

# *INTERNATIONAL JOURNAL OF THE ACADEMIC BUSINESS WORLD*

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# **ABSORPTIVE CAPACITY AS MODERATOR FOR COMPANY INNOVATION SUCCESS**

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## **ABSTRACT**

*Purpose: The literature prescribing determinants of innovation success address strategic leadership, competitive intelligence, management of technology, and specific characteristics of the company's innovation process. Organization absorptive capacity is considered as possible moderator for these determinants of innovation success. Unfortunately researchers in these areas mostly ignored each other's work thus proposing models relatively narrow in scope. This study tests these constructs as a set of determinants of innovation success and the possible moderating effect of organization absorptive capacity.*

*Design/methodology/approach: A field test using a mailed questionnaire for data collection has been used to test the proposed model. To eliminate possible multicollinearity among independent variables, a multivariate regression analysis was used.*

*Findings: The results provide clear evidence about the importance of organization absorptive capacity as a moderator between the independent variables and company success in business innovation, except the company's strategic leadership as defined here is equally important to low and high absorptive capacity organizations for successfully implementing business innovations.*

*Research limitation/implications: Despite the relatively broad scope of the proposed model, other factors may also be important and should be included in future studies.*

*Practical implications: The detailed items used for measuring the main constructs provide further insights for managers developing these areas within their organizations.*

*Originality/value: While the study is grounded in the literature of what until now have been four separate areas of knowledge, it proposed and tested an integrated model for these areas moderated by organization's absorptive capacity.*

## INTRODUCTION

The business literature has paid a great deal of attention to the relatively new concept of organization absorptive capacity and its importance as a requirement for companies to manage and prosper in a business environment heavily dependent on innovation (Noblet et al., 2011; Popaitoon and Siengthai, 2014; Elbashir et al., 2011; Kohlbacher et al., 2013). While many organizations have derived substantial benefits from business innovation, success implementing the required changes is far from assured, with many organizations also reporting disappointing results due to missed objectives, unexpectedly high costs, and turmoil caused by the changes. Besides the continuous need for organizations to re-invent themselves and for developing new products and services (O'Sullivan, 2003), many companies have adopted quality improvement methodologies which call for a continuous effort to improve products, processes, and operations to better satisfy customer needs. The required changes may also call for employee empowerment in decision making, a team approach to identify, prioritize targets for improvement, including changes to organization values and culture. Although there has been a significant amount of success with TQM, managers have realized that in many cases there is need for more dramatic improvements in productivity, competitiveness and profitability. This can be accomplished by major paradigm shifts which focus on value-added activities as well as other underpinnings for successfully implementing the concept of Business Process Reengineering (BPR) (Guimaraes and Paranjape, 2013; Caccia-Bava et al., 2005).

Regardless of the change methodology being employed, the factors important to innovation success or failure are many, but most authors would agree that the change process has to bear certain characteristics. Many researchers have looked to improvements in strategic leadership as critical to developing an organization environment conducive to innovation (Flatten et al., 2015; Lee et al., 2014; Sun and Anderson, 2011; Waldman et al., 2001; Williams, 2004). To help define and prioritize important problems and opportunities to the organization, many have proposed Competitive Intelligence (CI) programs as important to company success (Elbashir et al., 2011; Moilanen et al., 2014; Vedder and Guynes, 2002; duToit, 2003; Tarraf and Molz, 2006). Further, effective Management of Technology (MOT) is thought to be a critical requirement for successfully implementing most modern business changes (Lee et al., 2014; Wang et al., 2014; Block, 2014; Beattie and Fleck, 2005). While these propositions are exceedingly important, the existing literature contains little empirical evidence supporting them. As called for in the study by Guimaraes and Armstrong (1998a), while these constructs are well established among

scattered groups of academic researchers and practitioners, much remains to be done to test these propositions in practice. Some of these constructs have been addressed by narrow groups of academic researchers in their area of specialization and almost completely ignored by others studying the management of innovation, despite their combined importance among practicing managers. For example, despite its critical importance for organization innovativeness, strategic leadership has been substantially ignored by the academic circles researching the impact of management of technology in business innovation. Even more surprising has been the academic researcher community's neglect of CI as an important determinant of business innovation success, at a time when large numbers of managers from many companies have formed a professional association and created a special journal to specifically address issues important to this area. Similarly, some researchers of business innovation have addressed special characteristics of the innovation process as an important factor for innovation implementation success (Guimaraes and Paranjape, 2013; Caccia-Bava et al., 2005), but most other researchers of business innovation management have ignored this construct altogether. Last, despite the increasing acceptance of organization absorptive capacity as an important influence in identifying the need to innovate, as well as on the entire process for implementing business innovation, relatively little empirical research is available addressing organization absorptive capacity as a factor in business innovation success (Carrillo, 2005; Meijboom et al., 2007; Nadkarni and Narayanan, 2007; Weijermars, 2009). Thus, it might be particularly important to academic researchers and practicing managers alike to test an integrated model which brings together these major factors potentially important to effective implementation of business innovation. That was the primary objective of the field test discussed here.

## THEORETICAL BACKGROUND AND PROPOSED HYPOTHESES

### Dependent Variable— Business Innovation Success

Business innovation has been studied from a very wide variety of perspectives. Enkel et al. (2009), among many others, have explored the importance of innovation approaches which emphasize the inclusion of company outsiders. Johannessen et al. (2001) provided some guidelines for categorizing types of innovations in terms of what is being changed, how new, and new to whom? While it is important to understand the great variety of perspectives and factors affecting business innovation, this study has a very specific practical focus: The literature prescribing

important determinants of business innovation success is grouped into four main areas encompassing strategic leadership, competitive intelligence, management of technology, and specific characteristics of the company's innovation process. Further, organization absorptive capacity has been considered to be a possible moderator for these determinants of innovation success (Elbashir et al., 2011; Moilanen et al., 2014). While these major areas of study may indeed be important to enhance company innovation and competitiveness, the existing literature on each area is not being shared by researchers in the other areas. That has led until now to the study of models relatively narrow in scope and primarily focused on the particular research area. This study proposes an integrated model which tests these constructs as a set of determinants of innovation success and the possible moderating effect of industry clockspeed. To accomplish that, this study uses a broad definition of business innovation, without specifically measuring details of the innovation process such as if partners were involved, if it created new markets or new sources of supplies, etc.

The rationale for the definition/measure of innovation used here starts with the premise that to derive benefits from strategic opportunities and address problems, companies have to implement innovations to their business processes, products, and/or to the organization itself. This variable represents the degree of company effectiveness in implementing business innovation in these areas. A company's ability to effectively implement these innovations has a dramatic impact on organization performance and business success (Guimaraes and Armstrong, 1998a). A survey of the practitioner and academic literatures show that to manage business innovation effectively organizations need to: 1. Be in touch with their markets, customers, competitors, new products, etc; 2. Have adaptive leadership which promotes innovation; 3. Manage technology effectively in supporting the necessary changes; and 4. Follow some basic prescriptions while implementing the innovation process. Each one of these is correspondingly represented by the independent variables in this study which are discussed next.

### Independent Variable— Competitive Intelligence

To keep in touch with what is going on in their markets, managers are increasingly recognizing the importance of competitive intelligence and knowledge management as a key asset (Elbashir et al., 2011; Moilanen et al., 2014; Vedder and Guynes, 2002; duToit, 2003; Swartz, 2005; Tarraf and Molz, 2006). With the increase in business competition, company survival and success is now determined by its rate of learning. If it is faster than external changes,

the organization will experience long term success (Darling, 1996). Ironically, even though as much as 68% of U.S. companies have an organized approach to providing information to decision makers (Westervelt, 1996), historically, according to Ettorre (1995), less than 10 percent of American corporations managed the CI process well, and effectively integrate the information into their strategic plans. More recent statistics on the subject are not available but no major differences are expected.

The antecedents and consequences of competitive intelligence dissemination have been studied by Maltz and Kohli (1996). Competitor Analysis (CA) was proposed by Ghoshal and Westney (1991), and other approaches useful for companies to collect information from competitors were addressed by Heil and Robertson (1991). The importance of organization intelligence to financial performance has also been demonstrated. Historically, companies with well-established CI programs on the average showed earnings per share of \$1.24, compared to those without CI programs which lost 7 cents (King, 1997).

The literature contains many examples of benefits that can be derived from CI. Among these are improved competitive edge (McCune, 1996; Sawka, 1996; Westervelt, 1996; duToit, 2003; Editors, 2004) and improved overall company performance (Babbar and Rai, 1993; Guimaraes and Armstrong, 1998a; Davison, 2001), two essential company goals that can be brought about with effective application of competitive intelligence. More specific benefits of CI include: uncovering business opportunities and problems that will enable proactive strategies (Ellis, 1993; Westervelt, 1996); providing the basis for continuous improvement (Babbar and Rai, 1993); shedding light on competitor strategies (Harkleroad, 1993; Westervelt, 1996); improving speed to markets and supporting rapid globalization (Baat, 1994; Ettorre, 1995); improving the likelihood of company survival (Westervelt, 1996); increasing business volume (Darling, 1996); providing better customer assessment (Darling, 1996); and aiding in the understanding of external influences (Sawka, 1996). Benefits such as these provide the basis for firms to better understand the potential impact of the proposed innovations and the means by which they can be infused into the company's fabric. Based on the above discussion, we propose hypothesis

- H1: Company CI effectiveness is directly related to effectiveness implementing business innovation.

### Independent Variable— Strategic Leadership

There is a substantial body of knowledge proposing the importance of effective leadership as an ingredient to successful organization innovation (Flatten et al., 2015; Lee et al., 2014; Sun and Anderson, 2011; Waldman et al., 2001). There are many types of leadership (i.e. formal/informal, based on specific skills, social status, etc.) arising from the circumstances in which leaders/followers find themselves. However, for the purpose of this study the relevant construct is company strategic leadership (Garcia-Morales et al., 2012). Transactional strategic leadership has been studied widely (Garcia-Morales et al., 2012; Pawar and Eastman, 1997) as one operational within an existing organizational system or culture instead of trying to change it. It attempts to satisfy the current needs of followers by focusing on exchanges and contingent reward behavior. It pays close attention to exceptions or irregularities and takes action to make corrections (Burns, 1978; Bass, 1985). Conceptually similar to the cultural maintenance form of leadership described by Trice and Beyer (1993), transactional leadership acts to strengthen existing organization processes, structures, strategies, and culture.

The second form of strategic leadership is transformational or “charismatic” leadership (Garcia-Morales et al., 2012; Pawar and Eastman, 1997). According to Waldman et al., (2001) the leader articulates “a vision and sense of mission, showing determination, and communicating high performance expectations” (p.135). The followers reply with confidence in the leader and strong admiration or respect. Also they identify with the leader’s vision and with the organization itself, creating a high level of collective cohesion. This cohesion and the leader’s expressions of confidence in the followers’ ability to attain the vision produce, in turn, a heightened sense of self-efficacy (Podsakoff et al., 1990). Further, charismatic leaders are likely to show persistence and enthusiasm in pursuing goals and be demanding of others through the communication of high performance expectations (Kanter, 1983; Trice and Beyer, 1993). There is evidence that charismatic leadership at the top executive level is important for company performance (Hambrick and Finkelstein, 1987; Day and Lord, 1988; Yukl, 1998). Katz and Kahn (1978) argued that while charismatic leadership may be more relevant to situations where organization innovation is important, both transactional and transformational (charismatic) leadership are potentially important at the strategic level, that it is particularly important as a means of mobilizing an organization to meet the demands of its environment. Bass (1985) viewed transactional and charismatic leadership as being somewhat complementary in that both could be

displayed by the same individual leader. Similarly, Trice and Beyer (1993) acknowledged that both maintenance- and innovation-oriented leadership could be shown by a given leader over time. Based on the above discussion we propose hypothesis

**H2:** Strategic leadership is directly related to effectiveness implementing business innovation.

### Independent Variable— Management of Technology (MOT) for Business Innovation

As business competitiveness increases, many business organizations have used technology for redesigning business processes, provide new products and services, and improve the organization work environment. Many authors have proposed the importance of a wide variety of technologies to support business innovation (Lee et al., 2014; Wang et al., 2014; Block, 2014; Beattie and Fleck, 2005; Khalil and Ezzat, 2005; Li-Hua and Khalil, 2006). Computer Telephony Integration has been touted as a powerful tool to improve the relationship with customers (McCarthy, 1996). The effects of computer technology on organization design, intelligence and decision making have long been of interest to researchers (Huber, 1990). The use of computers for data mining and warehousing is seen as essential for decision support (Anonymous, 1995). Friedenberg and Rice (1994) and Guimaraes et al., (1997) have proposed Expert Systems as viable implementation vehicles for business change because they are effective in capturing and distributing knowledge and knowledge processing capability across an organization. The list of technologies available to support the necessary business innovations is endless. For business innovations requiring technology, without effective MOT the innovation implementation processes would be severely hindered and in many cases rendered impossible. Based on the above discussion, we propose hypothesis

**H3:** MOT effectiveness is directly related to effectiveness implementing business innovation.

### Independent Variable— Important Characteristics of the Innovation Process

A survey of the literature on business innovation management reveals several pre-requisites for successfully implementing business innovation such as conformity to company objectives, employee and department participation in the innovation process, customer input, reasonably balancing risk taking with cost benefit analysis, monitoring

progress, and communication regarding the innovation process. In other words, how innovation is implemented is an important determinant of success. Specifically, as proposed by Guimaraes and Armstrong (1998b), and subsequently assessed in practice (Guimaraes and Paranjape, 2013; Caccia-Bava et al., 2005), the important characteristics of the innovation process enumerated above are expected to influence the company’s ability to successfully change its products, processes, and its organizational structure and culture. Thus, we propose hypotheses

**H4:** The extent to which the innovation process bears the desirable characteristics will be directly related to company effectiveness implementing business innovation.

