the work. They may also have trouble linking elements of the financial analysis together in consistent and meaningful ways to produce quality analysis. Frustrated users might give up or resort to hiring costly professional help to complete the analysis. These expenditures utilize scarce resources needed otherwise to start or grow a business.

Jalbert (2017), develops a financial statement forecasting tool. The template includes forecasted financial statements, a capital budget, calculations of firm value and ratio analysis. The template is highly automated requiring users to enter managerial variables only. The template utilizes a high degree of automation assuring calculation accuracy. This high degree of accuracy can inspire confidence from skeptical bankers. The approach does not require plug-figures. Rather, the calculation of each variable is supported. Further, the spreadsheet does not create circular references, a problem that has been noted in other approaches.

The template addresses considerations commonly associated with start-up firms. Owners of startup firms sometimes do not take a wage. The template incorporates these non-expenses labor amounts into the analysis to more accurately evaluate projects. It also supports the use of Section 179 expense election tax treatment and other immediate expensing options on purchased assets. These special depreciation tools are commonly used by small and intermediate sized firms.

The template provides a useful resource for entrepreneurs, managers, financial planners and other business professionals. The template also holds promise as a teaching tool for business and finance courses. The tool combines accounting and finance considerations and allows users to see and understand the impact that changes in one variable have on the remaining financial analysis. The template can accommodate professors wishing to reduce automation and require students to complete additional calculations. It can also accommodate those that wish to introduce additional complexity to the tool.

The research presented here improves upon and enhances the work of Jalbert (2017). The improvements here make the template easier to use, reduces the need for external data sources and utilizes a more conservative approach to capital budgeting. The remainder of the paper is organized as follows. The next section discusses the relevant literature. The following section discusses improvements to the template developed here. The paper continues by presenting the revised spreadsheets and providing accompanying discussion of the template. The paper closes with some concluding comments.

LITERATURE REVIEW

Some financial research addresses financial statement forecasting, however; the extant body of literature is not extensive. One stream of research describes methods for forecasting financial statements based on historical data. Kerry (2010) forecasts financial statements based on historical financial statements of a firm along with those of other firms. His model requires the user to input macroeconomic data and some user forecasts of selected account items. With these inputs his approach produces forecasted financial statements.

Vélez-Pareja, I. and J. Tham (2008) and Vélez-Pareja (2011) also develop a system for forecasting financial statements based on historical data. They note that their system, unlike many available options, does not require plug figures to balance the financial statements. Arnold (2011) also develops pro-forma financial statements and demonstrates links between common stock and long-term debt, which are commonly entered as plug figures in financial statement forecasting.

Jalbert, Briley and Jalbert (2012) utilize Risk Management Associates (RMA), Annual Statement Studies data to forecast financial statements. RMA data provides summary historical, and current, data. RMA data averages financial values for groupings of firms within an industry. Their method provides an alternative to the percentage of sales method that might appeal more to loan officers.

Drougas and Johnson (2004) develop a system to facilitate financial statement understanding by undergraduate students. They create simulated financial statements with a focus on the role of uncertainty in forecasts. Desanctis and Jarvenpaa (1989) examine how three information presentation methods affect forecast accuracy. They consider numerical formats, graphical formats, and a combination of numeric and graphical formats. They find that graphical formats result in better forecast accuracy. Others that develop financial statement forecasting techniques include Cheremushkin (2010), who focuses on retained earnings use by the firm and Vélez-Pareja (2010) who focuses on the role of tax shields and debt in developing forecasted financial statements.

A common difficulty associated with creating financial statements lies in estimating sales and sales growth. To address this difficulty Vorkink, K. and K. Workman (2016) suggest a four-step process for estimating sales as follows: 1.) calculate historical averages, 2.) use macroeconomic considerations to adjust the historical averages, 3.) incorporate adjustments for industry effects and 4.) incorporate adjustments for company-specific effects.

In addition to the academic literature, several patents related to financial analysis and financial statement forecasting exist. Erwin, Fortheringham and McGuinness (1998), U.S. Patent US6249770, utilize historical

account data for the firm to forecast financial statements. Their method incorporates inflation adjustments and exchange rates in their forecasts. Other patents, and patent applications, exist that involve forecasting financial statements and related issues (Chopra, Masih, Chugh, Bidkar and Navani, 2015).

TEMPLATE ENHANCEMENTS

The author of this paper utilized the Jalbert (2017) template as a starting point. After using a beta version of the tool and the final tool developed by Jalbert (2017) several observations were noted. First, the template does not provide instruction on how to properly use the tool. Some instructions were presented in Jalbert (2017). However, users may not have access to the entire research paper when preparing their financial statements. Moreover, users may not be willing to invest the time to work through an academic paper to fully understand the instructions. The new template presented here incorporates a list of instructions to guide users through completing the template.

The second observation relates to errors in capital budgeting analysis. When completing the capital budget, users must enter the sales prices of items sold upon closing the business. Users may make errors when entering these terminal cash flows. Specifically, they may report sales prices for equipment that had not been previously purchased. The solution, incorporated into the template here, involves error messages calling users attention to problematic entries. The spreadsheet does this by comparing items being sold to items that were purchased earlier. If a user reports a sales prices for an item that was not previously purchased, an error message appears.

A third observation relates to long term assets. The template of Jalbert (2017) requires depreciating or immediately expensing all long-term assets purchased at the outset of the project. While this is a common occurrence, a few situations occur whereby long-term assets should not be depreciated, such as the case of land purchases. To accommodate these situations, the new template presented here includes a separate category for non-depreciable long-term assets.

The fourth observation relates to tax computations on the income statement. Jalbert (2017) uses the corporate tax rate to compute net income. This template is modified to utilize the personal ordinary income tax rate. Most users of the template are likely small businesses inclined to select an organizational form that subjects it to pass-through taxation. Thus, the change incorporated here results in a template more directly applicable to its primary users. Advanced users wishing to use the corporate tax rate may do so through a simple template modification that does not otherwise affect spreadsheet calculation techniques.

A fifth observation relates to sales estimates. The Jalbert (2017) template allows for a single sales input, all of which are subject to a Cost of Goods Sold (COGS). If sales are services, the user simply set the COGS percentage in the input variable section equal to zero to reflect this reality. However, the template does not easily accommodate revenue mixes that include both products and services. To simplify these computations, the template here includes rows for both product sales and other sales. COGS calculations apply to only the product sales.

Further, users may not realize that a positive entry for common stock is required. The template here incorporates a new error message that reminds users that accounting conventions require a positive entry for this field.

No known research addresses the appropriate method for handling accumulated cash from operations in the capital budget. The Jalbert (2017) template uses an aggressive form of capital budgeting. The method uses total cash accumulated in the business upon closing as a terminal cash flow. This approach commonly results in a large terminal cash flow. The aggressiveness occurs because profits reported earlier consider these cash flows. Thus, this approach creates cash flow estimates, net present value and internal rate of

return calculations that are arguably aggressive. The revised template presented here uses a more conservative capital budgeting approach. The new template considers only the beginning cash invested in the firm as a terminal cash flow. Other cash accumulated through operations, and where there exists an associated operating cash flow, are excluded from the terminal cash flow calculations. The template here is also modified to use the cost of equity for Net Present Value calculations rather than the weighted average cost of capital (WACC). This approach generally introduces more conservatism to the result.

Finally, for the Jalbert (2017) template users needed to access external data sources to determine values for required input variables. These variables include the cost of equity, average interest rates on loans, and the relevant tax rates. The template here includes two new worksheets to help users address this issue. The 'Tax' worksheet includes information to assist users with determining the appropriate tax rates to input for the corporate tax, ordinary income and capital gains. The tool does not automatically compute the tax rates because of tax-code complexity. However, users can use the provided information to approximate their relevant tax rates. The worksheet titled 'Cost of Cap' provides information to help users determine the appropriate costs of funds. Separate information is included to estimate the cost of equity and cost of debt. These tax rates and costs of funds data should be updated annually, prior to distributing the tool to potential users.

REVISED TEMPLATES

This section presents the revised template that incorporate improvements and enhancements to the template presented by Jalbert (2017). As with most financial models, the template here requires simplifying assumptions. This section begins by outlining these assumptions. Like the predecessor template, the template here allows capital equipment purchased, expensed using standard depreciation tools, at the outset of the project only. Users may choose between four depreciation methods, 1.) 3-year MACRS, 2.) 5-Year Straight Line, 3.) 5-year MACRS, and 4.) 39-Year Straight Line. Items purchased after initiation of the business must be immediately expensed using Section 179 expense election or other immediate expensing options. The analysis further assumes the direct cost of producing product sales (COGS), remains constant as a percentage of sales. Advanced users can override the annual COGS automatic calculations to produce a time variant COGS. Overriding this figure does not require other changes in the spreadsheet.

The financial analysis utilizes a five-year framework. The capital budget is estimated such that all assets are sold, and the business is terminated, upon completion of the fifth year of operations. Further, the template assumes all liabilities are paid in full at the end of the fifth year. The approach here discounts total cash flows at the cost of equity, K_E. Advanced users might elect to change the discount rate to the Weighted Average Cost of Capital (WACC) or modify the relevant cash flows considered in the capital budget.

Revised Financial Analysis Template

This section presents the revised financial analysis template. An Excel spreadsheet contains the template's six worksheets. Worksheet 'S1' is the primary worksheet. In includes the input variables, income statement, statement of retained earnings, statement of cash flows, balance sheet, capital budget analysis, computation of firm value, and ratio analysis. Users enter their information in the 'S1' worksheet. The worksheet 'Steps' contains directions for users to follow in incorporating their firm data in the spreadsheet. The worksheet 'DP' contains depreciation computations. The worksheet 'Cost of Cap' provides information to assist users in estimating the cost of equity and cost of obtaining loans. The worksheet 'Tax' provides information to assist users in estimating tax rate entries required in the input section of 'S1'. Finally, the worksheet 'EM' includes error message that populate in various locations within the spreadsheet when an entry does not conform to basic financial analysis rules.

Table 1: Steps to Complete the Template

	A	B	C	D	E	F	G	H	I	J	K
1	**Step 1:**	**DO NOT MODIFY ANY BOLDED ITEMS. THESE FIGURES ARE AUTOMATICALLY CALCULATED**									
2											
3	**Step 2:**	**ENTER DATA FOR YOUR INITIAL (TIME 0) BALANCE SHEET**									
4		**CELLS: A78-A115:** Modify the unbolded row headings to reflect your accounts.									
5		**CELLS: B78-B115:** Enter the beginning balance sheet data in unbolded cells									
6		**CELL A116: Check Error Message:** Confirm the Year 0 asset amount equals the liabilities and equity amount.									
7		**CELLS B111-G111:** Confirm you have included a potitive entry for common stock in each year.									
8											
9	**Step 3:**	**INPUT DATA FOR YOUR INCOME STATEMENT FOR YEARS 1-5**									
10		**CELLS A20-A25:** Modify the unbolded row headings to reflect your expense categories.									
11		**CELL B8:** Input your estimates for COGS as a Percentage of Sales.									
12		**CELL B9:** Input the General Excise Tax Rate you must pay on your sales.									
13		**CELLS: C14-C36, D14-D36, E14-E36, F14-F36, G14-G36:** Enter sales and expense estimates in unbolded cells.									
14											
15	**Step 4:**	**REPORT SECTION 179 PURCHASES**									
16		**CELLS: ROW 26:** Report any capital purchases made after the firm was started.									
17											
18	**Step 5:**	**REPORT UNEXPENSED LABOR**									
19		**CELLS: ROW 145:** Report the value of owner labor not expensed on the income statement.									
20											
21	**Step 6:**	**ADDRESS CAPITAL STRUCTURE CHANGES**									
22		**CELLS: C79-C111, D79-D111, E79-E111, F79-F111, G79-G111:** Modify the year 1-5 balance sheets to									
23		reflect changes in accounts. Changes might include increasing or reducing loan balances,									
24		increasing common stock contributions, and changes in assets utilized by the firm.									
25											
26	**Step 7:**	**ESTIMATE THE COSTS OF FUNDS**									
27		**CELLS: B3 AND B4:** Use information in the Cost of Cap worksheet to estimate Average									
28		Interest Rate Rate on Loans and Cost of Equity.									
29											
30	**Step 8:**	**ESTIMATE INCOME TAX RATES**									
31		**CELLS: B6, B7 AND B8:** Examine the Earnings Before Tax (EBT) data in the income statement.									
32		Utilize EBT data to estimate your tax rates. Information to do this is provided in the									
33		worksheet labeled TAX.									
34											
35	**Step 9:**	**REVIEW THE DIVIDEND POLICY**									
36		**CELLS: ROW 41:** Indicate your planned dividend payments									
37		**CELLS: ROW 42**: Confirm the dividend payments do not result in negative Retained earnings.									
38		**CELLS: ROW 78:** Confirm the dividend payments do not result in negative cash balances.									
39											
40	**Step 10:**	**ESTIMATE SALES PRICES FOR ASSETS**									
41		**CELLS G165-G176:** Indicate the revovery amounts of assets utilized by the business.									
42											
43	**Step 11:**	**REPORT RMA RATIO DATA**									
44		**CELLS: H216-H222:** Report relevant ratio values from RMA Annual Statement Studies.									

This table shows the steps necessary to complete the template.

The tool requires some user inputs. Other inputs are automatically calculated by the template. Users input items appear in plain text. The template automatically calculates items in bold text. The spreadsheet does not protect template-calculated variables allowing advanced users to make complex template adjustments to accommodate specific needs. The author encourages users to back up their data prior to changing bolded items in the event of unexpected results. The presentation includes both numeric and formula presentations when appropriate. Tables 1-10 show the template in numeric format. Tables 2F-7F show the relevant underlying formulae. The presentation does not accommodate some large formulae. In these instances, the indicator * along with a number indicates formulae presentation in the table note.