### Moderating Variable – Absorptive capacity

Absorptive capacity has been originally defined as “the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends” (Cohen and Levinthal, 1990, p. 128). In the realm of management research, absorptive capacity encompass a wide range of theories including organization learning (Lane et al., 2001), innovation (Tsai, 2001), a knowledge-based view of the firm (Zhao and Anand, 2009) and organization’s dynamic capabilities (Zahra and George, 2002). According to the dynamic capabilities theory, firms need to adjust their resource base constantly to cope with the changing environment, thereby generating a competitive advantage (Teece et al., 1997).

As an organization’s dynamic capability, absorptive capacity is embedded in organizational processes considered important enablers for successful organizational change and growth (Zott, 2003). Teece (2007) has emphasized the important role of strategic leadership in developing absorptive capacity and providing the necessary resources for this critical component of a company’s managerial infrastructure. In this study, we view absorptive capacity as such, while providing the conduit for information from strategic leadership, competitive intelligence, management of technology, and the individual change processes themselves to flow through the entire organization affecting the decision making process of managers and lower workers alike.

Cohen and Levinthal (1990) viewed absorptive capacity as a three-dimensional construct composed of identifying, assimilation, and exploiting external knowledge. Since then it has undergone several modifications and extensions (Lane et al, 2006; Lewin et al., 2011; Todorova and Durisin, 2007; Flatten, et al. 2011). Zahra and George

(2002) proposed it as a four-dimensional construct which has been validated by several studies (Brettel et al., 2011; Flatten et al., 2011; Jansen et al., 2005). The four dimensions or capabilities are: 1) Acquisition which refers to the identification and intake of external knowledge potentially relevant to the firm. 2) Assimilation of the knowledge that has previously been acquired through its analysis, understanding, and interpretation. 3) Transformation which focuses on combining prior existing knowledge with newly acquired knowledge to update underlying processes. 4) Exploitation focused on fostering the commercial application of the new knowledge.

Zahra and George (2002) noted that the first two dimensions (acquisition and assimilation) are capabilities exploring potentially relevant knowledge, thus they are jointly called potential absorptive capacity, expressing a firm’s ability to identify and gather external knowledge. The last two (transformation and exploitation) are capabilities exploiting relevant knowledge and realizing commercial gains from it, thus jointly they are called realized absorptive capacity, expressing a firm’s ability to employ and leverage absorbed knowledge converting such knowledge into new or improved products and processes, (Flatten et al., 2011).

In this study we surmise that even though the infrastructure (equipment, employee recruitment, training, etc.) enabling potential absorptive capacity and realized absorptive capacity can be developed and employed separately, they must exist simultaneously in order to achieve the beneficial organizational results (Zahra and George, 2002). Indeed, an extension of the theoretical absorptive capacity concept is the work of Todorova and Durisin (2007) which assumes feedback loops between the potential and realized absorptive capacity concepts and propose that firms with higher levels of absorptive capacity will have an advantage identifying, gathering, assimilating, and exploiting further relevant knowledge in the future. Therefore, we should expect that as a whole the absorptive capacity construct would act as a conduit for knowledge in an organization. If so, it should be viewed as an important component of the company innovation management infrastructure, magnifying the four major success factors proposed earlier (the independent variables) as determinants of company innovation success. Indeed, organization absorptive capacity has been considered by some to be a possible moderator for various determinants of innovation success (Elbashir et al., 2011; Moilanen et al., 2014). Based on the above discussion, we propose the following hypotheses:

(H1b): High organization absorptive capacity heightens the relationship between competitive intelligence and innovation success.

- (H2b): High organization absorptive capacity heightens the relationship between strategic leadership and innovation success.
- (H3b): High organization absorptive capacity heightens the relationship between effective MOT and innovation success.
- (H4b): High organization absorptive capacity heightens the relationship between the extent to which the innovation process bears the desirable characteristics and innovation success.

STUDY METHODOLOGY

This section provides an overview of the field-test data collection procedure, a brief description of the sample demographics, a detailed discussion of how the variables were measured, and the data analysis procedures.

Data Collection Procedure

This field test used a mailed questionnaire to collect data from the Internal Auditor Director (IA) of each company. IAs were chosen as respondents because, from a corporate perspective, they are most aware of the problems and activities throughout the company. Furthermore, the group is relatively homogeneous, a characteristic that strengthens internal validity of the data collection instrument used in the study. We felt that a survey of top managers who are directly responsible for strategic leadership, or of managers directly involved with specific projects implementing organizational innovations, would have greater likelihood of bias. After some rewording of a few questions following the input from a small pilot test involving four Ias, the questionnaire was distributed by mail to the Ias of 1000 organizations randomly selected from a list of approximately 4,000 members of an Internal Auditors Association. The sample represents a wide variety of organizational settings, (i.e. small as well as large companies), from several industry sectors. Participation

was voluntary, and the cover letter assured confidentiality of the responses and that only summary information from the participants would be published. The survey was accompanied by a published report from a previous study on the topic (as a courtesy to prospective respondents) and by a postage-paid envelope addressed for direct return to the researchers.

Sample Description

Through the procedure just described, 1000 Ias were selected to participate in the study and 294 returned the questionnaire in time for data analysis. Nine questionnaires were thrown out due to missing data. The remaining 285 usable questionnaires provide a response rate which is acceptable for studies of this type (Teo and King, 1996) and consistent with past experience with mailed surveys (George and Barksdale, 1974; Igbaria et al., 1991). Nevertheless care was taken to assess the representativeness of the sample. Chi-square tests were used with a sample of non-respondents to check for the possibility of non-response bias. The results of this test support the conclusion that based on company size (gross revenues) and industry sectors the companies in the sample are similar to those in the target sample. The actual sample versus the target sample percentage compositions in terms of primary industry sectors and company gross revenues are presented in Tables 1 and 2, respectively.

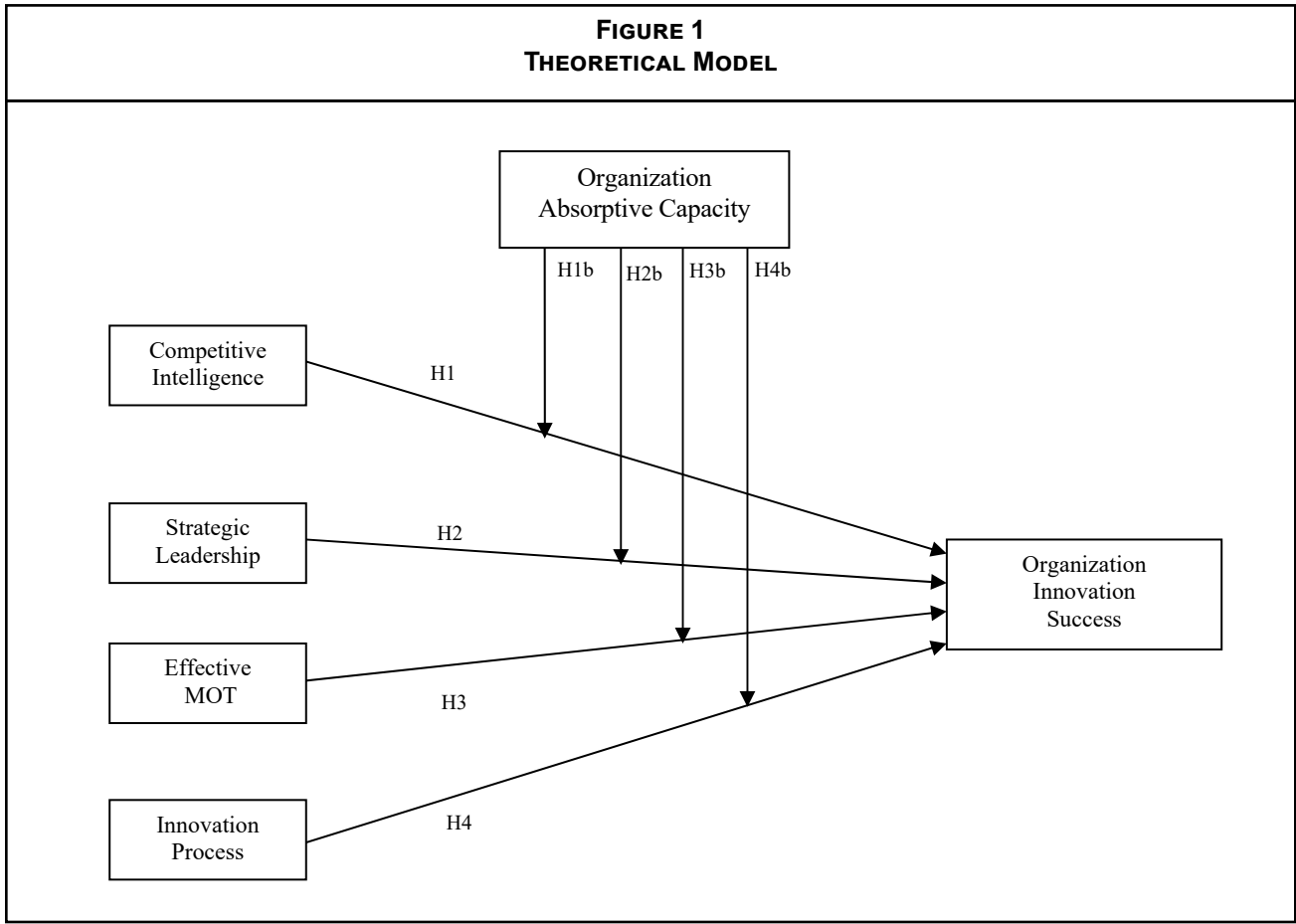
Variable Measurement

**Innovation Success** or company effectiveness implementing business innovation represents the company's ability to alter its business practices in the desired manner. As previously used by Guimaraes and Armstrong (1998a) and Guimaraes et al., (1999), this was measured by the respondents rating the effectiveness of the firm in changing four areas to address strategic problems and opportunities: products, processes, organization structure and organization culture. This was done in comparison with the closest competing organizations and using a seven-point Likert-type scale ranging from 1 extremely lower than average), 2 much lower), 3 somewhat lower), 4 average), 5 somewhat higher than average), 6 much higher), and 7 extremely higher). The ratings for the four areas were averaged to produce a single measure for effectiveness in implementing business innovation.

**Effectiveness in Competitive Intelligence** was measured, as proposed by Guimaraes and Armstrong (1998a) and used by Guimaraes and Paranjape (2013), by asking the respondent to rate the effectiveness of the firm in identifying strategic business opportunities and problems in six specific areas: traditional industry competitors, emerg-

TABLE 1 COMPANY INDUSTRY SECTORS			
Industry Sectors	No. of Companies	Actual Sample (n=285)	Target Sample (n=1000)
Manufacturing	93	32.6%	34.1%
Financial Services	24	8.4%	8.1%
Banking	21	7.4%	6.8%
Other	21	7.4%	6.6%
Retailers	19	6.7%	5.2%
Health Care	18	6.3%	5.1%
Merchandising	16	5.6%	6.5%
Transportation	15	5.3%	7.2%
Utilities	15	5.3%	4.7%
Communications	13	4.6%	4.9%
Wholesalers	12	4.2%	3.7%
Insurance	10	3.5%	5.1%
Mining	8	2.7%	2.0%
Total	285	100%	100%

TABLE 2 COMPANY GROSS REVENUES			
Gross Revenues	No. of Companies	Actual Sample (n=285)	Target Sample (n=1000)
Less than \$100M	0	0.0%	0.0%
\$101M-\$300M	4	1.4%	1.9%
\$301M-\$500M	8	2.8%	3.2%
\$501M-\$700M	21	7.4%	8.5%
\$701M-\$1B	31	10.9%	9.7%
\$1B-\$2B	43	15.1%	13.3%
\$2B-\$5B	49	17.2%	16.8%
\$5B-\$10B	72	25.2%	28.0%
Over \$10B	57	20.0%	18.6%
Total	285	100.0%	100.0%



ing competitors, traditional customer needs and wants, non-traditional customer needs and wants, relationships with business partners, and product or service development. Each item was rated on the same seven-point scale as above. The overall measure of CI effectiveness was the average rating for the six areas.

**Effectiveness in Strategic Leadership** represents the ability of the top management team to provide leadership when the organizational environment requires innovation. Environments perceived as highly uncertain (requiring major innovations) tend to be perceived as risky, where wrong decisions could be costly. Such environments probably generate a high degree of stress. Charismatic leadership would tend to reduce stress and generate confidence, and perhaps show how uncertainty can be turned into a vision of opportunity and success (Flatten et al., 2015; Lee et al., 2014; Sun and Anderson, 2011; Bass, 1985). While charismatic leadership may be more relevant to situations where organization innovation is of major importance, both transactional and transformational (charismatic) leadership are potentially important at the strategic level. Further, Bass (1985) viewed transactional and charismatic leadership as being somewhat complementary in that both could be displayed by the same individual leader. The same items proposed by Waldman et al., (2001) were used to measure the two types of strategic leadership: It was assessed by asking the respondents to rate the extent to which their top managers in general exhibit the particular behavior when compared to managers of main competing organizations. Transactional leadership: 1. Takes actions if mistakes are made. 2. Points out what people will receive if they do what needs to be done. 3. Reinforces the link between achieving goals and obtaining rewards. 4. Focuses attention on irregularities, exceptions, or deviations from what is expected. 5. Rewards good work. Charismatic leadership: 1. Shows determination when accomplishing goals. 2. I have complete confidence in them. 3. Makes people feel good to be around them. 4. Communicates high performance expectations. 5. Generates respect. 6. Transmits a sense of mission. 7. Provides a vision of what lies ahead.

**Characteristics of the Innovation Process** is defined as the degree to which companies promote “desirable” innovation process activities. As previously used by Guimaraes and Paranjape (2013) and Caccia-Bava et al., (2005), this was measured by asking the respondents to rate the importance or focus that the company places on ten areas of the innovation process characteristics. These consisted of: all significant innovations must conform to company objectives, all affected departments participate in the innovation process, individual employee input is considered important, customers input is considered important, business partners input is considered important, ability to balance risk taking with cost/benefit, clearly defined measures to monitor progress, innovation objectives and progress are clearly communicated, responding quickly to required change, and responding effectively to required change. The same seven-point Likert-type scale was used, and the overall rating of characteristics of the innovation

process for each firm was determined as the average of the ten areas.