Table 1 adds a new worksheet to the Jalbert (2017) template. This table, contained in the worksheet 'Steps', provides users instructions on how to utilize the template. The instructions walk the user through eleven sequential steps to successfully enter the data for their firm in the template. Each step points users to specific cells within the tables that must be addressed by the user. By following these steps sequentially, users produce results in a logical framework.

The analysis begins with the entry of required input fields. Table 2 (Table 2F) indicates the necessary input variables and provides the income statement. Required inputs include the average interest rate on loans and cost of equity. The template provides guidance to determine these variables in the worksheet labeled 'Cost of Cap' discussed later in this document. The user must also enter the general excise tax rate (GET), capital gains tax rate (TPS), ordinary income tax rate (TPB) and corporate tax rate (TC). Worksheet 'Tax', also discussed latter in this document, provides support for estimating these values.

Table 2: Input Variables and Income Statement

	A	B	C	D	E	F	G
1	**INPUT VARIABLES**						
2							
3	**Average Interest Rate on Loans**	7.250%					
4	**Cost of Equity**	12.000%					
5	**Tax Rate on Capital Gains (TPS)**	10.000%					
6	**Tax Rate on Ordinary Income (TPB)**	12.000%					
7	**Corporate Tax Rate (TC)**	21.000%					
8	**Cost of Goods Sold as a % of Sales**	40.000%					
9	**General Excise Tax Rate**	4.439%					
10							
11							
12	**INCOME STATEMENT**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
13							
14	**Product Sales with COGS**		300,000	325,000	295,000	300,000	600,000
15	**Other Sales without COGS**		50,000	50,000	50,000	50,000	50,000
16	**Total Sales**		**350,000**	**375,000**	**345,000**	**350,000**	**650,000**
17	**General Excise Tax**		**15,535**	**16,645**	**15,313**	**15,535**	**28,851**
18	**Cost of Goods Sold**		**120,000**	**130,000**	**118,000**	**120,000**	**240,000**
19	**Bank and Merchant Fees**		15,000	15,000	15,000	15,000	15,000
20	Labor		30,000	30,000	30,000	30,000	60,000
21	Employee Benefits		5,000	5,000	5,000	5,000	10,000
22	Advertising		10,000	10,000	8,000	10,000	10,000
23	Rent		40,000	40,000	40,000	40,000	40,000
24	Utilities		5,000	2,000	5,000	5,000	5,000
25	Expense 5		0	0	0	0	0
26	**Current Year Section 179 Purchases**		20,000	0	20,000	0	0
27	**Depreciation MACRS 3YR**		**9,900**	**13,500**	**4,500**	**2,100**	**0**
28	**Depreciation SL 5YR**		**8,000**	**8,000**	**8,000**	**8,000**	**8,000**
29	**Depreciation MACRS 5YR**		**12,000**	**19,200**	**11,400**	**7,200**	**6,600**
30	**Depreciation SL 39 Year Real Estate**		**2,564**	**2,564**	**2,564**	**2,564**	**2,564**
31	**Total Expenses**		**292,999**	**291,909**	**282,777**	**260,399**	**426,015**
32	**EBIT**		**57,001**	**83,091**	**62,223**	**89,601**	**223,985**
33	**Interest**		**8,700**	**11,963**	**9,063**	**11,238**	**6,525**
34	**EBT**		**48,301**	**71,129**	**53,160**	**78,363**	**217,460**
35	**Tax**		**5,796**	**8,535**	**6,379**	**9,404**	**26,095**
36	**Net Income**		**42,505**	**62,593**	**46,781**	**68,960**	**191,365**

This table shows the input variables and Income Statement.

Table 2F: Input Variables and Income Statement (Formulae Display)

	A	B	C	D	E	F	G
1	**INPUT VARIABLES**						
2							
3	**Avg. Interest Rate on Loans**	0.0725					
4	**Cost of Equity**	0.12					
5	**Tax Rate on Cap.Gains (TPS)**	0.1					
6	**Tax Rate on Ord. Inc. (TPB)**	0.12					
7	**Corporate Tax Rate (TC)**	0.21					
8	**COGS as a % of Sales**	0.4					
9	**General Excise Tax Rate**	0.044386					
10							
11							
12	**INCOME STATEMENT**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
13							
14	**Product Sales with COGS**		300000	325000	295000	300000	600000
15	**Other Sales without COGS**		50000	50000	50000	50000	50000
16	**Total Sales**		**=SUM(C14:C15)**	**=SUM(D14:D15)**	**=SUM(E14:E15)**	**=SUM(F14:F15)**	**=SUM(G14:G15)**
17	**General Excise Tax**		**=C16*$B$9**	**=D16*$B$9**	**=E16*$B$9**	**=F16*$B$9**	**=G16*$B$9**
18	**Cost of Goods Sold**		**=C14*$B$8**	**=D14*$B$8**	**=E14*$B$8**	**=F14*$B$8**	**=G14*$B$8**
19	**Bank and Merchant Fees**		15000	15000	15000	15000	15000
20	Labor		30000	30000	30000	30000	60000
21	Employee Benefits		5000	5000	5000	5000	10000
22	Advertising		10000	10000	8000	10000	10000
23	Rent		40000	40000	40000	40000	40000
24	Utilities		5000	2000	5000	5000	5000
25	Expense 5		0	0	0	0	0
26	**Current Year Sec. 179**		20000	0	20000	0	0
27	**Depreciation MACRS 3YR**		**=DP!D7**	**=DP!D8**	**=DP!D9**	**=DP!D10**	**=DP!D11**
28	**Depreciation SL 5YR**		**=DP!I7**	**=DP!I8**	**=DP!I9**	**=DP!I10**	**=DP!I11**
29	**Depreciation MACRS 5YR**		**=DP!N7**	**=DP!N8**	**=DP!N9**	**=DP!N10**	**=DP!N11**
30	**Dep. SL 39 Year Real Estate**		**=DP!S7**	**=DP!S8**	**=DP!S9**	**=DP!S10**	**=DP!S11**
31	**Total Expenses**		**=SUM(C17:C30)**	**=SUM(D17:D30)**	**=SUM(E17:E30)**	**=SUM(F17:F30)**	**=SUM(G17:G30)**
32	**EBIT**		**=C16-C31**	**=D16-D31**	**=E16-E31**	**=F16-F31**	**=G16-G31**
33	**Interest**		***1**	***2**	***3**	***4**	***5**
34	**EBT**		**=C32-C33**	**=D32-D33**	**=E32-E33**	**=F32-F33**	**=G32-G33**
35	**Tax**		**=C34*$B$6**	**=D34*$B$6**	**=E34*$B$6**	**=F34*$B$6**	**=G34*$B$6**
36	**Net Income**		**=C34-C35**	**=D34-D35**	**=E34-E35**	**=F34-F35**	**=G34-G35**

*This table shows the formulae display for input variables and the income statement. Worksheet 'S1' contains all calculations with the exception of depreciation. Worksheet 'DP' presents supporting depreciation calculations. *1 =(C100+C101+C108)*$B$3, *2 =(D100+D101+D108)*$B$3, *3 =(E100+E101+E108)*$B$3, *4 =(F100+F101+F108)*$B$3, *4 =(G100+G101+G108)*$B$3. The spreadsheet automatically computes bolded items. Users enter data for their company in plain text cells.*

The row titled General Excise Tax Rate represents the Hawaii General Excise Tax (GET). This tax is assessed on businesses in Hawaii based on sales. Businesses may elect to add this tax onto sales prices in a manner common to sales taxes. However, the business is responsible for the tax liability without regard to tax collections from customers. The Hawaii GET tax rate varies by island. The tax rate incorporated here equals 4.4386 percent, an amount relevant for the island of Hawaii. Users can adjust the percentage to reflect tax rates of their locality. Users not facing this tax may simply set the rate equal to zero percent.

In addition, users must enter the cost of goods sold (COGS) as a percentage of sales. As noted earlier, the spreadsheet holds COGS as a percentage of sales constant throughout the five-year analysis period. Advanced users may over-ride this calculation by directly entering the cost of goods sold dollar amount. While a bolded element, overriding the COGS figures in the income statement does not affect the remaining calculations. Users modify unbolded column headings, in Cells A20-A25, to reflect the expense categories

for their firm. Users then enter the relevant income statement figures in unbolded cells from A14-G25. Users may vary these amounts by year as determined appropriate.

The primary enhancement of Table 2 over previous versions of the template comes in the estimate of sales. As noted earlier, the previous iteration of this template computed COGS based on total sales. However, some sales, such as revenues for services provided, do not generally have accompanying COGS. The modification here allows product sales, for which COGS is calculated, and service sales without COGS.

Table 3 shows retained earnings and cash flow statements. These statements were not materially modified from their original version. Moreover, the only user entry required is the dividend amount in Row 41. Thus, we do not further discuss these tables here.

Table 3: Retained Earnings Statement and Cash Flow Statement

	A	B	C	D	E	F	G
38	**STATEMENT OF RET. EARNINGS**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
39	**Old Retained Earnings**		**0**	**42,505**	**55,098**	**51,879**	**45,839**
40	**Net Income**		**42,505**	**62,593**	**46,781**	**68,960**	**191,365**
41	Dividends		0	50,000	50,000	75,000	100,000
42	**New Retained Earnings**		**42,505**	**55,098**	**51,879**	**45,839**	**137,203**
43							
44	**STATEMENT OF CASH FLOWS**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
45	**Net Income**		**42,505**	**62,593**	**46,781**	**68,960**	**191,365**
46	**Depreciation**		**32,464**	**43,264**	**26,464**	**19,864**	**17,164**
47	**Increases in Liabilities**						
48	**Short Term Bank Loans**		**-5,000**	**-5,000**	**35,000**	**-25,000**	**0**
49	**Credit Card Loans**		**25,000**	**-25,000**	**0**	**-30,000**	**0**
50	**Current Liabilities 3**		**0**	**0**	**0**	**0**	**0**
51	**Current Liabilities 4**		**0**	**0**	**0**	**0**	**0**
52	**Current Liabilities 5**		**0**	**0**	**0**	**0**	**0**
53	**Current Liabilities 6**		**0**	**0**	**0**	**0**	**0**
54	**Current Liabilities 7**		**0**	**0**	**0**	**0**	**0**
55	**Long Term Loans 1**		**25,000**	**-10,000**	**-5,000**	**-10,000**	**-5,000**
56	**Long Term Loans 2**		**0**	**-10,000**	**-10,000**	**-10,000**	**-10,000**
57	**Total Sources of Cash**		**119,969**	**55,857**	**93,245**	**13,824**	**193,529**
58	**Increases in Assets**						
59	**Inventory**		**0**	**0**	**0**	**0**	**0**
60	**Deposits**		**-10,000**	**20,000**	**20,000**	**-50,000**	**20,000**
61	**Asset 4**		**0**	**0**	**0**	**0**	**0**
62	**Asset 5**		**0**	**0**	**0**	**0**	**0**
63	**Asset 6**		**0**	**0**	**0**	**0**	**0**
64	**Asset 7**		**0**	**0**	**0**	**0**	**0**
65	**Non Depreciable LT Assets (Land)**		**0**	**0**	**0**	**0**	**0**
66	**Total Uses of Cash in Operations**		**-10,000**	**20,000**	**20,000**	**-50,000**	**20,000**
67	**Cash Paid to and Received from Stockholders**						
68	**Increase in Common Stock**		**7,000**	**0**	**0**	**0**	**0**
69	**Dividends**		**0**	**50,000**	**50,000**	**75,000**	**100,000**
70	**= Change in Cash Position**		**136,969**	**-14,143**	**23,245**	**-11,176**	**73,529**
71							
72	**Old Cash**		**20,000**	**156,969**	**142,826**	**166,071**	**154,895**
73	**Plus Change in Cash Position**		**136,969**	**-14,143**	**23,245**	**-11,176**	**73,529**
74	**New Cash Balance**		**156,969**	**142,826**	**166,071**	**154,895**	**228,424**

This table presents the statements of retained earnings and cash flows. The template requires no user input for the statement of cash flows. Users must enter dividends paid in row 41 of the statement of retained earnings.

Table 3F: Statement of Retained Earnings and Statement of Cash Flows (Formulae Display)

	A	B	C	D	E	F	G
38	**STMT OF RET EARN**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
39	**Old Retained Earnings**		**=B112**	**=C112**	**=D112**	**=E112**	**=F112**
40	**Net Income**		**=C36**	**=D36**	**=E36**	**=F36**	**=G36**
41	Dividends		0	50000	50000	75000	100000
42	**New Retained Earnings**		**=C39+C40-C41**	**=D39+D40-D41**	**=E39+E40-E41**	**=F39+F40-F41**	**=G39+G40-G41**
43							
44	**STMT. OF CASH FLOWS**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
45	**Net Income**		**=C36**	**=D36**	**=E36**	**=F36**	**=G36**
46	**Depreciation**		**=SUM(C27:C30)**	**=SUM(D27:D30)**	**=SUM(E27:E30)**	**=SUM(F27:F30)**	**=SUM(G27:G30)**
47	**Increases in Liabilities**						
48	**=A100**		**=C100-B100**	**=D100-C100**	**=E100-D100**	**=F100-E100**	**=G100-F100**
49	**=A101**		**=C101-B101**	**=D101-C101**	**=E101-D101**	**=F101-E101**	**=G101-F101**
50	**=A102**		**=C102-B102**	**=D102-C102**	**=E102-D102**	**=F102-E102**	**=G102-F102**
51	**=A103**		**=C103-B103**	**=D103-C103**	**=E103-D103**	**=F103-E103**	**=G103-F103**
52	**=A104**		**=C104-B104**	**=D104-C104**	**=E104-D104**	**=F104-E104**	**=G104-F104**
53	**=A105**		**=C105-B105**	**=D105-C105**	**=E105-D105**	**=F105-E105**	**=G105-F105**
54	**=A106**		**=C106-B106**	**=D106-C106**	**=E106-D106**	**=F106-E106**	**=G106-F106**
55	**=A108**		**=C108-B108**	**=D108-C108**	**=E108-D108**	**=F108-E108**	**=G108-F108**
56	**=A109**		**=C109-B109**	**=D109-C109**	**=E109-D109**	**=F109-E109**	**=G109-F109**
57	**Total Sources of Cash**		**=SUM(C45:C56)**	**=SUM(D45:D56)**	**=SUM(E45:E56)**	**=SUM(F45:F56)**	**=SUM(G45:G56)**
58	**Increases in Assets**						
59	**=A79**		**=C79-B79**	**=D79-C79**	**=E79-D79**	**=F79-E79**	**=G79-F79**
60	**=A80**		**=C80-B80**	**=D80-C80**	**=E80-D80**	**=F80-E80**	**=G80-F80**
61	**=A81**		**=C81-B81**	**=D81-C81**	**=E81-D81**	**=F81-E81**	**=G81-F81**
62	**=A82**		**=C82-B82**	**=D82-C82**	**=E82-D82**	**=F82-E82**	**=G82-F82**
63	**=A83**		**=C83-B83**	**=D83-C83**	**=E83-D83**	**=F83-E83**	**=G83-F83**
64	**=A84**		**=C84-B84**	**=D84-C84**	**=E84-D84**	**=F84-E84**	**=G84-F84**
65	**=A86**		**=C86-B86**	**=D86-C86**	**=E86-D86**	**=F86-E86**	**=G86-F86**
66	**Total Uses of Cash in Oper.**		**=SUM(C59:C65)**	**=SUM(D59:D65)**	**=SUM(E59:E65)**	**=SUM(F59:F65)**	**=SUM(G59:G65)**
67	**Cash to and from Stckhldrs**						
68	**Increase in Common Stock**		**=C111-B111**	**=D111-C111**	**=E111-D111**	**=F111-E111**	**=G111-F111**
69	**Dividends**		**=C41**	**=D41**	**=E41**	**=F41**	**=G41**
70	**= Change in Cash Position**		***6**	***7**	***8**	***9**	***10**
71							
72	**Old Cash**		**=B78**	**=C78**	**=D78**	**=E78**	**=F78**
73	**Plus Chg. in Cash Position**		**=C70**	**=D70**	**=E70**	**=F70**	**=G70**
74	**New Cash Balance**		**=SUM(C72+C73)**	**=SUM(D72+D73)**	**=SUM(E72+E73)**	**=SUM(F72+F73)**	**=SUM(G72+G73)**

*This table shows the formulae display for variables in the Retained Earnings and Cash Flow Statements. Worksheet 'S1' contains all computations except depreciation. Worksheet 'DP' presents supporting depreciation calculations. *6 =sum(C57-C66+C68-C69), *7 =sum(D57-D66+D68-D69), *8 =sum(E57-E66+E68-E69), *9 =sum(F57-F66+F68-F69), *10 =sum(G57-G66+G68-G69). The spreadsheet automatically computes bolded items. Users enter data for their company in plain text cells.*

The discussion moves forward to the balance sheet presented in Table 4 (Table 4F), where users are directed to enter specific business information. Users begin by modifying the unbolded row headings to reflect the assets and liabilities accounts utilized by the business (Cells A79-A84). Next, users enter data for the initial balance sheet in column Yr. 0 (Cells B78-B114). Users can select from four depreciation choices by entering their initial balance sheet data in the corresponding row. As with all balance sheets, the process involves answering two fundamental questions: 1.) Which assets will the firm require?, and 2.) How will the firm finance the purchase of these items. Once the initial balance sheet meets the accounting standard Assets = Liabilities + Equity, users may modify unbolded items in subsequent balance sheets to reflect time-changing variations in the accounts. All necessary follow through changes, are automatically completed. Users can select from four depreciation methods by entering their data in the relevant row.

Two primary modifications were made to the balance sheet. First, an additional error message is incorporated. The message appears in cells B116 through G116 and identifies non-positive common stock amounts. Specifically, the error message indicates "ERROR! The common stock value is not valid. Common stock must be entered as a positive number." The second balance sheet modification creates an entry for non-depreciable long term assets such as land. These amounts are incorporated in cells B86-G86.

In the previous template iteration, depreciation applied to all long term assets. Incorporating non-depreciable long term assets improves the accuracy of estimates made with the template. Other elements of the balance sheet remain consistent with those presented in Jalbert (2017). The curious reader is referred to the earlier work for additional balance sheet discussion.

Table 4: Balance Sheet

	A	B	C	D	E	F	G
76	**BALANCE SHEET**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
77	**Assets**						
78	**Cash**	20,000	**156,969**	**142,826**	**166,071**	**154,895**	**228,424**
79	Inventory	10,000	10,000	10,000	10,000	10,000	10,000
80	Deposits	53,000	43,000	63,000	83,000	33,000	53,000
81	Asset 4	0	0	0	0	0	0
82	Asset 5	0	0	0	0	0	0
83	Asset 6	0	0	0	0	0	0
84	Asset 7	0	0	0	0	0	0
85	**Total Current Assets**	**83,000**	**209,969**	**215,826**	**259,071**	**197,895**	**291,424**
86	**Non Depreciable LT Assets (Land)**	100,000	100,000	100,000	100,000	100,000	100,000
87	**Long Term Asset MACRS 3YR**	30,000	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**
88	**Accumulated Depreciation 3YR**		**9,900**	**23,400**	**27,900**	**30,000**	**30,000**
89	**Long Term Asset SL 5YR**	40,000	**40,000**	**40,000**	**40,000**	**40,000**	**40,000**
90	**Accumulated Depreciation SL 5YR**		**8,000**	**16,000**	**24,000**	**32,000**	**40,000**
91	**Long Term Asset MACRS 5YR**	60,000	**60,000**	**60,000**	**60,000**	**60,000**	**60,000**
92	**Accumulated Depreciation MACRS 5 YR**		**12,000**	**31,200**	**42,600**	**49,800**	**56,400**
93	**Real Estate 39 Years**	100,000	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**
94	**Accumulated Depreciation RE 39 YR SL**		**2,564**	**5,128**	**7,692**	**10,256**	**12,821**
95	**Total Depreciable Fixed Assets**	**230,000**	**230,000**	**230,000**	**230,000**	**230,000**	**230,000**
96	**Total Accumulated Depreciation**	**0**	**32,464**	**75,728**	**102,192**	**122,056**	**139,221**
97	**Total Assets**	**413,000**	**507,505**	**470,098**	**486,879**	**405,839**	**482,203**
98							
99	**Liabilities and Equity**						
100	Short Term Bank Loans	25,000	20,000	15,000	50,000	25,000	25,000
101	Credit Card Loans	50,000	75,000	50,000	50,000	20,000	20,000
102	Current Liabilities 3	0	0	0	0	0	0
103	Current Liabilities 4	0	0	0	0	0	0
104	Current Liabilities 5	0	0	0	0	0	0
105	Current Liabilities 6	0	0	0	0	0	0
106	Current Liabilities 7	0	0	0	0	0	0
107	**Total Current Liabilities**	**75,000**	**95,000**	**65,000**	**100,000**	**45,000**	**45,000**
108	Long Term Loans 1	45,000	70,000	60,000	55,000	45,000	40,000
109	Long Term Loans 2	100,000	100,000	90,000	80,000	70,000	60,000
110	**Total Liabilities**	**220,000**	**265,000**	**215,000**	**235,000**	**160,000**	**145,000**
111	**Common Stock**	193,000	200,000	200,000	200,000	200,000	200,000
112	**Retained Earnings**	**0**	**42,505**	**55,098**	**51,879**	**45,839**	**137,203**
113	**Total Equity**	**193,000**	**242,505**	**255,098**	**251,879**	**245,839**	**337,203**
114	**Total Liabilities and Equity**	**413,000**	**507,505**	**470,098**	**486,879**	**405,839**	**482,203**
115	**Cumulative Section 179 Purchases**		**20,000**	**20,000**	**40,000**	**40,000**	**40,000**
116							

This table shows the balance sheet template.

Table 4F: Balance Sheet (Formulae Display)

	A	B	C	D	E	F	G
76	**BALANCE SHT**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
77	**Assets**						
78	**Cash**	20000	**=C74**	**=D74**	**=E74**	**=F74**	**=G74**
79	Inventory	10000	10000	10000	10000	10000	10000
80	Deposits	53000	43000	63000	83000	33000	53000
81	Asset 4	0	0	0	0	0	0
82	Asset 5	0	0	0	0	0	0
83	Asset 6	0	0	0	0	0	0
84	Asset 7	0	0	0	0	0	0
85	**Total C.A.**	**=SUM(B78:B84)**	**=SUM(C78:C84)**	**=SUM(D78:D84)**	**=SUM(E78:E84)**	**=SUM(F78:F84)**	**=SUM(G78:G84)**
86	**Non Dep. LT A.**	100000	=B86	=C86	=D86	=E86	=F86
87	**L. T, mACRS 3**	30000	**=B87**	**=C87**	**=D87**	**=E87**	**=F87**
88	**A.D. 3**		**=B88+C27**	**=C88+D27**	**=D88+E27**	**=E88+F27**	**=F88+G27**
89	**L.T. SL 5**	40000	**=B89**	**=C89**	**=D89**	**=E89**	**=F89**
90	**A.D. SL 5**		**=B90+C28**	**=C90+D28**	**=D90+E28**	**=E90+F28**	**=F90+G28**
91	**L.T. MACRS 5**	60000	**=B91**	**=C91**	**=D91**	**=E91**	**=F91**
92	**A.D. MACRS 5**		**=C29+B92**	**=D29+C92**	**=E29+D92**	**=F29+E92**	**=G29+F92**
93	**R.E.39 Yr.**	100000	**=B93**	**=C93**	**=D93**	**=E93**	**=F93**
94	**A.D. RE 39 YR**		**=B94+C30**	**=C94+D30**	**=D94+E30**	**=E94+F30**	**=F94+G30**
95	**Total Dep. F.A.**	***11**	***12**	***13**	***14**	***15**	***16**
96	**Total Acc Dep.**	***17**	***18**	***19**	***20**	***21**	***22**
97	**Total Assets**	***23**	***24**	***25**	***26**	***27**	***28**
98							
99	**Liab. and Eq.**						
100	S.T. B. Loans	25000	20000	15000	50000	25000	25000
101	C. Card Loans	50000	75000	50000	50000	20000	20000
102	C.L. 3	0	0	0	0	0	0
103	C.L. 4	0	0	0	0	0	0
104	C.L. 5	0	0	0	0	0	0
105	C.L. 6	0	0	0	0	0	0
106	C.L. 7	0	0	0	0	0	0
107	**Total C. Liab**	**=SUM(B100:B106)**	**=SUM(C100:C106)**	**=SUM(D100:D106)**	**=SUM(E100:E106)**	**=SUM(F100:F106)**	**=SUM(G100:G106)**
108	L.T. Loans 1	45000	70000	60000	55000	45000	40000
109	L.T. Loans 2	100000	100000	90000	80000	70000	60000
110	**Total Liab**	***29**	***30**	***31**	***32**	***33**	***34**
111	**Comm Stock**	193000	200000	200000	200000	200000	200000
112	**Ret. Earn.**	**0**	**=C42**	**=D42**	**=E42**	**=F42**	**=G42**
113	**Total Equity**	**=SUM(B111:B112)**	**=SUM(C111:C112)**	**=SUM(D111:D112)**	**=SUM(E111:E112)**	**=SUM(F111:F112)**	**=SUM(G111:G112)**
114	**Total L. and E.**	**=SUM(B110+B113)**	**=SUM(C110+C113)**	**=SUM(D110+D113)**	**=SUM(E110+E113)**	**=SUM(F110+F113)**	**=SUM(G110+G113)**
115	**Cum Sec 179**		**=C26**	**=C115+D26**	**=D115+E26**	**=E115+F26**	**=F115+G26**
116	***35**	***36**	***37**	***38**	***39**	***40**	***41**

*This table shows formulae for the balance sheet. Worksheet 'S1' contains all computations except depreciation and error messages. Worksheet 'DP' contains depreciation computations. Worksheet 'EM', contains error messages. *11 = (B87+B89+B91+B93), *12 = (C87+C89+C91+C93), *13 = (D87+D89+D91+D93), *14 = (E87+E89+E91+E93), *15 = (F87+F89+F91+F93), *16 = (G87+G89+G91+G93), *17 =(B88+B90+B92+B94), *18 =(C88+C90+C92+C94), *19 =(D88+D90+D92+D94), *20 =(E88+E90+E92+E94), *21 =(F88+F90+F92+F94), *22 =(G88+G90+G92+G94), *23 =sum(B85+B86+B87-B88+B89-B90+B91-B92+B93-B94), *24 =sum(C85+C86+C87-C88+C89-C90+C91-C92+C93-C94), *25 =sum(D85+D86+D87-D88+D89-D90+D91-D92+D93-D94), *26 =sum(E85+E86+E87-E88+E89-E90+E91-E92+E93-E94), *27 =sum(F85+F86+F87-F88+F89-F90+F91-F92+F93-F94), *28 =sum(G85+G86+G87-G88+G89-G90+G91-G92+G93-B94), *29 =sum(B107+B108+B109), *30 =sum(C107+C108+C109), *31 =sum(D107+D108+D109), *32 =sum(E107+E108+E109), *33 =sum(F107+F108+F109), *34 =sum(G107+G108+G109), *35 = if(B97=B114,"", EM!A1), *36 =if(B111>0,"",EM!$A$5), *37 =if(C111>0,"",EM!$A$5), *38 =if(D111>0,"",EM!$A$5), *39 =if(E111>0,"",EM!$A$5), *40 =if(F111>0,"",EM!$A$5), *41 =if(G111>0,"",EM!$A$5). Users enter data for their firm in items not bolded. The spreadsheet computes bolded items.*

Table 5 (Table 5F) shows the capital budget analysis. Much of the data for this table automatically transfers from information entered in previous statements. Users must only input terminal cash flows occurring at the close of year 5. The spreadsheet automatically computes the terminal cash amount as noted earlier. Users enter sale prices for the remaining current asset recovered and all recovered capital asset. Formulae assume sale of current assets for an amount equaling the purchase price. The careful reader will notice these items are not bolded. Thus, users may override these computations without corrupting the template.