**MOT Effectiveness in Supporting Business Innovation** is the extent to which the company’s needs for technology while implementing business innovation have been met. As previously used by Guimaraes and Armstrong (1998a) and Guimaraes et al., (1999), this was measured by asking the respondents to rate this for the overall company and in four specific areas: technology leadership in the industry, knowledge of how to get the best technology, effectiveness with which technology has been used over the years, and effectiveness in using technology in comparison with main competitors. The respondents were asked to use the same seven point scale described above. The measure for MOT effectiveness in supporting business activities is the average of the ratings for these five items.

**Organization Absorptive Capacity** measures the company’s “ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends” (Cohen and Levinthal, 1990, p. 128). Over time the measure has been expanded and modified. For this study we chose the measure validated by several studies (Brettel et al., 2011; Flatten et al., 2011) including four dimensions or capabilities addressing the identification and intake of external knowledge potentially relevant to the firm, assimilation of the knowledge that has previously been acquired, transformation of this knowledge by combining prior existing knowledge with newly acquired knowledge to update underlying processes, and exploitation of the knowledge to produce new products and processes benefitting the company. Respondents were again asked to use a seven point scale (1 = strongly disagree to 7 = strongly agree) to rate the fourteen items measuring this major variable. The specific items are:

- Please specify to what extent your company uses external resources to obtain information (e.g., personal networks, consultants, seminars, internet, databases professional journals, academic publications, market research, laws and regulations).
- The search for relevant information concerning our industry is every-day business in our company.
- Our management motivates the employees to use information sources within our industry.
- Our management expects that the employees deal with information beyond our industry.

Please rate to what extent the following statements fit the communication structure in your company.

- In our company, ideas and concepts are communicated cross-departmental.

- Our management emphasizes cross-departmental support to solve problems.
- In our company there is a quick information flow, e.g., if a business unit obtains important information it communicates this information promptly to all other business units or departments.
- Our management demands periodical cross-departmental meetings to exchange information on new developments, problems, and achievements.

Please specify to what extent the following statements fit the knowledge processing in your company.

- Our employees have the ability to structure and to use collected knowledge.
- Our employees are used to absorb new knowledge as well as to prepare it for further purposes and to make it available.
- Our employees successfully link existing knowledge with new insights.
- Our employees are able to apply new knowledge in their practical work.

Please specify to what extent the following statements fit the commercial exploitation of new knowledge in your company (Please think about all company divisions such as R&D, production, marketing and accounting).

- Our management supports the development of prototypes.
- Our company regularly reconsiders technologies and adapts them accordant to new knowledge.
- Our company has the ability to work more effectively by adopting new technologies.

### Construct Validity

Several precautions were taken to ensure the validity of the measures used. Many of the recommendations by Carmines and Zeller (1979) were followed. To ensure content validity, a thorough survey of the relevant literature was undertaken to understand the important aspects of each major variable and its components, and not neglect important dimensions of any variable. To further reduce the possibility of any non-random error, the main source of invalidity (Carmines and Zeller, 1979, p. 15), a group of four practitioners from different companies with extensive experience in managing business innovation reviewed the questionnaire for validity (measuring the phenomena intended), completeness (including all relevant items), and readability (making it unlikely that subjects will misinterpret a particular question). Some questions were re-

worded to improve readability; otherwise, the items composing each major variable remained as derived from the literature.

As proposed by Carmines and Zeller (1979), “construct validation focuses on the extent to which a measure performs in accordance with theoretical expectations” (p.27). To ensure construct validity, the theoretical relationships between the constructs should have been previously established, and these relationships hopefully have been empirically supported by different studies over time. As discussed earlier, the theoretical underpinnings of this study are relatively well established, with most of the items in each construct having been addressed before by several authors. Second order factor analyses on the two types of strategic leadership (transactional and charismatic leadership) indicate that they can be combined into a single factor. Thus, the subsequent multivariate analysis used the combined factors.

### Construct Reliability

Since many of the measures used are relatively new, it was deemed important to re-test their reliability. Carmines and Zeller (1979) identified four basic methods to assess a measure’s reliability (re-test, alternative-form, split-halves, and the internal consistency methods) and discussed their strengths and limitations. The main advantage of the internal consistency method is that it requires a single test, in lieu of splitting or repeating of items. “By far the most popular of these reliability estimates is given by Cronbach’s alpha” (Carmines and Zeller, 1979, p.44) which “in most situations provides a conservative estimate of a measure’s reliability” (Carmines and Zeller, 1979, p. 45). The authors go on to say “that although more complex computationally, alpha has the same logical status as coefficients arising from the other methods of assessing reliability.”

Several authors have proposed different acceptable levels of reliability coefficients. For example, Nunnally (1978) suggested a coefficient of 0.50 or higher would suffice. Srinivasan (1985) and Magal et al., (1988) contended that when using a not validated data gathering instrument in exploratory research, a reliability coefficient of 0.5 or higher is acceptable. Van de Ven and Ferry (1980) posited that in this type of research even a value of 0.4 or higher will be sufficient. In our case, the reliability coefficients of all the factors were higher than 0.70, which was proposed by Peterson (1994) as useful for more rigorous studies. As Table 3 indicates, the internal consistency reliability coefficients (Cronbach’s alpha) for the scales used in this study are all well above the level of 0.50 acceptable for exploratory studies of this type (Nunnally, 1978).

TABLE 3 CORRELATIONS BETWEEN MAJOR VARIABLES									
	Mean	Std Dev	1	2	3	4	5	6	7
1. Innovation Success	4.17	1.53	(.71)						
2. Competitive Intelligence	3.34	2.11	.58**	(.86)					
3. Transactional Leadership	4.02	1.10	.32**	NS	(.82)				
4. Charismatic Leadership	3.15	1.99	.38**	.40**	.33**	(.85)			
5. Management of Technology	4.26	1.16	.31**	NS	.26**	.20**	(.91)		
6. Innovation Process Features	3.73	1.46	.44**	.33**	.25**	.35**	.19**	(.93)	
7. Absorptive Capacity	3.55	1.29	.28**	.21**	.13*	.34**	.46**	.41**	(.96)
Numbers in parentheses are Cronbach's alpha reliability coefficients.									
NS means not significant, * means p<.05, ** means p< .01									

TABLE 4 RESULTS OF MULTIPLE REGRESSION USING STEPWISE METHOD (Dependent Variable: Innovation Success)		
Independent Variables*	Incremental R <sup>2</sup>	Significance Level
1. Competitive Intelligence	.34	.00
2. Innovation Process Features	.16	.00
3. Strategic Leadership	.09	.03
4. Management of Technology	.05	.04
Total Variance Explained	.64	
* In the sequence in which they entered the regression equation.		

Data Analysis Procedures

The average and standard deviation for each item in the questionnaire were computed. Confirmatory factor analyses for the items in each main variable were conducted as the basis for their validation and as a prerequisite for assessing their internal reliability through the Cronbach's alpha coefficients presented within parentheses in Table 3. To test the proposed hypotheses, Pearson's correlation coefficients between the major study variables were com-

puted and presented in Table 3. To detect any possible difference between the two strategic leadership types as determinants of business innovation success, they were processed separately in this analysis. Because this study is focused on assessing the moderating impact of organizational absorptive capacity as a whole, its components were not considered separately. A second order factor analysis indicated that the four components measuring absorptive capacity can be combined into a single factor which has been used in this study.

Because of the possibility of collinearity among the independent variables, a stepwise multivariate regression analysis was conducted to assess the extent to which each independent variable incrementally contributes to explaining the variance in the dependent variable. In this case the two leadership types were combined since they both were found to be significant determinants of business innovation success and such combination was deemed valid by a second order factor analysis. The multivariate regression analysis results are presented in Table 4.

Moderated multiple regression analysis using the hierarchical technique (Cohen and Cohen, 1983; James and Brett, 1984; Peters et al., 1984; Hair et al., 1995) was performed to assess the moderating effect of company absorptive capacity on the relationships between the four independent variables and firm's innovation effectiveness or success. The results are presented in tables 5 and 6.

This data analysis technique has been recommended as preferable to subgroup analysis for testing moderator effects because it makes more complete use of the data and its interaction effect (with the independent variables) on

TABLE 5 MODERATED MULTIPLE REGRESSION RESULTS (DEPENDENT VARIABLE: COMPANY INNOVATION SUCCESS)	
Independent Variables and Moderator: Absorptive capacity	INCREMENTAL R <sup>2</sup>
Competitive Intelligence	.34**
+ Absorptive capacity	.16**
+ Absorptive capacity x Competitive Intelligence	.08*
Total R <sup>2</sup>	.58**
Innovation Process Features	.19**
+ Absorptive capacity	.16*
+ Absorptive capacity x Change Process Features	.06*
Total R <sup>2</sup>	.41**
Strategic Leadership	.12**
+ Absorptive capacity	.06*
+ Absorptive capacity x Strategic.Leadership	.01NS
Total R <sup>2</sup>	.19NS
Management of Technology	.09**
+ Absorptive capacity	.08*
+ Absorptive capacity x Management of Tech.	.06*
Total R <sup>2</sup>	.23**
* p <= .05 ** p <= .01 NS=Not Significant	

TABLE 6 MODERATED MODEL SLOPE COEFFICIENTS FOR INDEPENDENT VARIABLES ON INNOVATION SUCCESS					
Independent Variable	Moderator Variable	Slope***		Adjusted R <sup>2</sup>	
		Low	High	Low	High
Competitive Intelligence	Ab Capacity	.23**	.51**	.34**	.36**
Innovation Process Features	Ab Capacity	.27**	.44**	.27**	.32**
Strategic Leadership	Ab Capacity	.36**	.40**	.33**	.29**
Management of Technology	Ab Capacity	.25**	.49**	.21**	.36**
* p <= .05, ** p <= .01					
*** Two separate equations were obtained, one for the low (below the median) moderator group, the other for the high (above the median) moderator group. Slope coefficients (non-standardized beta weights) for low and high moderator groups are significantly (.01 or lower) different for Company Intelligence, Management of Technology, and Innovation Process Features.					



the dependent variable (Zadeck, 1971; Peters and Champoux, 1979; Peters et al., 1984). First, innovation success was regressed on each of the four independent variables. The moderating variable (absorptive capacity) was added to the regression equation, and the increment in R2 (and the level of significance associated with the change) were computed. Once the significant relations were identified, the beta coefficients were computed to assess the direction of the relationship.

The increment in R2 rather than the magnitude of the correlation coefficient was used to determine the relative importance of each independent variable in explaining variation in innovation success (Arnold, 1982; Cohen and Cohen, 1983). The interaction of the moderating variable and each of the factors was added, and the increment in R2 (and associated significance level) were determined. This procedure makes the most conservative estimate possible of moderating effects as it “assigns to the additive effects all variance that cannot be unequivocally attributed to the interaction effects” (LaRocco et al., 1980). The interaction is denoted in Table 5 by (independent variable x company absorptive capacity).

To avoid the problems associated with subgroup correlational analysis and to complete the moderator model analyses (Peters and Champoux, 1979; Arnold, 1982; Peters et al., 1984), slope coefficients (non-standardized beta coefficients) were used to examine the direction of the significant interactions. Furthermore, to determine whether slope coefficients vary as a function of the interaction, the moderator variable was split into low (below the mean values) and high (above the mean values) groups. The statistical significance level of the differences between respective slope coefficients obtained for the two groups (low and high) were tested by applying the formula proposed by Arnold (1982).

The items comprising each major variable were subjected to a principal component analysis followed by a varimax (orthogonal) rotation to identify composite factors. To be included in a given factor the item is expected to load unambiguously (i.e., with one loading of 0.5 and no other loadings greater than 0.4), as suggested by Magal et al. (1988). As suggested by several researchers (i.e. Nunnally, 1978), the minimum eigenvalue for which a factor is to be retained was specified as 1.0. This procedure produced multifactor solutions for the main variables. Company absorptive capacity items loaded unambiguously into the four factors as expected. A second order factor analysis of these four factors produced a single factor representing overall company absorptive capacity which is used for this study.

Similarly, as a requirement to compute reliability coefficients for each multi-factor construct measure, second

order factor analyses were done on the extracted factors to ensure that they could be treated as one construct. In all cases, the analyses showed that the extracted factors can be combined (loaded unambiguously) into main single factors corresponding to the main variables in the model tested in this study. Based on the stated objectives of this study, further analyses shown in Tables 4, 5, and 6 used the combined sub factors for all major variables.

## RESULTS

Table 3 lists the means and standard deviations for the main research variables. As a group, in comparison with their main competitors, the companies in the sample are thought to be performing above average in the areas of implementing business innovation, and management of technology. On the other hand, on the average the companies in the sample are thought to be performing below average in the areas of charismatic leadership, competitive intelligence, and having the specific characteristics of change process needed for success in business innovation. The relatively large standard deviations indicate significant differences along all the major variables from company to company.

To test hypotheses H1-H4, Pearson's correlation coefficients were computed and presented in Table 3. All four independent variables show a direct relationship to success in business innovation, as defined in this study. Thus, based on these correlation coefficients, all four hypotheses are found significant at the 0.01 level or better. Because of the possibility of collinearity among the independent variables, a stepwise multivariate regression analysis was conducted to assess the extent to which each independent variable incrementally contributes to explaining the variance in the dependent variable. Table 4 shows that, dependent on the sequence in which the independent variable entered the regression equation: competitive intelligence explains 34 percent of the variance in innovation success, followed by the features of the innovation process, strategic leadership, and management of technology. Each independent variable makes a contribution to that effect at a significance level below .05.