The spreadsheet automatically calculates taxes due on the disposal of assets. The spreadsheet incorporates formulas that assume full payment of all liabilities. Users indicate the value of owner donated labor to the firm on row 145. The amount entered reflects opportunity cost effects of uncompensated work. The spreadsheet provides Net Present Value (NPV) and Internal Rate of Return (IRR) solutions. NPV calculations utilize the Cost of Equity that was input in Table 2, under most circumstances a more conservative approach than the WACC method used in Jalbert (2017).

The capital budget incorporates one important change over the previous template version. Jalbert (2017) utilized the total cash accumulated in Year 5 as the relevant terminal cash flow. The template here uses a different approach. The template here uses the cash amount on the Year 0 balance sheet as the terminal cash flow. This new approach is more conservative any time cash balances increase over the life of the business. This new approach generally produces lower cash flows and thus more conservative NPV and IRR values.

Table 5: Capital Budget Analysis

	A	B	C	D	E	F	G	H
117	**CAPITAL BUDGET ANALYSIS**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	
118								
119	**Product Sales with COGS**		**300,000**	**325,000**	**295,000**	**300,000**	**600,000**	
120	**Other Sales without COGS**		**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	
121	**Total Sales**		**350,000**	**375,000**	**345,000**	**350,000**	**650,000**	
122	**General Excise Tax**		**15,535**	**16,645**	**15,313**	**15,535**	**28,851**	
123	**Cost of Goods Sold**		**120,000**	**130,000**	**118,000**	**120,000**	**240,000**	
124	**Bank and Merchant Fees**		**15,000**	**15,000**	**15,000**	**15,000**	**15,000**	
125	**Labor**		**30,000**	**30,000**	**30,000**	**30,000**	**60,000**	
126	**Employee Benefits**		**5,000**	**5,000**	**5,000**	**5,000**	**10,000**	
127	**Advertising**		**10,000**	**10,000**	**8,000**	**10,000**	**10,000**	
128	**Rent**		**40,000**	**40,000**	**40,000**	**40,000**	**40,000**	
129	**Utilities**		**5,000**	**2,000**	**5,000**	**5,000**	**5,000**	
130	**Expense 5**		**0**	**0**	**0**	**0**	**0**	
131	**Current Year Section 179 Purchases**		**20,000**	**0**	**20,000**	**0**	**0**	
132	**Depreciation MACRS 3YR**		**9,900**	**13,500**	**4,500**	**2,100**	**0**	
133	**Depreciation SL 5YR**		**8,000**	**8,000**	**8,000**	**8,000**	**8,000**	
134	**Depreciation MACRS 5YR**		**12,000**	**19,200**	**11,400**	**7,200**	**6,600**	
135	**Depreciation SL 39 Year Real Estate**		**2,564**	**2,564**	**2,564**	**2,564**	**2,564**	
136	**EBIT**		**57,001**	**83,091**	**62,223**	**89,601**	**223,985**	
137	**Interest**		**8,700**	**11,963**	**9,063**	**11,238**	**6,525**	
138	**EBT**		**48,301**	**71,129**	**53,160**	**78,363**	**217,460**	
139	**Tax**		**5,796**	**8,535**	**6,379**	**9,404**	**26,095**	
140	**Net Income**		**42,505**	**62,593**	**46,781**	**68,960**	**191,365**	
141	**Depreciation MACRS 3YR**		**9,900**	**13,500**	**4,500**	**2,100**	**0**	
142	**Depreciation SL 5YR**		**8,000**	**8,000**	**8,000**	**8,000**	**8,000**	
143	**Depreciation MACRS 5YR**		**12,000**	**19,200**	**11,400**	**7,200**	**6,600**	
144	**Depreciation SL 39 Year Real Estate**		**2,564**	**2,564**	**2,564**	**2,564**	**2,564**	
145	**Non Expensed Owner Labor**		20,000	20,000	20,000	20,000	20,000	
146	**Total Operating Cash Flows**		**54,969**	**85,857**	**53,245**	**68,824**	**188,529**	
147								

Table 5: Capital Budget Analysis (Continued)

	A	B	C	D	E	F	G
148	**CAPITAL BUDGET (CONTINUED)**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
149	**Cash**	**-20,000**					
150	**Inventory**	**-10,000**					
151	**Deposits**	**-53,000**					
152	**Asset 4**	**0**					
153	**Asset 5**	**0**					
154	**Asset 6**	**0**					
155	**Asset 7**	**0**					
156	**Total Current Assets**	**-83,000**					
157	**Non Depreciable LT Assets (Land)**	**100,000**					
158	**Long Term Asset MACRS 3YR**	**-30,000**					
159	**Long Term Asset SL 5YR**	**-40,000**					
160	**Long Term Asset MACRS 5YR**	**-60,000**					
161	**Real Estate 39 Years**	**-100,000**					
162	**Cash Flow**	**-413,000**					
163							
164	**Cash**						**20,000**
165	**Inventory**						10,000
166	**Deposits**						53,000
167	**Asset 4**						0
168	**Asset 5**						0
169	**Asset 6**						0
170	**Asset 7**						0
171	**Sale of 179 Expense Election Assets**						20,000
172	**Non Depreciable LT Assets (Land)**						150,000
173	**Long Term Asset MACRS 3YR**						30,000
174	**Long Term Asset SL 5YR**						25,000
175	**Long Term Asset MACRS 5YR**						50,000
176	**Real Estate 39 Years**						90,000
177	**Tax on Gain on Sale of Current Assets**						**0**
178	**Tax on Sale of 179 Expense Election Assets**						**2,000**
179	**Tx on Sale of Non Depreciable LT Assets (Land)**						**5,000**
180	**Tax on Long Term Asset MACRS 3YR**						**3,000**
181	**Tax on Long Term Asset SL 5YR**						**2,500**
182	**Tax on Long Term Asset MACRS 5 YR**						**4,640**
183	**Tax on Real Estate Sale**						**282**
184	**Total Terminal Cash Flows**						**430,578**
185	**Total Cash Flow**	**-413,000**	**54,969**	**85,857**	**53,245**	**68,824**	**619,107**
186							
187	**NPV**	**137,460**					
188	**IRR**	**0.2039**					

This table shows the capital budget.

Table 5F: Capital Budget Analysis (Formulae Display)

	A	B	C	D	E	F	G
117	**CAP. BUDGET**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
118							
119	**=A14**		**=C14**	**=D14**	**=E14**	**=F14**	**=G14**
120	**=A15**		**=C15**	**=D15**	**=E15**	**=F15**	**=G15**
121	**=A16**		**=C16**	**=D16**	**=E16**	**=F16**	**=G16**
122	**=A17**		**=C17**	**=D17**	**=E17**	**=F17**	**=G17**
123	**=A18**		**=C18**	**=D18**	**=E18**	**=F18**	**=G18**
124	**=A19**		**=C19**	**=D19**	**=E19**	**=F19**	**=G19**
125	**=A20**		**=C20**	**=D20**	**=E20**	**=F20**	**=G20**
126	**=A21**		**=C21**	**=D21**	**=E21**	**=F21**	**=G21**
127	**=A22**		**=C22**	**=D22**	**=E22**	**=F22**	**=G22**
128	**=A23**		**=C23**	**=D23**	**=E23**	**=F23**	**=G23**
129	**=A24**		**=C24**	**=D24**	**=E24**	**=F24**	**=G24**
130	**=A25**		**=C25**	**=D25**	**=E25**	**=F25**	**=G25**
131	**=A26**		**=C26**	**=D26**	**=E26**	**=F26**	**=G26**
132	**=A27**		**=C27**	**=D27**	**=E27**	**=F27**	**=G27**
133	**=A28**		**=C28**	**=D28**	**=E28**	**=F28**	**=G28**
134	**=A29**		**=C29**	**=D29**	**=E29**	**=F29**	**=G29**
135	**=A30**		**=C30**	**=D30**	**=E30**	**=F30**	**=G30**
136	**=A32**		**=C32**	**=D32**	**=E32**	**=F32**	**=G32**
137	**=A33**		**=C33**	**=D33**	**=E33**	**=F33**	**=G33**
138	**=A34**		**=C34**	**=D34**	**=E34**	**=F34**	**=G34**
139	**=A35**		**=C35**	**=D35**	**=E35**	**=F35**	**=G35**
140	**=A36**		**=C36**	**=D36**	**=E36**	**=F36**	**=G36**
141	**=A132**		**=C132**	**=D132**	**=E132**	**=F132**	**=G132**
142	**=A133**		**=C133**	**=D133**	**=E133**	**=F133**	**=G133**
143	**=A134**		**=C134**	**=D134**	**=E134**	**=F134**	**=G134**
144	**=A135**		**=C135**	**=D135**	**=E135**	**=F135**	**=G135**
145	**N. E. Labor**		20000	20000	20000	20000	20000
146	**Total Op. C.F.**		***42**	***43**	***44**	***45**	***46**

Table 5F: Capital Budget Analysis (Continued) (Formulae Display)

	A	B	C	D	E	F	G	H
148	**CAP BUD (CONT)**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	
149	**=A78**	**=-B78**						
150	**=A79**	**=-B79**						
151	**=A80**	**=-B80**						
152	**=A81**	**=-B81**						
153	**=A82**	**=-B82**						
154	**=A83**	**=-B83**						
155	**=A84**	**=-B84**						
156	**=A85**	**=-B85**						
157	**=A86**	**=B86**						
158	**=A87**	**=-B87**						
159	**=A89**	**=-B89**						
160	**=A91**	**=-B91**						
161	**=A93**	**=-B93**						
162	**Cash Flow**	**=-B97**						
163								
164	**=A78**						**=-B149**	
165	**=A79**						=-B150	
166	**=A80**						=-B151	
167	**=A81**						=-B152	
168	**=A82**						=-B153	
169	**=A83**						=-B154	
170	**=A84**						=-B155	
171	**Sale of 179**						20000	*50
172	**=A157**						150000	*51
173	**=A158**						30000	*52
174	**=A159**						25000	*53
175	**=A160**						50000	*54
176	**=A161**						90000	*55
177	**Tax on Gain C.A.**						***47**	
178	**Tax on Sale of 179**						**=G171*B5**	
179	**Tx on Sale of N.D**						***48**	
180	**Tax on MACRS 3**						**=DP!D31**	
181	**Tax SL 5YR**						**=DP!I31**	
182	**Tax on MACRS 5**						**=DP!N31**	
183	**Tax on R.E. Sale**						**=DP!S31**	
184	**Total Term C.F.**						***49**	
185	**Total C.F.**	**=B162**	**=C146**	**=D146**	**=E146**	**=F146**	**=SUM(G146+G184)**	
186								
187	**NPV**	***56**						
188	**IRR**	***57**						

*This table shows formulae for the Capital Budget. Worksheet 'S1' contains all computations except depreciation and messages. Worksheet 'DP' contains depreciation computations. *42 =sum(C140:C144)-C145, *43 =sum(D140:D144)-D145, *44 =sum(E140:E144)-E145, *45 =sum(F140:F144)-F145, *46 =sum(G140:G144)-G145, *47 =(sum(G165:G170)+Sum(B150:B155)*$B$5, *48 =(G172-G86)*$B$5, *49 =SUM(G164:G176)-SUM(G177:B183), *50 =IF(AND(G171>0,G115=0,EM!A$,""), *51 =IF(AND(G172>0,G86=0,EM!A3,""), *52 =IF(AND(G173>0,B158=0,EM!A3,""), *53 =IF(AND(G174>0,B159=0,EM!A3,""), *54 =IF(AND(G175>0,B160=0,EM!A3,""), *55 =IF(AND(G176>0,B161=0,EM!A3,""), *56 =NPV(B4,C185:G185)+B185 *57 =IRR(B185:G185). Users enter data for their firm in non-bolded cells. The spreadsheet computes bolded items.*

Table 6 (Table 6F) shows calculated variables, firm values and provides calculations necessary to complete ratio analysis. The calculations follow exactly the work of Jalbert (2017). However, due to the complexity of the issue a discussion of the calculations is provided here for convenience. The calculated variables culminate in an estimate of the Weighted Average Cost of Capital (WACC). The computation utilizes the average cost of funds and cost of equity entered in the Input Variables in Table 2. The WACC formula combines these figures with the proportions of funds obtained from equity debt in the initial balance sheet. Net Present Value (NPV) computations use the cost of equity to estimate excess present value.

Table 6: Calculated Variables, Firm Value and Ratio Analysis

	A	B	C	D	E	F	G	H
190	**CALCULATED VARIABLES**							
191								
192	**Proportion of Funds From Equity**	**0.4673**						
193	**Proportion of Funds from Debt**	**0.5327**						
194	**Cost of Capital (WACC)**	**0.0901**						
195								
196	**COMPUTATION OF FIRM VALUE**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	
197								
198	**EBIT**		**57,001**	**83,091**	**62,223**	**89,601**	**223,985**	
199	**Unexpensed Value of Owners Time**		**20,000**	**20,000**	**20,000**	**20,000**	**20,000**	
200	**EBIT for Valuation**		**37,001**	**63,091**	**42,223**	**69,601**	**203,985**	
201								
202	**Firm Value: Pass-Through Taxation (Jalbert Method)**							
203								
204	**Value of Unlevered Firm**		**277,506**	**473,184**	**316,670**	**522,006**	**1,529,888**	
205	**Value of Levered Firm**		**275,106**	**469,884**	**314,170**	**518,906**	**1,528,088**	
206	**Gain from Leverage**		**-2,400**	**-3,300**	**-2,500**	**-3,100**	**-1,800**	
207								
208	**Firm Value: Double Taxation (Miller Method)**							
209								
210	**Value of Unlevered Firm**		**242,505**	**373,815**	**251,879**	**412,385**	**1,208,611**	
211	**Value of Levered Firm**		**262,785**	**401,700**	**273,004**	**438,580**	**1,223,821**	
212	**Gain from Leverage**		**20,280**	**27,885**	**21,125**	**26,195**	**15,210**	
213								
214	**COMPUTATION OF FINANCIAL RATIOS**							
215		**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**RMA**
216	**Total Asset Turnover**		**0.690**	**0.798**	**0.709**	**0.862**	**1.348**	x
217	**Return on Assets**		**0.084**	**0.133**	**0.096**	**0.170**	**0.397**	x
218	**Return on Equity**		**0.175**	**0.245**	**0.186**	**0.281**	**0.568**	x
219	**Debt to Equity**	**1.140**	**1.093**	**0.843**	**0.933**	**0.651**	**0.430**	x
220	**Debt to Assets**	**0.533**	**0.522**	**0.457**	**0.483**	**0.394**	**0.301**	x
221	**Current Ratio**	**1.107**	**2.210**	**3.320**	**2.591**	**4.398**	**6.476**	x
222	**Dividend Payout Ratio**		**0.000**	**0.799**	**1.069**	**1.088**	**0.523**	x

This table shows calculations of firm value and financial ratios. Valuation calculations are completed based on the work of Miller (1977) and Jalbert ***(2002) and Jalbert (2017).***

Table 6: Calculated Variables, Firm Value and Ratio Analysis (Formulae Display)

	A	B	C	D	E	F	G	H
190	**CALC VARIABLES**							
191								
192	**Prop of Funds Equity**	**=B113/B114**						
193	**Prop of Funds Debt**	**=SUM(B110/B114)**						
194	**Cost of Capital**	***58**						
195								
196	**COMP OF FIRM VAL**	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	
197								
198	**EBIT**		**=C32**	**=D32**	**=E32**	**=F32**	**=G32**	
199	**Unexp Value of Labor**		**=C145**	**=D145**	**=E145**	**=F145**	**=G145**	
200	**EBIT for Valuation**		**=C198-C199**	**=D198-D199**	**=E198-E199**	**=F198-F199**	**=G198-G199**	
201								
202	**Firm Value: P.T.**							
203								
204	**Value of Unlev. Firm**		***59**	***60**	***61**	***62**	***63**	
205	**Value of Levered Firm**		***64**	***65**	***66**	***67**	***68**	
206	**Gain from Leverage**		**=C205-C204**	**=D205-D204**	**=E205-E204**	**=F205-F204**	**=G205-G204**	
207								
208	**Firm Value: D.T.**							
209								
210	**Value of Unlev. Firm**		***69**	***70**	***71**	***72**	***73**	
211	**Value of Levered Firm**		***74**	***75**	***76**	***77**	***78**	
212	**Gain from Leverage**		**=C211-C210**	**=D211-D210**	**=E211-E210**	**=F211-F210**	**=G211-G210**	
213								
214	**COMP OF RATIOS**							
215		**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**RMA**
216	**Total Asset Turnover**		**=C16/C97**	**=D16/D97**	**=E16/E97**	**=F16/F97**	**=G16/G97**	x
217	**Return on Assets**		**=C36/C97**	**=D36/D97**	**=E36/E97**	**=F36/F97**	**=G36/G97**	x
218	**Return on Equity**		**=C36/C113**	**=D36/D113**	**=E36/E113**	**=F36/F113**	**=G36/G113**	x
219	**Debt to Equity**	**=B110/B113**	**=C110/C113**	**=D110/D113**	**=E110/E113**	**=F110/F113**	**=G110/G113**	x
220	**Debt to Assets**	**=B110/B97**	**=C110/C97**	**=D110/D97**	**=E110/E97**	**=F110/F97**	**=G110/G97**	x
221	**Current Ratio**	**=B85/B107**	**=C85/C107**	**=D85/D107**	**=E85/E107**	**=F85/F107**	**=G85/G107**	x
222	**Dividend Payout**		**=C69/C36**	**=D69/D36**	**=E69/E36**	**=F69/F36**	**=G69/G36**	x

*This table shows formulae for calculated variables, firm value and financial ratios. Worksheet 'S1' contains all calculations except depreciation. Worksheet 'DP' contains depreciation computations. *58 =SUM((B192*B4)+((B193*B3)*(1-B6))), *59 =MAX(SUM(C200*(1-$B$5)/$B$4),C113), *60 =MAX(SUM(D200*(1-$B$5)/$B$4),D113), *61 =MAX(SUM(E200*(1-$B$5)/$B$4),E113), *62 =MAX(SUM(F200*(1-$B$5)/$B$4),F113), *63 =MAX(SUM(G200*(1-$B$5)/$B$4),G113), *64 =MAX(C204+(C33*((1-$B$6)-(1-$B$5)))/$B$3,C113), *65 =MAX(D204+(D33*((1-$B$6)-(1-$B$5)))/$B$3,D113), *66 =MAX(E204+(E33*((1-$B$6)-(1-$B$5)))/$B$3,E113), *67 =MAX(F204+(F33*((1-$B$6)-(1-$B$5)))/$B$3,F113), *68 =MAX(G204+(G33*((1-$B$6)-(1-$B$5)))/$B$3,G113), *69 =MAX(C200*(1-$B$7)*(1-$B$5))/$B$4),C113), *70 =MAX(D200*(1-$B$7)*(1-$B$5))/$B$4),D113), *71 =MAX(E200*(1-$B$7)*(1-$B$5))/$B$4),E113), *72 =MAX(F200*(1-$B$7)*(1-$B$5))/$B$4),F113), *73 =MAX(G200*(1-$B$7)*(1-$B$5))/$B$4),G113), *74 =MAX(C210+(C33*((1-$B$6)-(1-$B$7)*(1-$B$5))/$B$3),C113), *75 =MAX(D210+(D33*((1-$B$6)-(1-$B$7)*(1-$B$5))/$B$3),D113), *76 =MAX(E210+(E33*((1-$B$6)-(1-$B$7)*(1-$B$5))/$B$3),E113), *77 =MAX(F210+(F33*((1-$B$6)-(1-$B$7)*(1-$B$5))/$B$3),F113), *78 =MAX(G210+(G33*((1-$B$6)-(1-$B$7)*(1-$B$5))/$B$3),G113). Users enter data for their firm in cells not bolded. The spreadsheet calculates bolded items.*

Table 6 (Table 6F) also provides an estimate of firm value. The calculations correspond directly to those in Jalbert (2017). The calculations utilize previous inputs to complete the computations, requiring no additional user intervention. The analysis here utilizes the Jalbert (2017) approach, a modification to the earnings valuation methods of Jalbert (2002) and Miller (1977). Methods developed by Jalbert (2002) estimate values of firms subject to the pass-through taxation system. The work of Miller (1977) computes the value of firms subject to the double taxation system. Users should focus their attention on the approach relevant for their tax status. The template reduces EBIT by an amount equal to non-expensed owner labor provided to the firm to determine valuation.

Firm value calculations consider both the going concern and liquidation value of the firm. Firm value is calculated as the maximum of the earnings-based valuation or liquidation value of the firm. Liquidation

value is proxied by common equity on the balance sheet. Equations 1 and 2 calculate the value of firms subject to the pass-through taxation system. Equation 1 provide values for the unlevered firm V_U, a firm that doesn't borrow money. Equation 2 specifies the value of a levered firm, V_L, a firm that borrows money. *E(EBIT)* equals expected earnings before interest and taxes, *I* equals the total interest expense, T_{PS} equals the capital gains tax rate, K_E equals the owners required rate of return on invested equity, K_D equals the cost of borrowing money and *CE* equals the common equity from the balance sheet.

$$V_U = Max(\frac{E(EBIT)(1-T_{PS})}{K_E}, CE) \quad (1)$$

$$V_L = Max(\frac{E(EBIT)(1-T_{PS})}{K_E} + \frac{I[(1-T_{PB})*(1-T_{PS})]}{K_D}, CE) \quad (2)$$

Similarly, Equations 3 and 4 provide calculations of value for firms subject to double taxation. This valuation requires introduction of a corporate tax rate, T_C. Equations 2 and 3 show equations for valuing the unlevered firm, V_U, and a levered firm, V_L respectively:

$$V_U = Max(\frac{E(EBIT)(1-T_{PS})(1-T_C)}{K_E}, CE) \quad (3)$$

$$V_L = Max(\frac{E(EBIT)(1-T_{PS})(1-T_C)}{K_E} + \frac{I[(1-T_{PB})(1-T_{PS})(1-T_C)]}{K_D}, CE) \quad (4)$$

The gain from borrowing money equals the difference in value between a firm that borrows money and a firm that does not borrow money. This amount is often referred to as the gain from leverage, G_L. Jalbert (2002) and Miller (1977) show that most tax regimes result in positive gains for double taxation firms and negative gains for pass through taxation firms. Equation 5 shows the gain from borrowing money and applies to both pass-through and double-taxation firms:

$$G_L = V_L - V_U \quad (5)$$

Table 6 (Table 6F) also calculates several financial ratios. Three new ratios were added to the analysis relative to the original template. This version includes new calculations for return on equity (ROE), debt to assets and dividend payout ratio. These new ratios provide useful information for users to evaluate important elements of their firm.

In addition to the calculated ratios, the worksheet provides space for industry average ratios. Users should refer to Risk Management Associates (RMA) Annual Statement Studies, or a similar data source, to obtain industry ratio levels. Users enter these values in Cells H216-H222. Comparing calculated figures to industry averages allows users to pinpoint important differences. The presence of large differences suggests the user may have mis-estimated some inputs, or the firm will operate using an approach different from most firms in the industry.

Table 7 (Table 7F) shows depreciation calculations. The table comes from the worksheet labeled 'DP'. Users select from four depreciation methods when completing their analysis by entering data in the corresponding row in the Year 0 balance sheet on Worksheet 'S1'. Worksheet 'DP' calculates the annual depreciation amounts and provides supporting data for tax calculations related to sales of equipment. The spreadsheet requires no user input and functions exactly as the Jalbert (2017) template. Table 8, comes

from the worksheet labeled 'EM' and includes error messages. Other worksheets call these error messages when users enter problematic data into the spreadsheet.

Table 7: Depreciation Computations

	A	B	C	D	E	F	G	H	I
1	**MACRS 3 Year**					**SL 5 Year**			
2									
3	**Depreciation Taken**					**Depreciation Taken**			
4									
5	**Year**	**Percentage**	**Cost**	**Depreciation**		**Year**	**Percentag**	**Cost**	**Depreciation**
6	**0**					**0**			
7	**1**	**0.33**	**30,000**	**9,900**		**1**	**0.2**	**40,000**	**8,000**
8	**2**	**0.45**	**30,000**	**13,500**		**2**	**0.2**	**40,000**	**8,000**
9	**3**	**0.15**	**30,000**	**4,500**		**3**	**0.2**	**40,000**	**8,000**
10	**4**	**0.07**	**30,000**	**2,100**		**4**	**0.2**	**40,000**	**8,000**
11	**5**	**0**	**30,000**	**0**		**5**	**0.2**	**40,000**	**8,000**
12									
13	**Total Depreciation Taken**			**30,000**		**Total Depreciation Taken**			**40,000**
14									
15	**Book Value**					**Book Value**			
16									
17	**Cost of Machine**			**30,000**		**Cost of Machine**			**40,000**
18	**Less Depreciation Taken**			**30,000**		**Less Depreciation Taken**			**40,000**
19	**= Book Value**			**0**		**= Book Value**			**0**
20									
21	**Gain on Sale**					**Gain on Sale**			
22									
23	**Sales Price**			**30,000**		**Sales Price**			**25,000**
24	**Less Book Value**			**0**		**Less Book Value**			**0**
25	**= Gain on Sale**			**30,000**		**= Gain on Sale**			**25,000**
26									
27	**Tax on Gain**					**Tax on Gain**			
28									
29	**Gain on Sale**			**30,000**		**Gain on Sale**			**25,000**
30	**Tax Rate**			**0.10**		**Tax Rate**			**0.10**
31	**Tax Due**			**3,000**		**Tax Due**			**2,500**

Table 7: Depreciation Computations (Continued)

	K	L	M	N	O	P	Q	R	S
1	**MACRS 5 Year**					**39 Year Real Estate**			
2									
3	**Depreciation Taken**					**Depreciation Taken**			
4									
5	**Year**	**Percentage**	**Cost**	**Depreciation**		**Year**	**Percentage**	**Cost**	**Depreciation**
6	**0**					**0**			
7	**1**	**0.2**	**60,000**	**12,000**		**1**	**0.025641**	**100,000**	**2,564**
8	**2**	**0.32**	**60,000**	**19,200**		**2**	**0.025641**	**100,000**	**2,564**
9	**3**	**0.19**	**60,000**	**11,400**		**3**	**0.025641**	**100,000**	**2,564**
10	**4**	**0.12**	**60,000**	**7,200**		**4**	**0.025641**	**100,000**	**2,564**
11	**5**	**0.11**	**60,000**	**6,600**		**5**	**0.025641**	**100,000**	**2,564**
12									
13	**Total Depreciation Taken**			**56,400**		**Total Depreciation Taken**			**12,821**
14									
15	**Book Value**					**Book Value**			
16									
17	**Cost of Machine**			**60,000**		**Cost of Machine**			**100,000**
18	**Less Depreciation Taken**			**56,400**		**Less Depreciation Taken**			**12,821**
19	**= Book Value**			**3,600**		**= Book Value**			**87,180**
20									
21	**Gain on Sale**					**Gain on Sale**			
22									
23	**Sales Price**			**50,000**		**Sales Price**			**90,000**
24	**Less Book Value**			**3,600**		**Less Book Value**			**87,180**
25	**= Gain on Sale**			**46,400**		**= Gain on Sale**			**2,821**
26									
27	**Tax on Gain**					**Tax on Gain**			
28									
29	**Gain on Sale**			**46,400**		**Gain on Sale**			**2,821**
30	**Tax Rate**			**0.10**		**Tax Rate**			**0.10**
31	**Tax Due**			**4,640**		**Tax Due**			**282**

This table shows depreciation computations. Users make no entries in this spreadsheet. The spreadsheet calculates all items in the table.