### Results Regarding Company Absorptive Capacity as Moderating Variable

The moderated regression results are presented in Table 5. As explained earlier, the increment in R2, rather than the magnitude of the beta coefficients, is used to determine the relative contribution of the correlated independent variables in explaining variation in the dependent variable. Results in Table 5 also show that company absorp-

tive capacity showed significant interaction effects on the relationships between competitive intelligence, management of technology, and characteristics of the innovation process with the dependent variable innovation success.

Using a procedure described by Hunt et al. (1975), the interaction effects noted in Table 5 were analyzed further to determine the direction of the moderating effects on the relationships between the independent variables and innovation success. As noted by several researchers (Hunt et al., 1975; Peters and Champoux, 1979; Arnold, 1982; Peters et al., 1984), an infinite number of slope coefficients (nonstandardized coefficients) can be computed within a moderated multiple regression model. Peters and Champoux (1979) recommended that the slope coefficients be used for analysis because they “suggest the differential impacts which are likely to occur from interventions targeted at alternative groups and alternative variables” (p. 91). Following the procedure used by Hunt et al. (1975), values for the moderating variable falling above or below the median value were used to obtain two equations. The equations, one for the low (below the median) values and the other for the high (above the median) values of the moderating variable, were used to regress the independent variables on innovation success. Table 6 presents the results of these analyses. It shows that the low and high groups for company absorptive capacity differed significantly with respect to the relationships between competitive intelligence, management of technology, and innovation process characteristics with the dependent variable innovation success. The slope coefficients and R2 for these three independent variables are statistically significant at the .05 or lower significance level. These results confirm the strength of the interaction effects found in the moderated regression analysis. Based on the results in Tables 5 and 6, the hypotheses H1b, H3b, and H4b are accepted at the .05 significance level or better. The results for hypothesis H2b was not statistically significant so it is not accepted.

## CONCLUSIONS

The results provide strong evidence regarding the importance of strategic leadership, competitive intelligence, management of technology, and specific characteristics of the company's innovation process to the success of business innovation regarding products, business processes, organization structure, and organization culture. Given the importance of effectively implementing business innovation in these days of hyper competitiveness, it behooves top managers to do whatever they can to improve their company's performance in the areas of competitive intelligence, strategic leadership, management of technol-

ogy, and characteristics of the process used to implement the necessary innovations.

Regarding CI, there are some major implications from this study results. To improve their CI programs, managers need to consider the collection of market intelligence based on the six areas addressed in this study: the traditional industry competitors, emerging competitors, traditional customer needs and wants, non-traditional customer needs and wants, relationships with business partners, and new product or service development. The importance of any one of these areas may be relatively higher or lower, and in some cases some of these sources may be irrelevant, depending on the company's specific industry sector, line of business, products, and processes being considered. Good performance in these areas, whenever applicable to the company's industry sector and lines of business, are likely to lead to more effective implementation of business innovations. Also, before embarking in major programs for business innovation such as TQM and/or BPR, which are supposedly market driven, the implications for company strategic competitiveness from these changes should be validated with CI information, rather than superficial guesswork by top managers or BPR consultants more focused on the innovation process instead of the strategic reasons for change. At the very least, the market reaction must be carefully considered by any team charged with projects involving significant innovations to business processes, products, and/or the organization itself. As our sample indicates, on average companies are performing below average in this area most important to successful business innovation.

In the area of strategic leadership there are also several implications that can be derived from this study. Charismatic leadership (showing determination while accomplishing goals, inspiring confidence, making people feel good around you, communicating expectations for high performance, generating respect, transmitting a sense of mission, and providing a vision of what lies ahead) is on average and as a whole relatively scarce in industry today, and judging by its nature it should be difficult to develop. Nevertheless, managers must try, particularly in high clockspeed industry sectors (Guimaraes et al., 2002) requiring continuous innovation. Also apparently important for successful business innovation but less scarce than charismatic leadership, transactional leadership (taking action if mistakes are made, pointing out what people will receive if they do what needs to be done, reinforcing the link between achieving goals and obtaining rewards, focusing attention on deviations from what is expected, and rewarding good work) by its nature should be easier to develop. Pawar and Eastman (1997) proposed that transactional leadership is more relevant within an existing organization environment instead of one attempting



to implement changes. Katz and Kahn (1978) argued that charismatic leadership may be more relevant where organization change is important, but that both types of strategic leadership are potentially important. Our results indicate that for successful business innovation both types of leadership are important.

To improve technology management while implementing business innovation, managers must look at company performance in terms of its technology leadership position in its main industry sectors, knowledge of how to get the best technology available, effective use of specific technologies, and benchmarking the use of specific technologies against the company's main competitors or best-in-class target organizations. An important requirement to accomplish these objectives is the clear definition of the more important technologies necessary to support the company's main products and business processes, and technologies which will enable the structural and cultural changes considered important to improve company competitiveness. Another important requirement is management recognition that the implementation of each of the various technologies deemed important to the organization are dependent on specific success factors. The success factors for the various technologies have been identified and discussed elsewhere (Guimaraes et al., 2014; Guimaraes et al., 1992; Udo and Guimaraes, 1994; Yoon et al., 1995; Yoon et al., 1995; Guimaraes and Igbaria, 1997; Yoon et al., 1998) and are considered beyond the scope of this paper.

Further, to improve the likelihood for innovation success, top managers must ensure that their company's change process bear the desirable characteristics studied here: all significant changes must conform to company objectives, all affected departments participate in the change process, individual employee input is considered important, customers input is considered important, business partners input is considered important, managers ability to balance risk taking with cost/benefit, ensuring that clearly defined measures to monitor progress exist, that innovation objectives and progress are clearly communicated, and that the innovation management teams respond quickly and effectively to required change. These guidelines must be widely disseminated and enforced by project managers responsible for significant business innovations.

The effect of company absorptive capacity on innovation success and its success factors is quite significant for research and practice. The results indicate that it does have a magnifying effect on the success factors for business innovation. Thus the knowledge from effective competitive intelligence, effective management of technology, and effective innovation project management seems to be leveraged for companies with higher absorptive capacity

and less productive in terms of innovation success in companies with lower absorptive capacity. In the minds of practitioners that will beg the question: What can we do to increase company absorptive capacity? The answer will lie in the area of Human Resources Management (HRM) improvements because every item used to measure absorptive capacity is directly dependent on employee abilities and performance. Therefore to develop a company's absorptive capacity the HRM sub functions (employee recruiting, retention/weeding out, development/training, performance evaluation, and rewarding) must be taken more seriously than it is being done today in most organizations. These HRM sub functions must be revamped and charged with some long term objectives designed to give the company the people it needs to perform better along the company absorptive capacity items used in this study. Some policy making directions should for example include a stronger HR department whose director reports directly to the CEO and is an integral member of the corporate executive team. Essential for effective recruiting would be the development of a desirable working environment where intelligent, knowledgeable people want to come to work, rather than viewing people as a commodity whose cost is to be continuously minimized. Also helpful would be a work environment where workers are empowered to make decisions, are responsible for their results and with promotion from within preferences. Last, our results showed that strategic leadership is equally significant for high and low absorptive capacity companies. In either case, it is very important for developing employee morale and trust in management, as well as the creation of a sprit de corps among team members working on innovation projects.

#### Study Limitations and Research Opportunities

Based on an extensive survey of the relevant literature, this study is a first attempt at empirically testing the importance of company absorptive capacity as an influence in the connections between strategic leadership, competitive intelligence, management of technology, and specific characteristics of the company's innovation process for the success of business innovation projects. While the tested model represents a major contribution as an integration of several constructs which in the past have been studied in isolation, this model may need to be expanded further to include other factors potentially important to effective implementation of strategic business innovation. Another important contribution from further research could be the identification and empirical testing of other variables besides company absorptive capacity which might moderate the relationships between the independent variables and success in business innovation. Perhaps the use of path analytic modeling techniques would be ap-

plicable for these studies involving more extensive models. The results should provide valuable information on other possible determinants of innovation success, as well as on the extent to which strategic leadership can positively influence the effective use of technology, and CI programs, for companies to improve their business competitiveness, while ensuring that their innovation processes follow the prescribed guidelines suggested in this study.

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# **THE RIVERTON-KING COUNTY SMALL BUSINESS TRAINING SERIES: A CASE STUDY**

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## **ABSTRACT**

*This case is designed to be a class activity for introductory courses in entrepreneurship, small business management, marketing principles, and introduction to business. Through participating in this case activity, students will gain a better understanding of the decision making process including identifying problems and possible solutions. Additionally, group activities are presented to allow students to experience team exercises focused on the issues presented in the case. Teaching notes are provided to assist instructors with guiding students through the case, questions presented, and group activities. Teaching notes include key learning points of the case, suggested student responses to the case questions, recommended class times allotted for the case activities, and possible courses in which this case might align with material covered.*

Entrepreneurial and small businesses provide valuable services and products that contribute to the growth and sustainability of economies from both local and the national perspectives. The presence of these locally-owned businesses is evident in every city, town, community, and often can be found in rural, off-the-beaten-path locations. Consider those more visible establishments such as restaurants, healthcare facilities, professional services (legal, accounting, insurance agencies, real estate agencies, etc.), religious organizations, and retail businesses, as well as the less visible, but equally important, establishments like consulting practices, event planners, and public relations experts, and how many of these types of businesses are available in each town, city, and community throughout the nation. The need for these entrepreneurial and small businesses to continue to thrive in their areas is critical and, even with the available resources, additional ones can

prove to be vital in meeting their needs for sustainability, growth, and addressing the unique issues faced daily.

The Small Business Training Series is a partnership between the small, rurally-located Riverton-King County Chamber of Commerce and Economic Development Center (C/EDC) and business professors from a local university. The program offers training to chamber members, of which the focus is placed on small business owners, managers, and employees.

The Small Business Training Series, which completed its fourth year, is a blend of education, networking, and a lunch break for hardworking individuals, who are in many ways the economic backbone of the rural area. By partnering with the business professors, the C/EDC brings in experts to help local business personnel grow their companies, manage their workforces, and better prepare for the future of their organizations.

THE RIVERTON-KING COUNTY  
CHAMBER OF COMMERCE AND  
ECONOMIC DEVELOPMENT CENTER

As in many rural locations, the Riverton-King County Chamber of Commerce and Economic Development Center are combined in to one organization. This allows the county to benefit from the resources of both, including the personnel, events, activities, and programs designed to promote the area to residents, employers, tourists, and potential employers, as well as organizations seeking a location to conduct temporary business, such as the film industry and pop-up retailers.

Five full-time employees oversee the C/EDC’s functions, programs, and daily operations. The Executive Director serves in the leadership role to ensure all areas of the organization make progress towards their project goals as well as meet their overall goals for the county. The Chamber Director provides guidance and direction for the specific functions of the chamber of commerce including the members, events, meetings, and programs. The Project Manager works to assist the economic development center in attracting new business to the county. There is also an Administrative Assistant to perform secretarial and receptionist duties and a Comptroller to oversee the budgets and expenditures of the C/EDC.

The C/EDC offers area residents, businesses, and tourists opportunities to experience King County through a variety of events and programs. Past ones have provided family-focused, community events, celebratory new business opening ceremonies, guest speaker events, fundraisers, committee work, and the highly popular annual meeting. The C/EDC also provides information about what is happening throughout the county, assistance for new residents to better know their community, and produces promotional items, such as pamphlets, a website, and videos, to promote King County to tourists and industry that would be a good fit for the area.

The chamber membership includes area businesses of all sizes. Individuals are encouraged to join the chamber as a means to get involved in their community and to make a difference by serving on various committees. Total membership, including businesses and individuals, in Year 1 was 350, Year 2 was 323, Year 3 was 307, and Year 4 was 295.

ABOUT THE AREA

This case takes place in the rural, agriculturally-based King County situated along the Mississippi River. The county’s population is 49,688, of which 7.4% are under the age of 5, 26.7% are under the age of 18, and 13.2% are

over the age of 65. Females comprise 52.9% of the population. The racial make-up of the area is 71.3% Black or African American, 27.0% White or Caucasian, with the remaining racial representation of Hispanic/Latino, Asian, Native American, some other race, and two or more races.

The median household income in King County is \$25,757, and the median family income is \$30,324. Males have a median income of \$28,266, while females have a median income of \$20,223. Per capita income for the county is \$13,430. Approximately 24.9% of families and 29.2% of the population are below the poverty line. 38.4% of those under 18 and 24.6% of those over 65 are below the poverty line.

The largest city in King County is Riverton, which has a population of 33,928 of which 75.9% are Black or African American, 21.7% are White or Caucasian, and the remaining races are Asian, Hispanic/Latino, other races, and two or more races.

King County has a port on the Mississippi River and a regional airport with one commercial service provider offering two incoming and two departure flights daily. The three closest large cities to the area are 150 miles (driving time: 2 hours 45 minutes), 120 miles (driving time: 2 hours 15 minutes), and 150 miles (driving time: 2 hours 30 minutes). Selected data for the county are provided in Table 1.

TABLE 1 SELECTED DATA FOR THE COUNTY	
Private nonfarm establishments	1,181
Private nonfarm employment	14,273
Nonemployer establishments	3,465
Total number of firms	4,469
Black-owned firms	43.9%
Asian-owned firms	2.6%
Hispanic-owned firms	1.5%
Women-owned firms	35.3%
Manufacturers shipments (in \$1000)	840,250
Retail sales (in \$1000)	577,738
Retail sales per capita	\$10,413
Accommodation and food service sales (in \$1000)	93,800

HISTORY OF THE SMALL BUSINESS  
TRAINING SERIES PROGRAM

Throughout its existence, the Small Business Training Series has been overseen and organized by two chamber directors. The first chamber director, a Caucasian female, took a relaxed approach to planning the monthly training sessions. She scheduled each session one month in advance and provided minimal promotions; attendance remained low at approximately 10 participants each month. After two years, a change in leadership resulted in the hiring of the new chamber director, an African American male. He chose a more active role in building the program. In addition to scheduling the monthly training sessions one year in advance, he increased the promotion to include information in weekly e-blasts, which contain an abundance of information, quarterly newsletters, radio advertisements detailing the upcoming training sessions, announcements at chamber meetings and events, and inviting the business professors to speak at local civic club meetings and community events. Years 3 and 4 saw the number of participants attending each month increase to approximately 25. Table 2 provides monthly and annual attendance records of participants over the program’s four years.

TABLE 2 PROGRAM ATTENDANCE YEARS 1-4				
Months	Years			
	1	2	3	4
March	5	9	32	28
April	7	6	35	25
May	9	11	30	27
June	16	14	28	18
July	11	10	25	25
August	13	11	20	26
September	14	10	18	20
October	9	9	20	22
November	8	15	19	25
December	6	7	22	33
Average/Month	10	10	25	25
YTD Totals	98	102	249	246

The participants who regularly attend monthly training sessions equal about 50% of the attendees. Of those 50%, approximately 42% are small business owners, 38% are managers of small businesses, and the remaining 20% are a combination of employees of small businesses, work for large businesses, or are individuals with no affiliation

to a specific organization in the county. Another 45% of monthly attendees usually participate in multiple sessions, although they would not be classified as regulars. The remaining 5% of attendees account for participants who attend one session.

The majority of participants each month are over the age of 40, and a slightly higher percentage of males attend than females. Blacks or African Americans account for approximately 67% of attendees and 33% are Whites or Caucasians.

The variety of industries in the county is presented in Table 3; also provided is the ranking of each industry according to the number of employees and the participation of employees in the Small Business Training Series. The chamber members include businesses in all of the categories, however their participation in the program is sporadic, at best.

TABLE 3 RANKING OF INDUSTRIES IN THE AREA BY NUMBER OF EMPLOYEES AND PROGRAM PARTICIPATION			
Industries	Number of Employees	Rank: Number of Employees	Rank: Program Participation
Manufacturing	744	1	4
Gaming	610	2	11
Retail	468	3	1
Healthcare	390	4	5
Agriculture	338	5	7
Professional Services	220	6	3
Government	140	7	2
Education	125	8	9
Transportation	110	9	10
Restaurant	96	10	12
Media	75	11	6
Lodging	65	12	8

Although manufacturing is the largest industry represented in King County, its employees are fourth in rank when it comes to participating in the Small Business Training Series. The gaming industry, second in size, ranks eleventh out of twelve total industries in the county who attend the monthly sessions. In addition to gaming, the restaurants, transportation, and education sectors are the least participative in the program, whereas the retail industry, govern-



ment entities, and professional services have strongest attendance in the program.

Through partnering with local training experts, the C/EDC has developed a valuable program for its members, provided a financially beneficial and much needed assistance to the local economy, and created a resource to assist in the overall recruitment and retention of small businesses in the area.

The two business professors serving as program facilitators have remained the same throughout the program's existence. One professor is an African American female with over 30 years of experience teaching at the local university. She has owned several small businesses and grew up in an entrepreneurial environment—her family established, owned, operated, and sold numerous businesses. The other professor is a Caucasian male with approximately 10 years teaching experience at the local university. His career has included working for small businesses, researching topics of interest to small businesses, and owning a consulting business with the female program facilitator. The cost to the C/EDC for the professors' time and expertise is strictly reimbursement for their travel expenses, which total \$50 each month. The cost to the participants is included in their chamber fees, which did not increase when the program was added four years ago. They are not charged a fee for the meal nor do the professors charge for any expert advice shared with the attendees during the training sessions.

From March through December, the training sessions are held one day each month. Year 1 the sessions were on the third Wednesday of the month, Year 2 on the second Tuesday, Year 3 on the fourth Friday, and Year 4 on the third Friday. The sessions for all four years have been during the traditional lunch hour. The trainings were hosted by the C/EDC in their downtown office location, as the conference room provided plenty of tables, comfortable chairs, and the necessary technology to conduct the sessions.

In order to meet the needs of the local businesses and plan the topics to be covered for the next year, the facilitators administer a survey to gather information from the chamber members as to which topics are most in need and of interest to attendees. The survey allows participants to not only select from a list of available topics, but also an opportunity to write in additional suggestions, of which the facilitators will create a new presentation should there be substantial interest expressed. Additionally, the survey includes questions related to the days of the week and times of day that work best for participants. The survey is provided in Figure 1.

**FIGURE 1**  
**CHAMBER MEMBER SURVEY USED TO**  
**PLAN THE NEXT YEAR'S PROGRAM**

The Riverton-King County Chamber of Commerce & Economic  
Development Center  
Small Business Training Series

**Participant Survey**  
Select the topics that most interest you as part of next year's Small Business Training Series. Mark all that apply.  
☐ Communication: Listening and Hearing are Two Different Concepts  
☐ Customer Service: The Key to Success  
☐ Empowering Your Employees Through Ownership and Responsibility  
☐ Ethical Values and Behavior: Is it so Black and White?  
☐ Goal Setting for All Employees  
☐ How to Accurately Appraise the Performance of Your Employees  
☐ How to Conduct Excellent Interviews  
☐ How to Create Successful Teams  
☐ How to Make the Best Decisions  
☐ How to Properly Terminate Low Performing Employees  
☐ How to Resolve Conflict and Overcome Changes  
☐ Increasing Profitability  
☐ Marketing Your Business  
☐ Motivation: How to Get the Most Out of Your People  
☐ The Importance of Employee Training  
☐ Time Management: How to Get More Accomplished in Less Time  
Other workshop topic suggestions: \_\_\_\_\_  
What day of the week works best for your business? \_\_\_\_\_  
What time of day works best for your business? \_\_\_\_\_  
Thank you for your feedback!

The survey is administered on-site during the November and December sessions and is emailed to all members of the chamber in order to solicit feedback from as many interested parties as possible. With the information collected, the professors provide the chamber director with a list of the topics and dates for the next year's program. Upon approval by the chamber director, the information is distributed to the members. This method allows all chamber members to have input in the program and informs them of the sessions' dates and topics well in advance to provide them with the opportunity to make plans to attend.

Participants are often business owners and managers who seek to build their organizations, address issues faced by their employees, and prepare for future expansion of their companies. Given the size of the businesses, many times the cost of on-site training is not feasible, nor are specialized programs that require employee travel. However, the convenience and availability of this small business focused monthly training included in the cost of their chamber membership is not only cost efficient, it also allows these critical players in the company's daily operations to receive needed information in the time they usually take for lunch. The added benefit for some food service organizations is the opportunity to share their products with program participants, thus providing a sample of their offerings to other area businesses, which often leads to more businesses utilizing the company for their own needs.

At the end of each session, participants complete evaluations to provide feedback to the facilitators and the C/EDC to ensure the needs of the area businesses are in alignment with the training they receive. The evaluations allow participants to provide feedback, which is reviewed by the facilitators to allow them to make any changes suggested that are both feasible and notable to a majority of the participants. The chamber director is provided an overall summary to include in reports, meetings, and other ways of demonstrating the value of the training program to stakeholders. The questions asked in the evaluation are provided in Figure 2.

The evaluation consists of 10 questions in which the evaluator rates the session they just participated in according to the questions asked on a scale of 1 (strongly disagree/very poor) to 5 (strongly agree/excellent). The annual feedback for years 1-4 is provided in Figure 3.

LACK OF GROWTH

The program, despite its success, has experienced a lack of growth in recent years. Marketing efforts are focused primarily on chamber members, who receive weekly e-blasts and quarterly newsletters, which include information about the program. The C/EDC website does not mention the program in its training section. The promotional

**FIGURE 2**  
**MONTHLY EVALUATION OF PROGRAM SESSIONS**

Small Business Training Series

Topic: [Enter session topic here]  
Location: The Riverton-King County Chamber of Commerce & Economic  
Development Center  
Date: MM/DD/YYYY

Please use the following scale to indicate your response to the statements below: SA=strongly agree; A=agree; N=neither agree/disagree; D=disagree; SD=strongly disagree

1. The information was presented effectively.

☐ SA ☐ A ☐ N ☐ D ☐ SD

2. The information presented was practical.

☐ SA ☐ A ☐ N ☐ D ☐ SD

3. The training session provided a good working knowledge of the subject matter presented.

☐ SA ☐ A ☐ N ☐ D ☐ SD

4. The training session allowed me to acquire practical skills and knowledge to manage my business more effectively.

☐ SA ☐ A ☐ N ☐ D ☐ SD

5. The training session met my expectations.

☐ SA ☐ A ☐ N ☐ D ☐ SD

6. The trainer(s) was/were knowledgeable.

☐ SA ☐ A ☐ N ☐ D ☐ SD

7. The quality of instruction was good.

☐ SA ☐ A ☐ N ☐ D ☐ SD

8. Participation and interaction were encouraged.

☐ SA ☐ A ☐ N ☐ D ☐ SD

9. Adequate time was provided for questions and discussion.

☐ SA ☐ A ☐ N ☐ D ☐ SD

10. How do you rate this training session overall?

☐ Excellent ☐ Good ☐ Average ☐ Poor ☐ Very poor

**FIGURE 3**  
**ANNUAL RESULTS OF THE**  
**PROGRAM EVALUATION FOR YEARS 1-4**

Question	Year 1	Year 2	Year 3	Year 4
Question 1	4.5	4.5	4.5	4.5
Question 2	4.5	4.5	4.5	4.5
Question 3	4.5	4.5	4.5	4.5
Question 4	4.5	4.5	4.5	4.5
Question 5	4.5	4.5	4.5	4.5
Question 6	4.5	4.5	4.5	4.5
Question 7	4.5	4.5	4.5	4.5
Question 8	2.5	3.0	3.0	3.0
Question 9	2.5	3.0	3.0	3.0
Question 10	4.5	4.5	4.5	4.5

items, such as pamphlets and videos, created and distributed by the C/EDC to promote the county to potential businesses does not highlight or discuss the program. The program is not marketed to non-chamber members. The participants, although enthusiastic about the training, are a very small percentage of the total membership.

QUESTIONS/DISCUSSIONS

1. Identify the problems and factors contributing to the issues faced by the Riverton-King County Chamber of Commerce and Economic Development Center.
2. What additions and changes could be made to the Small Business Training Series program in order to increase participation? Discuss the pros and cons of each suggestion.
3. Assess the evaluation tool used in the monthly training sessions (Figure 2), including the administration of the tool to participants. What changes to this evaluation might strengthen the feedback received?
4. List and discuss additional training topics that should be considered to be included in future sessions in order to widen the appeal to area businesses.

TEACHING NOTES

This case is best used in courses on the undergraduate level. It is most valuable in basic, introductory, and lower level courses. Suggested courses for inclusion of this case are:

- Marketing Principles
- Entrepreneurship

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- Small Business Management
- Introduction to Business

The key learning points of this case are:

1. Target market issues and analysis
2. Market research
3. Promotion strategies

### Questions/Discussions

1. Identify the problems and factors contributing to the issues faced by the Riverton-King County Chamber of Commerce and Economic Development Center.

#### Problems

- Participant attendance at the Small Business Training Series has plateaued.
- Declining Chamber membership.

Contributing Factors (Additional factors are to be identified by the students.)

- There is a lack of expanded, creative, and all-encompassing program promotions.
- The time slot that monthly training sessions are held has remained the same throughout the program.
- The location of monthly training sessions has remained stationary since the program began.
- The program facilitators have remained the same throughout the program.
- Participation in the program is only offered to chamber members.
- A perception might exist that the program's cost being included in the chamber membership fee means it is not a quality program. (People tend to place value on items based upon the cost to them.)
- Competition for the training series in the form of webinars, YouTube videos, seminars in nearby cities, etc.

2. What additions and changes could be made to the Small Business Training Series program in order to increase participation? Discuss the pros and cons of each suggestion.

Student ideas will vary, but may include:

- a. Provide new training topics not listed in figure 1.
- b. Change the time, day, and/or location of the sessions to better fit the participants' availability.
- c. Include other facilitators, including some who specialize in specific areas of interest to the participants.
- d. Expand promotion of the program.
- e. Include non-chamber members in the program.
- f. Charge a fee to participate to add perceived value of the program.

An example of the pros and cons of suggestion b. above, Change the time, day, and/or location of the sessions to better fit the participants' availability, is provided below.

#### Pros

By surveying the participants to determine the best time and day for their inclusion in the program, they could ease some restrictions and increase their freedom to attend. By moving the location, participants would have opportunities to attend sessions closer to their businesses or, should they volunteer to host a monthly training session, they could showcase their business to other participants. Additionally, having participating businesses host the monthly sessions might increase attendance as the hosting business owner/manager will want to look good to the other program participants and the C/EDC and, as a result, may require their employees to attend the training session at their property.

#### Cons

The regular participants might have scheduled their work to accommodate the set day and time of the monthly training sessions. Changing this could disrupt their availability. Also, moving to a different location for each session could cause confusion.

3. Assess the evaluation tool used in the monthly training sessions (Figure 2), including the administration of the tool to participants. What changes to this evaluation might strengthen the feedback received?

The evaluation has remained unchanged throughout the program's existence and should be updated to allow for more applicable and relevant feedback, thus prompting an evolution of the program. While student suggestions will vary, some examples of possible changes are provided below:

- Allow participants to freely provide feedback through open-ended questions/comments.
- Delay the administration of the evaluation as opposed to having participants complete it at the end of each session. By emailing it to participants after some time has passed, the feedback received might be more accurate. Also, this will allow the addition of a question related to the usefulness of the training to their job.
- For questions 6 and 7 participants must evaluate the two facilitators collectively. This may be hindering the quality of the feedback. By providing each question as it pertains to a specific facilitator the participants can properly evaluate each facilitator, thus helping to improve his/her section of the training, thereby strengthening the overall program.

When assessing an instrument of this nature, it is critical that students understand the value in identifying and recognizing the parts that are effective and work well. In their assessment of the evaluation tool, students should list the parts that meet the needs of the program, facilitators, C/EDC, and participants. Some suggestions include:

- The evaluation tool is simplistic in wording, layout, and purpose. Remember this is not an exam, and therefore, a simple approach is best.
- Each monthly session is evaluated, which provides continuous feedback about the program.
- The participants' feedback is valued and appreciated. The information collected from the evaluation is analyzed and changes are implemented based on the feedback received.