Table 7F: Depreciation Computations (Formulae Display)

	A	B	C	D	E	F	G	H	I
1	**MACRS 3 Year**					**SL 5 Year**			
2									
3	**Dep. Taken**					**Dep. Taken**			
4									
5	**Year**	**Percent**	**Cost**	**Depreciation**		**Year**	**Percent**	**Cost**	**Depreciation**
6	**0**					**0**			
7	**1**	**0.33**	**='S1''!$B$87**	**=B7*C7**		**1**	**0.2**	**='S1''!$B$89**	**=G7*H7**
8	**2**	**0.45**	**='S1''!$B$87**	**=B8*C8**		**2**	**0.2**	**='S1''!$B$89**	**=G8*H8**
9	**3**	**0.15**	**='S1''!$B$87**	**=B9*C9**		**3**	**0.2**	**='S1''!$B$89**	**=G9*H9**
10	**4**	**0.07**	**='S1''!$B$87**	**=B10*C10**		**4**	**0.2**	**='S1''!$B$89**	**=G10*H10**
11	**5**	**0**	**='S1''!$B$87**	**=B11*C11**		**5**	**0.2**	**='S1''!$B$89**	**=G11*H11**
12									
13	**T. Dep. Taken**			**=SUM(D7:D11)**		**T. Dep. Taken**			**=SUM(I7:I11)**
14									
15	**Book Value**					**Book Value**			
16									
17	**Cost of Machine**			**=C7**		**Cost of Machine**			**=H7**
18	**Less Dep. Taken**			**=D13**		**Less Dep. Taken**			**=I13**
19	**= Book Value**			**=D17-D18**		**= Book Value**			**=I17-I18**
20									
21	**Gain on Sale**					**Gain on Sale**			
22									
23	**Sales Price**			**='S1''!G173**		**Sales Price**			**='S1''!G174**
24	**Less Book Value**			**=D19**		**Less Book Value**			**=I19**
25	**= Gain on Sale**			**=D23-D24**		**= Gain on Sale**			**=I23-I24**
26									
27	**Tax on Gain**					**Tax on Gain**			
28									
29	**Gain on Sale**			**=D25**		**Gain on Sale**			**=I25**
30	**Tax Rate**			**='S1''!$B$5**		**Tax Rate**			**='S1''!$B$5**
31	**Tax Due**			**=D29*D30**		**Tax Due**			**=I29*I30**

Table 7F: Depreciation Computations (Formulae Display) (Continued)

	K	L	M	N	O	P	Q	R	S
1	**MACRS 5 Year**					**39 Year R.E.**			
2									
3	**Dep. Taken**					**Dep. Taken**			
4									
5	**Year**	**Percent**	**Cost**	**Depreciation**		**Year**	**Percent**	**Cost**	**Depreciation**
6	**0**					**0**			
7	**1**	**0.2**	**='S1'!$B$91**	**=L7*M7**		**1**	**0.025641**	**='S1'!$B$93**	**=Q7*R7**
8	**2**	**0.32**	**='S1'!$B$91**	**=L8*M8**		**2**	**0.025641**	**='S1'!$B$93**	**=Q8*R8**
9	**3**	**0.19**	**='S1'!$B$91**	**=L9*M9**		**3**	**0.025641**	**='S1'!$B$93**	**=Q9*R9**
10	**4**	**0.12**	**='S1'!$B$91**	**=L10*M10**		**4**	**0.025641**	**='S1'!$B$93**	**=Q10*R10**
11	**5**	**0.11**	**='S1'!$B$91**	**=L11*M11**		**5**	**0.025641**	**='S1'!$B$93**	**=Q11*R11**
12									
13	**T. Dep. Taken**			**=SUM(N7:N11)**		**T. Dep. Taker**			**=SUM(S7:S11)**
14									
15	**Book Value**					**Book Value**			
16									
17	**Cost of Machine**			**=M7**		**Cost of Machi**			**=R7**
18	**Less Dep. Taken**			**=N13**		**Less Dep. Tak**			**=S13**
19	**= Book Value**			**=N17-N18**		**= Book Value**			**=S17-S18**
20									
21	**Gain on Sale**					**Gain on Sale**			
22									
23	**Sales Price**			**='S1'!G175**		**Sales Price**			**='S1'!G176**
24	**Less Book Value**			**=N19**		**Less Book Va**			**=S19**
25	**= Gain on Sale**			**=N23-N24**		**= Gain on Sal**			**=S23-S24**
26									
27	**Tax on Gain**					**Tax on Gain**			
28									
29	**Gain on Sale**			**=N25**		**Gain on Sale**			**=S25**
30	**Tax Rate**			**='S1'!$B$5**		**Tax Rate**			**='S1'!$B$5**
31	**Tax Due**			**=N29*N30**		**Tax Due**			**=S29*S30**

This table shows formulae for calculated variables, firm value and financial ratios. Worksheet 'S1' contains all calculations except depreciation. Worksheet 'DP' contains depreciation computations. The spreadsheet calculates all items without user intervention.

Table 8: Error Messages

	A
1	**ERROR! Your beginning balance sheet entries do not conform to the basic accounting relationship Assets = Liabilities + Equity. Please adjust your entries to comply with this requirement.**
2	
3	**ERROR! This entry is not valid. A non zero entry in this cell indicates you are selling something that you did not purchase. Either record the purchase of this item on the Year 0 balance sheet or remove the entry from this cell.**
4	**ERROR! This entry is not valid. A non zero entry in this cell indicates you are selling something that you did not purchase. Either record the purchase of this item statement as a section 179 purchase on your income statement or remove the entry from this cell.**
5	**ERROR! The common stock value is not valid. Common stock must be entered as a positive value.**

This table shows worksheet 'EM'. The worksheet stores error messages which are referenced and displayed by other areas of the spreadsheet.

Table 9 provides information to help users determine the cost of equity and average cost of loans. The table represents an enhancement to the previous template version. Historical data from Ibbotson and Sinquefield (2019) indicate long-term historical returns on stocks and bonds as well as inflation rates. Data used to calculate these averages runs from 1926-2015. Next, the table provides information to assist users with calculating loan rates. The table includes information on the current prime rate of interest, Government bond rates, Small Business Administration loan rates and other potentially useful interest rates.

Table 9: Information to Determine Loan Rates and Cost of Equity

	A	B	C	D	E	F	G	H
1	**INFORMATION TO DETERMINE AVERAGE INTEREST RATE ON LOANS AND COST OF EQUI**							
2								
3	**Cost of Equity Information**							
4								
5	***Average Return on financial instruments from 1926-2015***							
6								
7	**Small Stocks**				**12.00%**			
8	**Large Stocks**				**10.00%**			
9	**Government Bonds**				**5.60%**			
10	**Treasury Bills**				**3.40%**			
11	**Inflation**				**2.90%**			
12	**Source Ibbotson and Sinquefield: Stocks, Bonds, Bills and Inflation, (SBBI) Yearbook**							
13								
14	**Loan Cost Information**							
15								
16	***Interest Rate Data (December 2, 2019)***							
17								
18	**Prime rate of interest**				**4.75%**			
19	**Source FedPrimeRate.com**							
20								
21	**December 2, 2019, 1-year Treasury Bill Rate**				**1.56%**			
22	**December 2, 2019 Current 10-year Treasury Bond**				**2.15%**			
23	**Source: U.S. Department of the Trasury Resource Senter**							
24								
25	***Small Business Administration Loans (December 2, 2019)***							
26								
27	**For Loans exceeding $50,000 and repayment in less than 7 years.**						**7.25%**	
28	**For Loans exceeding $50,000 and repayment in more than 7 years.**						**7.75%**	
29								
30	***Other rates (December 2, 2019)***							
31								
32	**Typical Credit Card Rates**						**15.00%**	
33	**Typical 15-year Mortgate Rates**						**3.25%**	
34	**Typical 30-year Mortgage Rates**						**3.50%**	
35	**Typical Personal Loans Rate**						**7.00%**	
36	**Source: Bankrate.com**							
37								
38	**Typical Automobile Loan Rates**						**3.50%**	
39	**Source: BankofAmerica.com**							

This table shows the 'Cost of Cap' worksheet. The worksheet provides users information to assist in estimating loan rates and cost of capital rates.

Table 10 provides data to assist users in estimating tax rates. This table represents a new addition to the template. Providing the data directly in the spreadsheet simplifies the users work. Standard deduction rates provide users an approximation of the amount of money that can be earned tax-free. Tax tables are provided for capital gains tax rates as well as ordinary income tax rates. The table contains ordinary tax rates for four filing status'. The table shows the current corporate tax rate of 21 percent and the Qualified Business Income (QBI) deduction rate of 20 percent.

Table 10: Tax Rate Information

	A	B	C	D	E	F
1	**TAX RATES FOR 2020 TAX YEAR**					
2						
3	**USE THIS INFORMATION TO ESTIMATE YOUR TAX RATES**					
4						
5	***Standard Deduction Amounts***					
6						
7	**Single**			**$12,400**		
8	**Married Filing Jointly and Surviving Spouses**			**$24,800**		
9	**Maried Filing Separately**			**$12,400**		
10	**Head of Household**			**$18,650**		
11						
12	***Maximum Capital Gains Rates***			**Max At**	**Max at**	**Excess**
13				**0% Rate**	**15 % Rate**	**Rate**
14	**Single**			**$40,000**	**$441,450**	**20%**
15	**Married Filing Jointly and Surviving Spouses**			**$80,000**	**$496,600**	**20%**
16	**Maried Filing Separately**			**$40,000**	**$248,300**	**20%**
17	**Head of Household**			**$53,600**	**$469,050**	**20%**
18						
19	***Qualified Business Income Deduction Rate***		**20%**			
20						
21	***Corporate Tax Rates***					
22						
23	**21%**	**on all corporate income**				
24						
25	***Ordinary Income Tax Rates***					
26						
27	**Single**					
28	**Base of Range**	**Top of Range**	**Base Tax**	**Tax Rate on Income over Base**		
29	**$0.00**	**$9,875.00**	**$0.00**	**10%**		
30	**$9,876.00**	**$40,125.00**	**$987.50**	**12%**		
31	**$40,126.00**	**$85,525.00**	**$4,617.50**	**22%**		
32	**$85,526.00**	**$163,300.00**	**$14,605.50**	**24%**		
33	**$163,301.00**	**$207,350.00**	**$33,271.50**	**32%**		
34	**$207,351.00**	**$518,400.00**	**$47,367.50**	**35%**		
35	**$518,401.00**		**$156,235.00**	**37%**		
36						
37	**Mariied Filing Joint Returns and Surviving Spouse**					
38	**Base of Range**	**Top of Range**	**Base Tax**	**Tax Rate on Income over Base**		
39	**$0.00**	**$19,750.00**	**$0.00**	**10%**		
40	**$19,751.00**	**$80,250.00**	**$1,975.00**	**12%**		
41	**$80,251.00**	**$171,050.00**	**$9,235.00**	**22%**		
42	**$171,051.00**	**$326,600.00**	**$29,211.00**	**24%**		
43	**$326,601.00**	**$414,700.00**	**$66,543.00**	**32%**		
44	**$414,701.00**	**$622,050.00**	**$94,735.00**	**35%**		
45	**$622,051.00**		**$167,307.50**	**37%**		
46						
47	**Married Filing Separately**					
48	**Base of Range**	**Top of Range**	**Base Tax**	**Tax Rate on Income over Base**		
49	**$0.00**	**$9,875.00**	**$0.00**	**10%**		
50	**$9,876.00**	**$40,125.00**	**$987.50**	**12%**		
51	**$40,126.00**	**$85,525.00**	**$4,617.50**	**22%**		
52	**$85,526.00**	**$163,300.00**	**$14,605.50**	**24%**		
53	**$163,301.00**	**$207,350.00**	**$33,271.50**	**32%**		
54	**$207,351.00**	**$311,025.00**	**$47,367.50**	**35%**		
55	**$311,026.00**		**$83,653.75**	**37%**		
56						
57	**Head of Household**					
58	**Base of Range**	**Top of Range**	**Base Tax**	**Tax Rate on Income over Base**		
59	**$0.00**	**$14,100.00**	**$0.00**	**10%**		
60	**$14,101.00**	**$53,700.00**	**$1,975.00**	**12%**		
61	**$53,701.00**	**$85,500.00**	**$9,235.00**	**22%**		
62	**$85,501.00**	**$163,300.00**	**$29,211.00**	**24%**		
63	**$163,301.00**	**$207,350.00**	**$66,543.00**	**32%**		
64	**$207,351.00**	**$518,400.00**	**$94,735.00**	**35%**		
65	**$518,401.00**		**$167,307.50**	**37%**		

This table provides information to assist users in estimating the relevant tax rates.

CONCLUDING COMMENTS

This paper presents a template for producing pro-forma financial statements. The template provides users assured accuracy regarding calculations. Thus, they can defend their calculations to skeptical bankers. Users simply enter relevant information for managerial determined variables. The template automatically completes all other computations. When the user adjusts a value in the spreadsheet, the remaining accounts automatically reflect the change. The template does not utilize plug figures and results are free of circular references. Users begin by entering figures into the initial balance sheet. Error messages point out imbalances to the user. Once the initial balance sheet meets the condition that Assets = Liabilities + Equity, regardless of user inputs, the remaining financial statements will be computationally correct.

While the template here constitutes a substantial improvement over the Jalbert (2017) template, there remains room for further improvement. Future refinements might include automatically estimating tax rates, cost of equity and loan rates rather than requiring users to interpret the data and make their own estimates. The spreadsheet has some depreciation limitations. Currently users purchase depreciable assets at the outset of the project. Purchases that occur later must be immediately expensed. Future refinements might allow users to purchase and sell depreciable assets throughout the company life cycle. Finally, the template is limited to annual analysis. Some users may require monthly analysis. Future development might provide a template capable of monthly analysis. Interested users may contact the author to obtain an electronic copy of the template.

REFERENCES

Arnold, T. (2011) "Connecting Balance Sheet Plugs: A New Integrated Presentation of Pro Forma Analysis," Available at SSRN: https://ssrn.com/abstract=1923672

Bank of America (2019), Automobile Loan Rates, Downloaded December 2, 2019 from: https://www.bankofamerica.com/auto-loans/

BankRate.com, Loan Rates, downloaded December 2, 2019 from: https://www.bankrate.com/credit-cards/good-credit/

Cheremushkin, S.V. (2010) "Long-Term Financial Statements Forecasting. Reinvesting Retained Earnings," *The Valuation Journal,* Vol. 5(2) p. 46-87

Chopra, A. S. P. Masih, A. Chugh, P. Bidkar, M. Navani (2015) "Financial Statement Forecaster," U.S. Patent Application, 20150363888

Desanctis, G., and S.L. Jarvenpaa (1989) "Graphical Presentation of Accounting Data for Financial Forecasting: An Experimental Investigation," *Accounting, Organizations and Society,* Vol. 14(5-6), p. 509-525.

Drougas, A.M. and A.C. Johnson (2004) "Use of Simulation to Enhance Undergraduate Financial Forecasting Education," *Journal of Financial Education*, vol. 30(Summer), p. 26-43

Erwin, A., S. Fotheringham and C. McGuinness (1998), "Method and System of Financial Spreading and Forecasting," U.S. Patent US6249770 B1

FedPrimeRate.com (2019), United States Prime Rate, downloaded December 2, 2019 from: fedeprimerate.com

Fit Small Business (2019) "SBA Loan Rates 2019: Current Interest Rates and How They Work" retrieved December 2, 2019 from: https://fitsmallbusiness.com/sba-loan-rates/

Ibbotson, R.G. and R. Sinquefield (2019), Stocks, Bonds, Bills and Inflation (SBBI) Yearbook, Data retrieved 12/02/2019 from https://www.raymondjames.com/soundwealthmanagement/pdfs/sbbi-1926.pdf

Jalbert, T. (2002) "Pass-Through Taxation and the Value of the Firm," *The American Business Review*, Vol. 20(2), June, p. 47-54

Jalbert, T., J.E. Briley and M Jalbert, (2012) "Forecasting Financial Statements using Risk Management Associates Industry Data," *Business Education and Accreditation,* Vol. 4(1) p. 123-134

Jalbert, T. (2017) "A Model for Forecasting Small Business Financial Statements and Firm Performance," *Business Education and Accreditation* Vol. 9(2) p. 61-84

Kerry, F. (2010) "Method and Systems for Forecasting Financial Statements and Analysis There of," U.S. Patent US20100161471

Miller, Merton, "Debt and Taxes," *Journal of Finance*, May 1977, pp. 261-275

Risk Management Associates "Annual Statement Studies"

U.S. Department of the Treasury (2019) Resource Center. Retrieved December 2, 2019 from https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=longtermrate

Vélez-Pareja, I. and J. Tham (2008) "Prospective Analysis: Guidelines for Forecasting Financial Statements," downloaded from SSRN November 8, 2016: ssrn.com/abstract=1026210

Vélez-Pareja, I. (2010) "Risky Tax Shields and Risky Debt: A Monte Carlo Approach," available at: https://ssrn.com/abstract=1630056

Vélez-Pareja, I. and J. Tham (2011) "Forecasting Financial Statements with No Plugs and No Circularity," *The IUP Journal of Accounting Research & Audit Practices,* Vol. X(1), p. 38-68

Vorkink, K. and K. Workman (2016) "Introduction to Valuation and Discounted Cash Flow Methods," working paper, downloaded November 8, 2016 from www.marriottschool.net

BIOGRAPHY

Terrance Jalbert is professor of finance at University of Hawaii Hilo. His research appears in many journals including *International Journal of Finance, Journal of Emerging Markets, Journal of Accounting Education, Advances in Financial Education* and *Journal of Applied Business Research.*

REVIEWERS

The IBFR would like to thank the following members of the academic community and industry for their much appreciated contribution as reviewers.

Hisham Abdelbaki, University of Mansoura - Egypt
Isaac Oluwajoba Abereijo, Obafemi Awolowo University
Naser Abughazaleh, Gulf University for Science and Technology
Nsiah Acheampong, University of Phoenix
Iyabo Adeoye, National Horticultural Research Institute-Nigeria.
Michael Adusei, Kwame Nkrumah University of Science & Tech.
Mohd Ajlouni, Yarmouk University
Sylvester Akinbuli, University of Lagos
Anthony Akinlo, Obafemi Awolowo University
Efiong Akwaowo, Ashford University
Yousuf Al-Busaidi, Sultan Qaboos University
Khaled Aljaaidi, Universiti Utara Malaysia
Alawiya Allui, Prince Sultan University
Hussein Al-Tamimi, University of Sharjah
Paulo Alves, CMVM, ISCAL and Lusofona University
Ghazi Al-weshah, Albalqa Applied University
Fabiola Baltar, Universidad Nacional de Mar del Plata
Samar Baqer, Kuwait University College
Nagib Bayoud, Tripoli University
Ahmet Bayraktar, Rutgers University
Myrna Berrios, Modern Hairstyling Institute
Daniel Boylan, Widener University
Kyle Brink, Western Michigan University
Giovanni Bronzetti, University of Calabria
Priyashni Chand, University of the South Pacific
Surya Chelikani, Quinnipiac University
Wan-Ju Chen, Diwan College of Management
Yahn-shir Chen, National Yunlin University of Science and Techology, Taiwan
Bea Chiang, The College of New Jersey
Shih Yung Chou, University of the Incarnate Word
Te-kuang Chou, Southern Taiwan University
Monica Clavel San Emeterio, University of La Rioja
Caryn Coatney, University of Southern Queensland
Iyanna College of Business Administration,
Michael Conyette, Okanagan College
Huang Department of Accounting, Economics & Finance,
Rajni Devi, The University of the South Pacific
Mahmoud Elgamal, College of Business Administration - Kuwait University
Prince Ellis, Argosy University
Esther Enriquez, Instituto Tecnologico de Ciudad Juarez
Ernesto Escobedo, Business Offices of Dr. Escobedo
Zaifeng Fan, University of Wisconsin whitewater
Perrine Ferauge, University of Mons
Olga Ferraro, University of Calabria
Carmen Galve-Górriz, Universidad de Zaragoza
Blanca Rosa Garcia Rivera, Univ. Autónoma De Baja California
Peter Geczy, AIST
Lucia Gibilaro, University of Bergamo
Carlos Alberto González Camargo, Universidad Jorge Tadeo Lozano
Hector Alfonso Gonzalez Guerra, Universidad Autonoma de Coahuila
Hongtao Guo, Salem State University
Danyelle Guyatt, University of Bath
Peter Harris, New York Institute of Technology
Zulkifli Hasan, Islamic University College of Malaysia
Shahriar Hasan, Thompson Rivers University
Fariza Hashim, Prince Sultan University
Peng He, Investment Technology Group
Niall Hegarty, St. Johns University
Jorge Hernandez Palomino, Universidad Autónoma de Mexico
Azucena Leticia Herrera Aguado, Universidad Tecnológica de Puebla
Claudia Soledad Herrera Oliva, Universidad Autónoma de Baja California
Paulin Houanye, University of International Business and Education, School of Law
Daniel Hsiao, University of Minnesota Duluth
Xiaochu Hu, School of Public Policy, George Mason University
Qianyun Huang, City University of New York - Queens College
Jui-ying Hung, Chatoyang University of Technology
Fazeena Hussain, University of the South Pacific
Stoyu Ivanov, San Jose State University
Shilpa Iyanna, Abu Dhabi University
Sakshi Jain, University of Delhi
Raja Saquib Yusaf Janjua, CIIT
Yu Junye, Louisiana State University
Tejendra N. Kalia, Worcester State College
Gary Keller, Eastern Oregon University
Ann Galligan Kelley, Providence College
Ann Kelley, Providence college
Ifraz Khan, University of the South Pacific
Halil Kiymaz, Rollins College
Susan Kowalewski, DYouville College
Jan Kruger, Unisa School for Business Leadership
Christopher B. Kummer, Webster University-Vienna
Mei-Mei Kuo, JinWen University of Science & Technology
Miguel Ángel Latorre Guillem, Universidad Católica de Valencia "San Vicente Mártir"
John Ledgerwood, Embry-Riddle Aeronautical University
Yen-hsien Lee, Department of Finance, Chung Yuan Christian University
Yingchou Lin, Missouri University of Science and Technology
Shulin Lin, Hsiuping University of Science and Technology
Lynda Livingston, University of Puget Sound
Melissa Lotter, Tshwane University of Technology
Xin (Robert) Luo, Virginia State University
Eduardo Macias-negrete, Instituto Tecnologico de Ciudad Juarez
Firuza Madrakhimova, University of North America
Abeer Mahrous, Cairo university
Tshepiso Makara, University of Botswana
Ioannis Makedos, University of Macedonia
Gladys Marquez-Navarro, Saint Louis University
Jesús Apolinar Martínez Puebla, Univ. Autónoma de Tamaulipas
Mario Jordi Maura, University of Puerto Rico
Francisco Jose May Hernandez, Universidad del Caribe

Aurora Irma Maynez Guaderrama, Universidad Autonoma de Ciudad Juarez
Romilda Mazzotta, University of Calabria
Mary Beth Mccabe, National University
Linda Margarita Medina Herrera, Tecnológico de Monterrey. Campus Ciudad de México
Marco Mele, Unint University
Gulser Meric, Rowan University
Avi Messica, Holon Institute of Technology
Scott Miller, Pepperdine University
Cameron Montgomery, Delta State University
Oscar Javier Montiel Mendez, Univ. Autonoma De Ciudad Juarez
Cleamon Moorer, Madonna University
Sandip Mukherji, Howard University
Tony Mutsue, Iowa Wesleyan College
Ertambang Nahartyo, UGM
Linda Naimi, Purdue University
Arezoo Nakhaei, Massey University
Cheedradevi Narayanasamy, Graduate School of Business, National University of Malaysia
Erwin Eduardo Navarrete Andrade, Universidad Central de Chile
Gloria Alicia Nieves Bernal, Universidad Autónoma del Estado de Baja California
Erica Okere, Education Management Corp
Dennis Olson, Thompson Rivers University
Godwin Onyeaso, Shorter University
Ramona Orastean, Lucian Blaga University of Sibiu-Romania
Vera Palea, University of Turin
Julian Pando, University of the Basque Country
Dawn H. Pearcy, Eastern Michigan University
Eloisa Perez, MacEwan University
Iñaki Periáñez, Universidad del Pais Vasco (Spain)
Pina Puntillo, University of Calabria (Italy)
Rahim Quazi, Prairie View A&M University
Anitha Ramachander, New Horizon College of Engineering
Charles Rambo, University of Nairobi, Kenya
Prena Rani, University of the South Pacific
Alma Ruth Rebolledo Mendoza, Universidad De Colima
Kathleen Reddick, College of St. Elizabeth
Maurizio Rija, University of Calabria.
Carmen Rios, Universidad del Este
Fabrizio Rossi, University of Cassino and Southern Lazio
Matthew T. Royle, Valdosta State University
Rafiu Oyesola Salawu, Obafemi Awolowo University
Paul Allen Salisbury, York College, City University of New York
Leire San Jose, University of Basque Country
Celsa G. Sánchez, CETYS Universidad
I Putu Sugiartha Sanjaya, Atma Jaya Yogyakarta University, Indonesia
Sunando Sengupta, Bowie State University
Brian W. Sloboda, University of Phoenix
Adriana Patricia Soto Aguilar, Universidad Autonoma De Puebla
Smita Mayuresh Sovani, Pune University
Alexandru Stancu, University of Geneva and IATA
Jiří Strouhal, University of Economics-Prague
Vichet Sum, University of Maryland -- Eastern Shore
Qian Sun, Kutztown University
Diah Suryaningrum, Universitas Pembangunan Nasional Veteran Jatim
Andree Swanson, Forbes School of Business & Technology, Ashford University
James Tanoos, Saint Mary-of-the-Woods College
Ranjini Thaver, Stetson University
Jeannemarie Thorpe, Southern NH University
Alejandro Torres Mussatto, Senado de la Republica; Universidad de Valparaíso
Jorge Torres-Zorrilla, Pontificia Universidad Católica del Perú
William Trainor, East Tennessee State University
Md Hamid Uddin, University Of Sharjah
Intiyas Utami, Satya Wacana Christian University
Ozge Uygur, Rowan University
Vijay Vishwakarma, St. Francis Xavier University
Julian Vulliez, University of Phoenix
Richard Zhe Wang, Eastern Illinois University
Ya-fang Wang, Providence University
Jon Webber, University of Phoenix
Jason West, Griffith University
Wannapa Wichitchanya, Burapha University
Veronda Willis, The University of Texas at San Antonio
Amy Yeo, Tunku Abdul Rahman College
Bingqing Yin, University of Kansas
Paula Zobisch, Forbes School of Business, Ashford University

REVIEWERS

The IBFR would like to thank the following members of the academic community and industry for their much appreciated contribution as reviewers.