4. List and discuss additional training topics that should be considered for future sessions in order to widen the appeal to area businesses.

Student suggestions will vary. Some possible topics include:

- Insurance
- How to protect your business from cyber theft
- Social media

- Risk management
- Health and Safety

### Group Activities

#### Promoting the Program and Increasing Membership

The Small Business Training Series program is not marketed to non-chamber members as a means to recruit new members. This program is unique and could be used to expand membership and participation, if promoted correctly.

In small groups (consider 3-5 students in each group), have students develop ideas for promoting the program to increase participation and chamber membership. Each group should develop an action plan for one of its ideas. Included in the plan should be a discussion of the resources needed to carry out the plan, the steps to be taken in implementing the plan, and the role of the C/EDC employees in the plan.

Allow approximately 20 minutes for group discussions and plan development. Have each group briefly share with the class its selected idea and action plan. Allow each group 5-7 minutes to present their work followed by an open class discussion.

#### Increasing Attendee Participation

In both Figures 2 and 3, questions 8 and 9 (which relate to the interaction, participation, discussion, and questions of the attendees at the sessions) were noted to be of concern and have been the focus of the facilitators throughout the program's existence. As such, improvement has been made each year in relation to these matters. In small groups (consider 3-5 students in each group), have students develop ideas for further improving these areas. Remind them to keep in mind that any increase in time for audience interactions reduces the available time for the other parts of the training.

Allow approximately 10 minutes for group discussions. Have each group briefly present its ideas to the class followed by an open class discussion.



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# WHEN DOES COMMUNICATION TURN INTO MISCOMMUNICATION? A CASE STUDY

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## ABSTRACT

*This case study looks at problems that can happen when barriers to communication prevent information from being shared among managers. In particular the barriers of selective perception, language, and silence are seen in four scenarios that happened at a manufacturing facility that is no longer in business.*

## INTRODUCTION

Business communication and organizational behavior texts discuss several uses of communication. This case will concentrate on the importance of information sharing and the barriers to effective communication. Selective perception, language, and silence are three communication barriers that will be illustrated in the following case. Selective perception can be seen as a barrier due to receivers seeing and hearing based on their experiences and backgrounds. Communicating in the same language, at times leads to words being interpreted differently by different people. Silence is a barrier because it limits information that should be given to receivers or that the receiver should provide as feedback.

This case will attempt to have students respond to the following questions from four scenarios.

1. Does "one" mean one at a time or does it mean number one?
2. Which is less expensive, a long distance phone call, or Easter pay and private transportation?
3. Was the product too tall or the back dock roof too short?
4. Will a large volume fit in a small one?

## BACKGROUND

TD Company is a small refrigeration manufacturing business located in West Tennessee. The company has approximately 125 hourly employees and has approximately \$4.3 million in sales yearly. It was founded 60 years ago by an individual and continues to be privately owned. Manufacturing units are located in West Tennessee, Canada,

England, and Australia. The corporate office is located in Nashville, Tennessee. Salespeople in the field or headquarters do most of the bidding on contracts. This case pertains to the plant facility located in West Tennessee.

## MANUFACTURING PROCESS

The plant in West Tennessee manufactures both reach-in and walk-in commercial refrigerators. These are made from both aluminum and stainless steel. Shipping to customers is done almost entirely through commercial transportation companies. On rare occasions, local individuals are used for expediting late deliveries of refrigerators. The insulation is mostly from two chemicals that when mixed together forms a rigid material that provides stability and cooling for the product. Improper use could result in scrap material and possible breathing hazards if the mixture were to catch fire. These chemicals should only be mixed together during the manufacturing process. These chemicals are an isocyanate (A Foam) and resin (B Foam). A Foam has a reddish-brown color that resembles molasses. B Foam is more of a dark brown color. These chemicals are shipped every 5 to 6 weeks by a company located in Michigan that uses an independent carrier. The drivers of these containers vary with each shipment and they do not have knowledge of the chemicals they are transporting. A truck pulling a cylinder with three separate compartments labeled 1, 2, and 3 delivers shipments. The chemicals are stored in a separate building that is attached to the main manufacturing facility. On delivery day the maintenance and quality managers are responsible for working with the truck driver to unload the two chemicals. The quality manager's primary responsibility is to take samples from each container on the truck and conduct sample tests to check for viscosity, tack time, and density. The

maintenance manager along with the truck driver begins the unloading process by hooking up hoses to two of the cylinders on the truck. These hoses are then run through a window in the foam building and attached to two storage tanks within the building. An air hose is attached to the top of the truck though a device called a “Christmas tree”. This tree is a small cross-like device used to ensure that the compartments do not become over pressurized. Once a container has sufficient pressure, the chemical is literally blown off the truck, through the hoses, into the storage tanks within the building.

SCENARIO 1

One late day in November, the foam truck arrived at the plant to be unloaded. John, the maintenance manager began helping Tom the truck driver get the hoses off the truck. While they were doing this, Bill, the quality manager began taking samples from each compartment on the truck. While Bill was conducting the tests, John carried the bill of lading to the front office so they could begin processing payment. When John returned, Bill had finished his analysis and said that the shipment was good to accept quality wise. John then told Tom, the truck driver that if he had two “Christmas trees”, they could pressurize two compartments at the same time and blow off both chemicals at once. Tom said that he had only brought one “Christmas tree”. Therefore, John said, “We’ll just do one at a time.” He then began to hook the hose on the inside of the building to the “A Foam” storage tank, which happened to be the first tank. While he was doing this, Tom was hooking his hose up to compartment one, which contained “B Foam”. With compartment one of the cylinder fully pressurized, John turned the lever that allowed the chemical from the truck to flow into compartment one. Suddenly John’s and Bill’s faces turned ghost white. Something had gone wrong.

Now for the original question:  
Does one mean “one at a time or does it mean number one”?

Discussion Questions:

- 1. From a communication standpoint, what went wrong with the chemical mix-up?
- 2. What procedures would you suggest be implemented to prevent an accident like this one from occurring again?

- 3. Identify and discuss barriers to effective communication that may arise when implementing procedures identified in question 2.
- 4. Would a training program for those who handle the chemicals be an effective way to improve communication and thus reduce the chances of future accidents? Discuss.

SCENARIO 2

As always, production of the refrigerator for a special project in Texas was behind schedule. In fact it was so far behind, that the plant manager was trying to decide if working on Easter Sunday would be worth the effort to get the product completed at least close to the scheduled date. A local independent contractor was willing to deliver the refrigerator by private truck to the construction site in Texas. The production control manager had called the salesperson in Texas and was urged to do everything possible to ship the refrigerator as close to the due date as possible. The production of the refrigerator was completed on Saturday afternoon, at which time quality control tests were started. These tests required several hours to complete, therefore testing personnel were asked to work on Easter Sunday. Completing the test on Sunday, allowed the refrigerator to be crated first thing Monday morning and transported to Texas, an approximately 12-hour drive. Everything went as planned and the independent contractor departed Monday morning for Texas.

Two days later when the owner of the private truck returned, he had this story to share. He had arrived at the construction site, a shopping mall, late that night. He had to stay over until the next day to get help in unloading the refrigerator. Early the next morning, the construction supervisor said he did not really need the refrigerator, but that it could be stored until needed. You see as most mall construction projects go, this one was no exception. It was behind schedule.

Now for the original question:  
Which is cheaper, a long-distance phone call, or Easter pay and private transportation?

Discussion Questions:

- 1. From a communication standpoint, what went wrong with the production schedule and shipping?
- 2. Identify and discuss the barriers to effective communication that contributed to this problem.

- 3. What procedures would you suggest be implemented to prevent mistakes such as this from occurring in the future?

SCENARIO 3

Frank, a member of the engineering department had just finished the design specs for a new Walk-In refrigerator. Walk-Ins were much larger than the standard commercial refrigerator and some could actually accommodate a large truck. This particular walk-in had been designed for an oil drilling rig off the coast of Louisiana. It was small compared to most walk-ins, but it had to be mounted on a special wooden frame, rather than packaged in corrugated cartons. The walk-in and its frame were to be transported by truck to the coast where it would be delivered to the oil rig by boat. The walk-in was completed on time and taken to the back dock as the truck was arriving to pick it up along with other refrigerators. However, a problem was observed as the walk-in reached the back dock. The roof sloped down too far and at an angle that made it impossible for a forklift to load the walk-in on the truck. In fact without the forklift, it was still too high to be loaded on the truck. This predicament reminded the shipping supervisor of the old story about the boat being built in a basement with no way of getting it out. However, in this particular case, the solution was a simple one; notch a hole in the roof.

Now for the original question:  
Was the product too tall or the back dock roof too short?

Discussion Questions:

- 1. Did Frank have any miscommunications with anyone? Perhaps a better question would be, did Frank communicate with anyone?
- 2. What procedures would you suggest to ensure that communication problems such as this did not reoccur?
- 3. Identify and discuss the steps to implement the procedure identified in question two and the role of communication in the implementation process.

SCENARIO 4

The refrigerator order had been in the home office for two weeks. It was a large shipment of 95 refrigerators that would be going overseas and require special shipping con-

tainers. These containers measure 8’ x 8’ x 20’ for a total volume of 1280 cubic feet. The bid included costs for using the overseas containers as well as the cost of the refrigerators.

Arnold, the home office individual responsible for the bid, calculated that a total of seven containers would be needed for this shipment. He determined this number by taking the size of the refrigerators, 3.5’ x 3.5’ x 7’, to get an individual volume of 85.75 cubic feet. This number was divided into the container volume of 1280 cubic feet to come to the conclusion that 14.9 or 14 refrigerators could be shipped per container. Since the order was for 95 refrigerators, he calculated that 6.8 or 7 containers would be sufficient for the shipment.

As the refrigerators were being built and placed in the containers, the number of refrigerators stayed at 95, but the number of containers increased to 22. Since they were going overseas, the refrigerators required special bracing for the trip by rail to the docks and additional bracing for the trip by ship to their final destination. They could not be stacked on top of each other. Also, the extra bracing took up much needed space that could have been used for additional refrigerators.

Now for the original question:  
Will a large volume fit in a small one?

Discussion Questions

- 1. Did Arnold miscommunicate with anyone? Should he have contacted anyone at the manufacturing plant before he calculated the number of containers for the bid?
- 2. What barriers to communication did Arnold experience?
- 3. What precautions should Arnold have made other than the costs of the refrigerators and their packing volume?

TEACHING NOTES

Students should become aware of at least two examples of miscommunication among management and workers. They should be able to offer suggestions as to how these problems can be avoided.

Scenario 1 answers:

- 1. None of the three men shared information with each other. Each man was preoccupied with per-

forming his job and treated that job as if it were separate from any other part of the foam unloading procedure.

2. Several checks and balances should have been implemented to prevent this accident.
  - a. The maintenance manager should have checked the bill of lading to identify which chemical was in which compartment. He could have verified this by examining the ground for the chemical spill drawn by the quality manager for his sample.
  - b. While the quality manager was conducting his tests, the maintenance manager should have asked him which tank contained which chemical. This would have been a double check against what the maintenance manager observed and what the bill of lading showed.
  - c. While the maintenance manager was hooking his hose up on the inside, the truck driver was hooking his hose up on the outside. No one checked the overall hookup to ensure "Foam A" in the truck was hooked up to "Foam A" in the building. Either the maintenance manager or the quality manager should have traced the hose from inside the building to the compartment outside on the truck. Only then should the lever have been thrown to allow the chemical to flow into the inside tank.
3. Several barriers could be discussed here.
  - a. Sender barrier—Each man fails to speak up and question the other as to the correct attachment of the hoses.
  - b. Encoding barrier—Maintenance manager had meant to unload the foam, one container at a time. He intended to start with the first compartment.
  - c. Decoding barrier—The trucker understood the manager's comments to mean that compartment one would be unloaded first.
  - d. None of the managers ask for feedback from each other.
4. A procedural manual should be developed and all personnel trained to follow it. To maximize

similarities between the training and the job, the trainee could job shadow an experienced manager. The trainee should be given knowledge of the dangers of the two foams being mixed improperly.

#### SCENARIO 2 ANSWERS:

1. More time should have been allotted for production of this particular refrigerator, due to its importance.
2. Several barriers could be discussed here.
  - a. Sender barrier—Production control manager and salesperson did not discuss the possibility of calling the customer.
  - b. Medium barrier—Although the phone was used between production control manager and salesperson, it was not used to contact the customer.
  - c. Without contacting the customer, no feedback was provided.
3. While the salesperson and production control communicated with each other, no one communicated with the customer. Specifically, no one investigated the possibility that the construction project might be behind schedule. A short phone call to the construction foreman might have prevented the use of unneeded production time at the factory. This time could have been better spent producing refrigerators that were crucial to other customers.

#### SCENARIO 3 ANSWERS:

1. Frank did not communicate with the appropriate people. He knew this was a special product with different shipping instructions. The managers of the engineering department and the production control should have been informed. They in turn should have checked with shipping as to how much clearance was available on the back dock.
2. While this problem may seem like the exception, there still needs to be one person assigned the responsibility of ensuring all products can be shipped regardless of the type of packaging.

3. Customer orders that have special dimensions should be communicated to all departments that have a responsibility for producing and shipping. These departments should include the heads of marketing, engineering, and production control. The marketing department should be sure that the bid was enough to cover the additional shipping costs. Engineering and production control should work together to ensure that the most economical type of shipping is used. Production control will need to be coordinated with shipping to ensure that the dimensions of the special order can be shipped by commercial truck.

#### SCENARIO 4 ANSWERS

1. Arnold evidently did not realize that overseas shipping took 2 bracing. He should have contacted the plant's shipping department in advance of his bid.
2. Arnold's primary barrier was complete silence. He did not contact anyone.
3. Arnold may need to enroll in a good math class at the local community college. Maybe consulting with the plant's engineering department would have given him a hint that there is usually some wasted space when attempting to load cargo in a fixed size container.