Haydeé Aguilar, Universidad Autónoma de Aguascalientes

Bustamante Valenzuela Ana Cecilia, Universidad Autonoma De Baja California

María Antonieta Andrade Vallejo, Instituto Politécnico Nacional

Olga Lucía Anzola Morales, Universidad Externado de Colombia

Antonio Arbelo Alvarez, Universidad de la Laguna

Hector Luis Avila Baray, Instituto Tecnologico De Cd. Cuauhtemoc

Graciela Ayala Jiménez, Universidad Autónoma de Querétaro

Fabiola Baltar, Universidad Nacional de Mar del Plata

Myrna Berrios, Modern Hairstyling Institute

Albanelis Campos Coa, Universidad de Oriente

Carlos Alberto Cano Plata, Universidad De Bogotá Jorge Tadeo Lozano

Alberto Cardenas, Instituto Tecnologico De Cd. Juarez

Sheila Nora Katia Carrillo Incháustegui, Universidad Peruana Cayetano Heredia

Emma Casas Medina, Centro de Estudios Superiores del Estado de Sonora

Benjamin Castillo Osorio, Universidad del Sinú-Sede Monteria

María Antonia Cervilla de Olivieri, Universidad Simón Bolívar

Monica Clavel San Emeterio, University of La Rioja

Cipriano Domigo Coronado García, Universidad Autónoma de Baja California

Semei Leopoldo Coronado Ramírez, Universidad de Guadalajara

Esther Eduviges Corral Quintero, Universidad Autónoma de Baja California

M. T. Coto, Intl. Academic Sevices

Tomás J. Cuevas-Contreras, Universidad Autónoma de Ciudad Juárez

Edna Isabel De La Garza Martinez, Universidad Autónoma De Coahuila

Javier de León Ledesma, Universidad de Las Palmas de Gran Canaria - Campus Universitario de Tafira

Hilario Díaz Guzmán, Universidad Popular Autónoma del Estado de Puebla

Cesar Amador Díaz Pelayo, Universidad de Guadalajara, Centro Universitario Costa Sur

Avilés Elizabeth, CICESE

Esther Enriquez, Instituto Tecnologico de Ciudad Juarez

Ernesto Geovani Figueroa González, Universidad Juárez del Estado de Durango

Carlos Fong Reynoso, Universidad de Guadalajara

Carmen Galve-górriz, Universidad de Zaragoza

Teresa García López, Instituto De Investigaciones Y Estudios Superiores De Las Ciencias Administrativas

Blanca Rosa Garcia Rivera, Universidad Autónoma De Baja California

Denisse Gómez Bañuelos, CESUES

Carlos Alberto González Camargo, Universidad Jorge Tadeo Lozano

Hector Alfonso Gonzalez Guerra, Universidad Autonoma de Coahuila

María Brenda González Herrera, Universidad Juárez del Estado de Durango

Ana Ma. Guillén Jiménez, Universidad Autónoma de Baja California

Araceli Gutierrez, Universidad Autonoma De Aguascalientes

Andreina Hernandez, Universidad Central de Venezuela

Arturo Hernández, Universidad Tecnológica Centroamericana

Jorge Hernandez Palomino, Universidad Autónoma de Mexico

Alejandro Hernández Trasobares, Universidad de Zaragoza

Azucena Leticia Herrera Aguado, Universidad Tecnológica de Puebla

Claudia Soledad Herrera Oliva, Universidad Autónoma de Baja California

Luis Enrique Ibarra Morales, Universidad Estatal de Sonora

Mercedes Jalbert, The Institute for Business and Finance Research

Carmen Leticia Jiménez González, Université de Montréal Montréal QC Canadá.

Gaspar Alonso Jiménez Rentería, Instituto Tecnológico de Chihuahua

Lourdes Jordán Sales, Universidad de Las Palmas de Gran Canaria

Miguel Ángel Latorre Guillem, Universidad Católica de Valencia "San Vicente Mártir"

Santiago León Ch., Universidad Marítima del Caribe

Graciela López Méndez, Universidad de Guadalajara-Jalisco

Virginia Guadalupe López Torres, Universidad Autónoma de Baja California

Cruz Elda Macias Teran, Universidad Autonoma de Baja California

Eduardo Macias-negrete, Instituto Tecnologico de Ciudad Juarez

Aracely Madrid, ITESM, Campus Chihuahua

Deneb Magaña Medina, Universidad Juárez Autónoma de Tabasco

Carlos Manosalvas, Universidad Estatal Amazónica

Gladys Yaneth Mariño Becerra, Universidad Pedagogica y Tecnológica de Colombia

Omaira Cecilia Martínez Moreno, Universidad Autónoma de Baja California-México

Jesús Apolinar Martínez Puebla, Universidad Autónoma De Tamaulipas

Jesus Carlos Martinez Ruiz, Universidad Autonoma De Chihuahua

Francisco Jose May Hernandez, Universidad del Caribe

Aurora Irma Maynez Guaderrama, Universidad Autonoma de Ciudad Juarez

Linda Margarita Medina Herrera, Tecnológico de Monterrey. Campus Ciudad de México

Alaitz Mendizabal, Universidad Del País Vasco

Alaitz Mendizabal Zubeldia, Universidad del País Vasco/ Euskal Herriko Unibertsitatea

Fidel Antonio Mendoza Shaw, Universidad Estatal De Sonora

Oscar Javier Montiel Mendez, universidad autonoma de ciudad juarez

Juan Nicolás Montoya Monsalve, Universidad Nacional de Colombia-Manizales

Gloria Muñoz Del Real, Universidad Autonoma de Baja California

Alberto Elías Muñoz Santiago, Fundación Universidad del Norte

Erwin Eduardo Navarrete Andrade, Universidad Central de Chile

Gloria Alicia Nieves Bernal, Universidad Autónoma del Estado de Baja California

Bertha Guadalupe Ojeda García, Universidad Estatal de Sonora

Erika Olivas, Universidad Estatal de Sonora

Erick Orozco, Universidad Simon Bolivar

Rosa Martha Ortega Martínez, Universidad Juárez del Estado de Durango

José Manuel Osorio Atondo, Centro de Estudios Superiores del Estado de Sonora

Julian Pando, University of the Basque Country

Daniel Paredes Zempual, Universidad Estatal de Sonora

Luz Stella Pemberthy Gallo, Universidad del Cauca

Eloisa Perez, MacEwan University

Adrialy Perez, Universidad Estatal de Sonora

Iñaki Periáñez, Universidad del Pais Vasco (Spain)

Hector Priego Huertas, Universidad De Colima

Alma Ruth Rebolledo Mendoza, Universidad De Colima

Oscar Bernardo Reyes Real, Universidad de Colima

Carmen Rios, Universidad del Este

Juan Carlos Robledo Fernández, Universidad EAFIT-Medellin/Universidad Tecnologica de Bolivar-Cartagena

Natalia G. Romero Vivar, Universidad Estatal de Sonora

Humberto Rosso, Universidad Mayor de San Andres

José Gabriel Ruiz Andrade, Universidad Autónoma de Baja California-México

Antonio Salas, Universidad Autonoma De Chihuahua

Claudia Nora Salcido, Facultad de Economía Contaduría y Administración Universidad Juarez del Estado de Durango

Juan Manuel San Martín Reyna, Universidad Autónoma de Tamaulipas-México

Francisco Sanches Tomé, Instituto Politécnico da Guarda

Celsa G. Sánchez, CETYS Universidad

Edelmira Sánchez, Universidad Autónoma de Ciudad Juárez

Deycy Janeth Sánchez Preciado, Universidad del Cauca

María Cristina Sánchez Romero, Instituto Tecnológico de Orizaba

María Dolores Sánchez-Fernández, Universidade da Coruña

Luis Eduardo Sandoval Garrido, Universidad Militar de Nueva Granada

Pol Santandreu i Gràcia, Universitat de Barcelona, Santandreu Consultors

Victor Gustavo Sarasqueta, Universidad Argentina de la Empresa UADE

Jaime Andrés Sarmiento Espinel, Universidad Militar de Nueva Granada

Jesus Otoniel Sosa Rodriguez, Universidad De Colima

Adriana Patricia Soto Aguilar, Benemerita Universidad Autonoma De Puebla

Edith Georgina Surdez Pérez, Universidad Juárez Autónoma de Tabasco

Jesus María Martín Terán Terán Gastélum, Centro de Estudios Superiores del Estado de Sonora

Maria De La Paz Toldos Romero, Tecnologico De Monterrey, Campus Guadalajara

Alejandro Torres Mussatto, Senado de la Republica; Universidad de Valparaíso

Abraham Vásquez Cruz, Universidad Veracruzana

Rosalva Diamantina Vásquez Mireles, Universidad Autónoma de Coahuila

Angel Wilhelm Vazquez, Universidad Autonoma Del Estado De Morelos

Lorena Vélez García, Universidad Autónoma de Baja California

Alejandro Villafañez Zamudio, Instituto Tecnologico de Matamoros

Hector Rosendo Villanueva Zamora, Universidad Mesoamericana

Oskar Villarreal Larrinaga, Universidad del País Vasco/Euskal Herriko Universitatea

Delimiro Alberto Visbal Cadavid, Universidad del Magdalena

HOW TO PUBLISH

Submission Instructions

The Journal welcomes submissions for publication consideration. Complete directions for manuscript submission are available at the Journal website www.theibfr.com/journal-submission/. Papers may be submitted for initial review in any format. However, authors should take special care to address spelling and grammar issues prior to submission. Authors of accepted papers are required to precisely format their document according to the journal guidelines, available at www.theibfr.com/guidelines/.

Authors submitting a manuscript for publication consideration must guarantee that the document contains the original work of the authors, has not been published elsewhere, and is not under publication consideration elsewhere. In addition, submission of a manuscript implies that the author is prepared to pay the publication fee should the manuscript be accepted.

Subscriptions

Individual and library subscriptions to the Journal are available. Please contact us by mail or by email to: admin@theibfr.com for updated information.

Contact Information

Mercedes Jalbert, Managing Editor
The IBFR
P.O. Box 4908
Hilo, HI 96720
editor@theIBFR.com

Website

www.theIBFR.com

PUBLICATION OPPORTUNITIES

REVIEW of BUSINESS & FINANCE STUDIES

Review of Business & Finance Studies

Review of Business & Finance Studies (ISSN: 2150-3338 print and 2156-8081 online) publishes high-quality studies in all areas of business, finance and related fields. Empirical, and theoretical papers as well as case studies are welcome. Cases can be based on real-world or hypothetical situations.

All papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.

EBA Business Education & Accreditation

Business Education and Acreditation (BEA)

Business Education & Accreditation publishes high-quality articles in all areas of business education, curriculum, educational methods, educational administration, advances in educational technology and accreditation. Theoretical, empirical and applied manuscripts are welcome for publication consideration.

All papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.

AT Accounting & Taxation

Accounting and Taxation (AT)

Accounting and Taxation (AT) publishes high-quality articles in all areas of accounting, auditing, taxation and related areas. Theoretical, empirical and applied manuscripts are welcome for publication consideration.

All papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.

REVISTA GLOBAL de NEGOCIOS

Revista Global de Negocios

Revista Global de Negocios (RGN), a Spanish language Journal, publishes high-quality articles in all areas of business. Theoretical, empirical and applied manuscripts are welcome for publication consideration.

AAll papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.

PUBLICATION OPPORTUNITIES

The International Journal of Business and Finance Research ISSN 1931-0269

The International Journal of Business and Finance Research (IJBFR) publishes high-quality articles in all areas of finance, accounting and economics. Theoretical, empirical and applied manuscripts are welcome for publication consideration.

All papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.

International Journal of Management and Marketing Research ISSN 1933-3153

The International Journal of Management and Marketing Research (IJMMR) publishes high-quality articles in all areas of management and marketing. Theoretical, empirical and applied manuscripts are welcome for publication consideration.

All papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.

Global Journal of Business Research ISSN 1931-0277

The Global Journal of Business Research (GJBR) publishes high-quality articles in all areas of business. Theoretical, empirical and applied manuscripts are welcome for publication consideration.

All papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.

Revista Internacional Administración y Finanzas ISSN 1933-608X

Revista Internacional Administracion y Finanzas (RIAF), a Spanish language Journal, publishes high-quality articles in all areas of business. Theoretical, empirical and applied manuscripts are welcome for publication consideration.

All papers submitted to the Journal are blind reviewed. Visit our website www.theibfr.com/our-journals/ for distribution, listings and ranking information.