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# THE BLOCKCHAIN: THE FUTURE OF BUSINESS INFORMATION SYSTEMS?

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## ABSTRACT

*Historians believe that early modern man (homo sapiens) persevered over competing humanoid forms via their ability to unite in large numbers due to a shared belief in something powerful and intangible (Harari). Those early shared beliefs were in gods; but later in the course of humanity a shared medium of exchange, a “currency”, forged a common belief in something powerful and intangible.*

*Now “we may be at the dawn of a new revolution” which started with the digital bitcoin currency (Swan). Bitcoin allows the instant certified transfer of money electronically between possibly unrelated and distant parties without the need for any intermediary trusted authority (i.e. bank); the certification is via an indestructible “public ledger” of the transfer transactions.*

*But it is really the technology behind bitcoin, something called the “blockchain”, which is the driving factor for this new revolution. What blockchain did for currency, it may do to an even greater extent for many other areas of business and their supporting information systems.*

*In this paper, we discuss the blockchain technology and the reasons why it may replace tradition business information systems. We also explore and illustrate this in more detail for one of the many possible business disciplines in which the blockchain will be utilized - the accounting discipline.*

## INTRODUCTION

Historians believe that early modern man (homo sapiens) persevered over competing humanoid forms via their ability to unite in large numbers due to a shared belief in something powerful and intangible (Harari). Those early shared beliefs were in gods; but later in the course of humanity a shared medium of exchange, a “currency”, forged a common belief in something powerful and intangible.

Now “we may be at the dawn of a new revolution” which started with the digital bitcoin currency (Swan). Bitcoin allows the instant certified transfer of money electronically between possibly unrelated and distant parties without the need for any intermediary trusted authority (i.e. bank); the certification is via an indestructible “public ledger” of the transfer transactions.

But it is really the technology behind bitcoin, something called the “blockchain”, which is the driving factor for this new revolution. What blockchain did for currency, it may do to an even greater extent for many other areas of business and their supporting information systems.

Business is based upon a trust that each party will perform their roles in a transaction. These transactions need to be recorded to reflect the effect of such upon the parties

thereto. To an ever increasing extent business transactions are carried out and recorded electronically via our modern business information systems. For an information system to be trustworthy, it must preserve the confidentiality and integrity of the transaction information, and that information system must have a high degree of availability so parties who need to view the information, and who also have authority to do so, can do so upon demand. Thus derives the so called “CIA Triangle” of modern information security: confidentiality, integrity, and availability (Whitman).

A blockchain is a decentralized, distributed, ledger which confirms and stores transactions added to the chain. It is not owned nor controlled by any one party and the entire chain is replicated on many servers. For bitcoin, a blockchain is a chain of blocks each of which holds information about the history of a single bitcoin transaction.

An adopted business information system prevails over competing business information systems due to its ability to reduce the cost, time and risk of completing and recording business transactions while also preserving the CIA of the information. Via bitcoin, blockchain technology has been proven to be a trustworthy information system reducing time, cost, and risk of money transfer and pre-

serving the CIA of the associated information; however it is capable of being applied to many more, and possibly all, business areas.

## THE BLOCKCHAIN

Blockchain has been enabled by a set of modern technologies including the internet, open-source peer-to-peer protocols (BitTorrent), rapid digital communications, enormous computing power, and modern cryptography. It is an electronic shared, replicated, distributed (organizationally and geographically), and decentralized transactional file. CIA is a central trait of a blockchain since a transaction is committed in real time to the blockchain and connected via a hash to all those transactions that came before it. The transactions persists forever and cannot be deleted nor modified. To ensure availability, the entire block chain of transactions is continuously replicated across many servers so that there is no central point of failure. Privacy is guaranteed by rigid credential checking techniques and protected through modern encryption.

The crypto-technology behind the blockchain is based on asymmetric encryption or “public-key” encryption. This type of encryption uses two different but related keys, either of which can encrypt or decrypt a message or transaction. If one key encrypts the message only the other key can decrypt it. One key serves as the private key (retained confidentially by the initiating party) and the other key serves as the public key. Back calculating a private key from a public is either impossible (due to the one-way hashing used) or prohibitively expensive.

A party to a blockchain obtains an address, a public key, and a private key; all of which are automatically generated by the blockchain application program (or “app”) that is installed on the party’s computing device. The installed software generates a large random number, and using ECDSA (Elliptic Curve Digital Signature Algorithm) generates the private key (such as a 128 to 512 bit number). From the private key, the public key and address are computed. The address is typically not simply the public key, but a transformed version of the public key for more efficient usage, greater security, and a checksum.

The blockchain unique address is externally represented by a sequence of characters (typically about 32 characters) or a QR (quick response) code. The address is used to identify the parties involved in a transaction. For example, in the bitcoin application, the “wallet” contains the address, public key and private key. To send a transaction to another blockchain party, one needs their address and your private key. When the party submits a transaction, a message is sent to the blockchain network which creates

a “block”, and that block is “authorized” by the sending party’s private key.

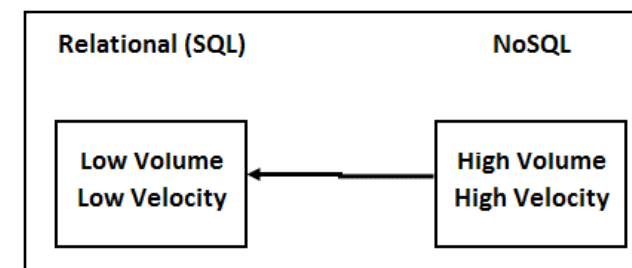
A distributed consensus system called “mining” is part of the blockchain system to provide for greater integrity. Mining confirms that the transactions are coded into blocks according to the cryptographic rules and enforces the time sequence placing of blocks on the chain. In bitcoin the miners are compensated by earning a fee (in bitcoins) for the use of their servers; other blockchain applications use other incentives. The blockchain is replicated across a number of nodes (servers) who share the entire chain and perform the mining. Every block contains a hash of the previous block, thus imprinting the entire chain’s “DNA” into each block. Each block is guaranteed to come after the previous block chronologically and integrity is preserved once the block has been added to the chain. A “balance” for some account of some party can always be calculated by scanning the full chain.

## BUSINESS APPLICATIONS

Most business applications currently maintain data, including asset info and financial transactions, in relational databases (RDBMS). The data in the RDBMS is manipulated via SQL (Structured Query Language) statements. Multiple copies of the data are needed for operational considerations (logs and locks) as well as for backup and business continuity. These RDBMS are for the most part centralized and unencrypted. As well as being relatively expensive and inefficient, they are vulnerable to user errors and fraud, operational failures, and cyber security attacks. Differences between DBMS data item representations within an organization and between organizations foster inconsistencies that necessitate expensive and time consuming reconciliation.

In general data can be characterized by the “three Vs” of volume, velocity and variety which are useful in understanding the nature of the data and the hardware and software platforms needed to best support such data. In addition to the traditional need to store characters and numbers, the internet and in particular social media have driven businesses to store so called “big data” which includes images, music, videos, and numerous social media objects such as “tweets”.

According to Stonebraker, “current RDBMS while attempting to be a one size fits all solution, in fact, excel at nothing. They are a 25 year old legacy that should be retired in favor of a collection of specialized engines.” (Stonebraker). To handle the very high volume and velocity of big data, many organization are replacing or augmenting their traditional RDBMS with these new specialized engines new called “NoSQL” (Not only SQL)



platforms. As illustrated in the figure below, data which has high volume and/or high velocity is now being stored in these new NoSQL type of platforms which typically spread out the storage and processing over a large number of “commodity” type low cost servers instead of a centralized mainframe or server farm. New technology such as Hadoop/MapReduce has been developed to orchestrate the efficient solution of data processing tasks by distributing a task across many servers.

To meet the unique needs of different kinds of big data, several software database architectures have been developed for the new NoSQL platforms including key-value, column, graph, and document. Blockchain can be thought of as another NoSQL type of distributed data architecture. As stated by Mougayar, “The blockchain is the new database – get ready to rewrite everything. For developers, the blockchain concept represents a paradigm shift in how software engineers will write software applications in the future.” (Mougayar)

Just as money is transferred from one party to another via bitcoin, a blockchain can be used to transfer ownership or rights from one party to another involving almost any physical or intangible asset. This includes items that physically move upon the transfer from one party to another and assets that do not physically move upon ownership transfer. Using a blockchain to record such transfers is faster, cheaper, and provides better CIA than existing methods. It is faster and cheaper for a number of reasons, but the most important is the elimination of expensive and delay inducing third party intermediaries. Organizations who have a need to know about a transfer generally include not just the two (or more) direct parties to the transaction but possibly banks, agents, clearing houses, custodians, and government registrars or regulators. Consider the last time you bought or sold a house. There were many intermediaries and participating parties (banks, attorneys, notaries, counties, cities, etc.), and typically each was due some kind of transfer fee or tax. With a common blockchain, time and costs are significantly reduced, since every party to the deal does not have to maintain their own copy of the data. This also minimizes errors and does away with reconciliation.

With a blockchain, and in general terms, instead of each business having to maintain information on their transactions in separate databases (with copies for logs and backups), a communal organization (i.e. trade association) can hold all this information in one distributed database. Sales and asset exchanges can be handled instantaneously and without the time/cost/risk of one or more intermediate parties. Compliance with industry regulations will also be easier and less expensive since a record of all past transactions is directly available.

Hundreds of possible blockchain applications have been identified including a number of applications in each of these categories: currency and banking, accounting and auditing, financial, asset transfer, contracts, public records (birth certificates, passports, voter IDs, vehicle registers), private records (wills, trusts, warrantees, delivery receipts), insurance, rights protection (license, copyright, trademark), medical records, reservations, coupons, and gambling (Swan).

“Financial services firms will be early adopters, ..., bankers want to get out in front of the technology, ..., the Nasdaq is already testing a blockchain-enabled platform” (Kiplinger [1]). Bankers perhaps have the most to lose if they do not “get there first”, so it’s no surprise that “the world’s central bankers are contemplating digital currencies of their own” (Economist Staff). One of the criticisms of the public ledger based bitcoin is that it makes it easier to launder money, buy and sell drugs or other illegal items, and dodge taxes. If the banking industry can set up its own cooperative blockchain, then it could still earn some fees and protect against the aforementioned criticisms of the public bitcoin. Governments also like the idea of industry cooperative blockchains since it gives them access to the information.

As an example of keen interest by the Management Information Systems (MIS) community, IBM is a major partner in the newly formed Open Ledger Project to develop open source blockchain software. However, in terms of the impact upon business higher education, it is not only the MIS discipline that will be significantly impacted, but also other business disciplines including Business Law, Economics, Banking, and Finance. As stated by Mougayar : “This is not just a computing phenomenon. Decentralized applications are going to enable a trend at the societal, legal, governance, and business levels because there is a race to decentralize everything and give power to the networks.” (Mougayar) Since there are so many possible business uses of blockchain, in this paper we are only going to explore in more detail the accounting discipline since that is a business area upon which blockchain technology may have one of the highest impacts.



ACCOUNTING SYSTEMS

Early accounting systems used “single-entry” methodology. Even today this type of bookkeeping system may be used for small business, since they are less expensive to obtain and maintain than modern double-entry systems, which also require a significantly larger amount of expertise to use. According to the U.S. Internal Revenue Service: “A single-entry system is based on the income statement (profit/loss statement)” (IRS). Such a system records the flow of income and expenses through the use of a “checkbook” – a series of deposits for income and checks for disbursements.

For management information purposes, the single entry system only shows cash flow and current cash balance. Although single entry systems are easy and knowing your cash position is important, managing your business with a checkbook is like trying to drive your car to a destination by only looking at the fuel gauge. Disadvantages include the fact that there is no balance sheet to show your overall assets and liabilities, the system is not self-balancing, mathematical errors in the balances are common, preparation of tax returns and other financial reports is difficult, theft and other such issues are less likely to be detected, and reconciliation of the books to external records is difficult.

Modern business accounting uses “double entry bookkeeping” in which a “chart of accounts” or ledger system is used to keep track of dollar amounts in different categories to satisfies the business needs for financial reporting both internally and externally. Single-entry systems just record what happened, whereas with double-entry, each transaction has to be explained by its effect on multiple accounts. If there is no explanation, then there is no entry. Money cannot just appear or disappear, it has to have both an origination and a destination. This is the basis of debits (DR) and credits (CR) in double entry accounting, where one account is typically a balance and the other an event or activity.

The double entry ledger system provides a separate money bucket or “account” for each of the organization’s categories of assets, liabilities, equity, revenue (income) and expenses; with assets, liabilities, and equity being on the “balance sheet” side of the ledger, and income and expenses activities being on the “income statement” side of the ledger. The total of account categories on both sides equals zero; with assets minus liabilities equaling equity on the balance sheet, and income minus expense equaling profit on the income side. If the ledger contains accounts for all assets, liabilities, equity, revenue, and expense it is called a “general ledger” (GL), even if there are only “control accounts” and not additionally “detail accounts”.

When supporting ledgers are also used with the detail for a particular group of accounts, the supporting ledgers are called “subsidiary ledgers”. For example, there might be subsidiary ledgers for accounts receivable, fixed assets, payroll, and accounts payable.

A business may report on a “cash” or “accrual” basis. As an example an organization using the cash basis would not record income until a customer pays his invoice. Using the accrual method, the income transaction is recorded when the income is “realized” typically when the sale takes place (or an invoice is sent to the customer), and a separate payment transaction is booked when the money is received. While cash basis reporting organizations typically use a single-entry system, double entry bookkeeping may be also used.

The balance sheet is also known as the statement of financial position and it reports a company’s assets, liabilities, and equity at a specific point in time. The income statement is the financial statement that reports a company’s revenues and expenses and the resulting net income. While the balance sheet is concerned with one point in time, the income statement covers a time interval. The income statement will explain the change (or much of the change) in equity during the time interval between two balance sheets. The organization’s GL is not only used to produce the financial statements (balance sheet and income statement), but also used as the basis for tax returns, and for a variety of management reports.

For each transaction in double entry bookkeeping, the same total dollar amount is posted to multiple ledger accounts in which some accounts get a CR and some amounts get a DR with the total of the credits being equal to the total of the debits. “Regular” (standard reoccurring) transactions are typically established for the organizations business cycles: revenue, expenditure, production, and finance. Most source business transaction documents are posted to journals, and the journal totals are later posted to the general ledger from which financial statements are generated. In pre-computer days the paper journals provided for the “division of work” in larger organizations. So that instead of one accountant posting all transactions to a GL, a number of accountants could post to journals, and then at the end of an accounting period (typically a month), post journal totals to the GL. Journals also provided for easier control and auditing. Typically “journals” are set up for high activity business cycles such as a cash receipts journal and a cash disbursements journal.

With modern information systems, the journals are not separate entities, but logical parts of an overall relational database containing all the accounts and entries. In such a relational database, there are at least two relational tables. One table is for the accounts with account number being

the primary key. The other table is for the entries with a control number for the primary key and the account number as the foreign key; indexes are used for other reporting or sorting fields such as journal, reference numbers, dates, etc. Ledgers for larger organization are not linear but hierarchical to provide for reporting at various detail to different levels of management. For a hierarchical master-detail GL systems, a foreign key in the account table references the master account to set up this recursive forest (multiple node) data structure. For example:

1100 Current Assets
1110 Cash in Banks
1111 Bank A
1112 Bank B
1113 Bank C
1120 Petty Cash

Each accounting transaction, either journal or ledger entry, typically includes:

- ▶ Money (i.e. dollar) amount
- ▶ Date
- ▶ One of more reference numbers (such as the customer number)
- ▶ Description
- ▶ The general ledger (GL) account number(s) to be credited
  - ▷ Dollar amount for each if more than one
- ▶ The general ledger account number(s) to be credited
  - ▷ Dollar amount for each if more than one

An example of a sales transaction entry would be for the sale of \$1000 of widgets from ABC Company to XYZ Company:

- ▶ Money amount–\$1000
- ▶ Date – AP 12 2016
- ▶ Ref – 2556 (a customer #)
- ▶ Desc – sale of 4 widgets
- ▶ CR
  - ▷ GL Account 455 (an income account)–\$900
  - ▷ GL Account 295 (a tax payable account)–\$100
- ▶ DR – GL Account 210 (customer receivable account)

There are many errors that could occur in describing or in the posting (entry) of accounting transaction as:

- ▶ A document was skipped (not entered)
- ▶ A document was entered twice
- ▶ Key errors in the entry of a document including:
  - ▷ GL account number (s)
    - Invalid, omitted, or wrong number (mis-key, transposition, etc.)
  - ▷ Reference number (s)
    - Invalid, omitted, or wrong number (mis-key, transposition, etc.)
  - ▷ Money amount (s)

Before modern computers, recording transaction data to documents, documents to journals, and journals to ledgers was all done manually. This was very time consuming and error prone. Various “writing boards” and other “one-write” systems were developed to reduce the time and errors in this labor extensive process. In the early days of computers, information was entered from source documents onto keypunched cards, and the source documents were typically entered twice – “punch and verify” to minimize key errors. Later with entry onto display screens, and to reduce source document entry costs, the documents were only entered once with a visual verification. Check digits might be used for some numbers such as GL account numbers or reference numbers. Today online single source document error checking is typically done including verifying the GL account number and reference numbers against a database and making sure that dollar amounts for multiple account debits and/or credits add up to the total document dollar amount.

Much of today’s transaction entry involves automatic posting by “source data automation” systems such as in store point-of-sale systems or e-commerce web purchase systems. These source data automation systems minimize not only entry time but also accounting entry errors. The remaining direct manual entry of source documents is typically a physical or virtual batch process for error checking and control purposes; batches might for example be formed from one day’s entry of documents. Reports are generated (paper or on-screen) for each batch to typically show number of documents, total dollars, hash total of GL numbers, and hash total of reference numbers. These report totals are compared to manually generated totals and hash counts to find other errors including skipped or duplicated documents and wrong ledger or reference numbers.

In addition to error checking and consistency checking, a number of other measures are typically put into place called “internal controls” to further reduce errors and fraud, and to insure compliance with applicable laws and regulations. Many of these are policy and procedure related such as segregation of duties, supervision, job rotation, dual control, independent reviews, and data/program access control (both physical and logical). Others controls may involve tests made by internal examiners to check the computer system and the procedures in place for the use of these systems. The examiners may prepare test data to run thru a parallel copy of the system database. That test data will typically have both valid and invalid source information, and testing will check that invalid data has been properly identified and handled. Forward audit traces will show where each source document shows up in the financial statements, and reverse traces will show every source document that effected a certain value in the financial statement. Today sophisticated auditing software is available to look thru live database information identifying abnormal amounts, relationships, patterns, or other unusual situations. This typically includes duplicate checking such as did the same bill get paid twice or did the same customer get billed twice for the same service/product.

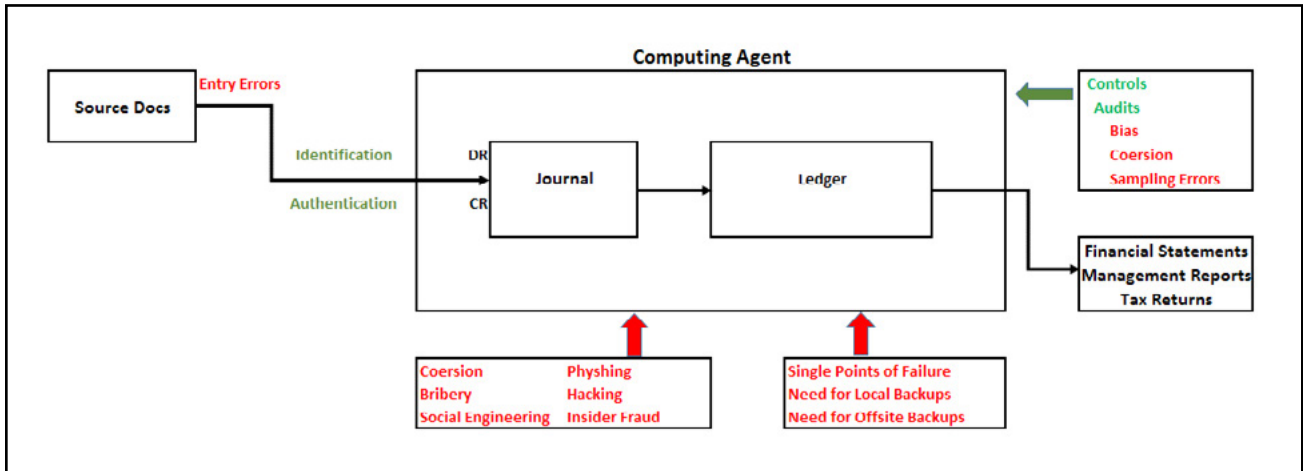
The following figure is a high level look at modern complex accounting systems. Most accounting database systems are “walled-off” within the corporate physical and virtual barriers, so that detailed outside inspection is not possible without specific permission to specific information. The complexity of this overall financial environment is costly, but the complexity of these systems has become necessary to minimize errors and fraud. However that complexity also makes it easy to hide intentional dishonest manipulations by individuals (either insiders or outsiders) who know the system well. System complexity is further increased since multiple copies of the data must be maintained by RDBMS for logging and for backup pur-

poses both locally and remotely for business continuity in case of natural or man made disasters.

Despite the use of these many error detection methods and internal controls, there are many risks to the integrity of accounting records. “Fraud occurs to some extent in almost every large company”, and includes misappropriation, forgery, theft, diversion, improper charges, costing overages, insurance fraud, and misrepresentation of value (Bodnar). Fraud can not only be perpetrated by employees and business insiders, but also by outsiders via many types of cyber security breaches as illustrated in the above figure. As a result organizations are having to invest more in “forensic accounting” which is the prevention and detection of such fraud.

Because a company is accountable to owners and investors and also due to laws and regulations for public companies, accurate financial statements are required to determine the financial health of an organization. To certify the accuracy of these financial statements, organizations hire independent external auditors to verify the balances shown on the statements, a process called “substantive testing”. Many corporations also have internal auditors who in addition to checking internal controls (“compliance testing”), also verify the balances. As a result there is either considerable duplication of audit effort, or external auditors rely on the intermediate work of the internal auditors. Substantive testing of balance accounts typically involves checking bank statements (reconciliation), verifying accounts receivable with customers, verifying accounts payable with creditors, and verifying other assets (inventories, fixed assets, etc.) by inspections.

Consider the above sales transaction where ABC Company sold \$1000 of widgets and in turn gets a commitment for payment from XYZ Company to pay the \$1000. Over the course of the overall fiscal accounting period (typically a year), accounts receivable balances accumulate with each



**BLOCKCHAIN AND ACCOUNTING**

Blockchain accounting applications are sometimes called “triple entry bookkeeping”. In double entry bookkeeping, every transaction is entered twice: as a debit and as a credit. With blockchain there are three entries that occur: the debit, the credit, and the cryptographic signature of the transaction. There are really three parties also, such as: the buyer, the seller, and the blockchain network. With the blockchain, all of the transactions exists on many networked computers instead of just one mainframe (or server farm) with backups. The concept is similar to that of the US DOD Arpanet that was the foundation for the Internet. A distributed network with many servers and communication lines was built so that the loss of one (or a few) would not take the entire system down.

For the accounting application it is possible that the account balance part of the application data would remain in a relational form on the organization’s mainframe or server and the transactions would be placed in a NoSQL blockchain, as illustrated in the figure below.

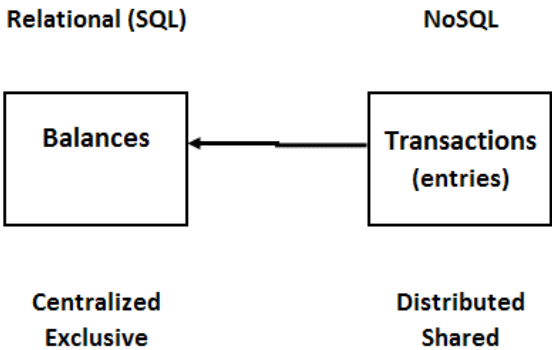
However the advantages of blockchain in accounting go far beyond just providing a more efficient and secure IT process for large organizations. Both internal and external accounting audit procedures involve confirming transactions and balances that are stated on the organization’s financial books. However, the transactions on the blockchain ledger can be confirmed as true and accurate without having a third party auditor confirm these transactions.

This accounting application of blockchain can be extended beyond a single company. In addition to the auditor examining ABC Company, XYZ company may have an external auditor as well. So these auditors would be examining many of the same transactions, the ones involving both ABC and XYZ. Now consider this on a country-wide or even worldwide basis for all organizations and their vendors and trading partners. If there was just one blockchain, instead of one for each company, then the re-

sales transaction. By the end of that accounting period, Company ABC may be owed thousands of dollars from XYZ Company. To verify such ending balances, an external auditor is called in to check with Company XYZ that it does in fact owe ABC that amount. In addition to the accounts receivable balance from this one XYZ customer, Company ABC has many other customers who also owe money to them. It is economically unfeasible to check with every customer, so an auditor will typically test a reasonable sample of these balances, and the underlying transactions, by direct correspondence with the customers to make sure that the ledger balance is close enough to the actual money owed. This substantive testing process is often marginally effective since the verification letters or emails to the customers often get few responses, as statisticians would say “sampling error”. However, if no significant discrepancies are found, the auditor issues a favorable opinion on the reasonable correctness of the financial statements. The opinion given by the auditor is very important for outside parties who often rely on the auditor’s opinion in regard to doing business with company or investing with the company. So the external auditor has a “duty to protect the public”.

While the external audit provides for an independent trusted third party to verify balances, there is an inherent bias that exists. This is because the auditors are charging fees to the company for conducting the audit; and so it is in their best interest to protect their client. A trusted well known audit company may be chosen for the audit, however about 80% of Fortune 500 company audits are then subcontracted out to lesser known parties (Kiplinger, 3). In addition there is also the inherent risk that the company’s management, other employees, or outside hackers will “cook the books” for their own benefit in a way that may be difficult to detect by the auditors.

When an auditor issues an opinion that the financial statements are properly prepared and reasonably accurate, the public trusts that the auditors have done a diligent job and that all internal biases and self-interest has been put aside. But unfortunately this isn’t always the case, and we ultimately have scandals like the Enron case in 2001 with a loss of public trusts in the organizations, auditors, and the entire system. To address these issues new accounting rules and regulations have been introduced such as the Sarbanes-Oxley Act. As a result, organizations are spending more on compliance and employing more forensic accountants, auditors and investing in more IT infrastructure. But perhaps the blockchain offers a better-cheaper-faster solution to this complex accounting and auditing nightmare. As a result the web is full of new blockchain approaches and designs for distributed financial ledgers.



dundancy reduction and cost/time savings would be huge. Essentially blockchain provides an automatic capability to verify accounting transactions between multiple business partners while maintaining data privacy. Conceivably external audits could be fully automated, and thus, the role auditors would be significantly reduced and perhaps even completely eliminated. The Depository Trust and Clearing Corporation is already testing a blockchain distributed ledger in short term lending markets to reduce risk and allow financial firms to share information in real time. (Kiplinger [2])

## CONCLUSION

Today “we are living in exponential times” (Fisch) – change keeps happening faster and faster. One day we are buying our movie DVD’s at Blockbuster, and it seems like the next day all the Blockbusters are gone and we’re all downloading from Netflix. One day we’re going to Borders for our books, and suddenly Borders is gone and we’re buying books on Amazon and the like.

Major changes in established business systems can take place very quickly in our times. Those business that are not prepared suffer irreparable damage. Similarly those in higher education should also be prepared for this upcoming major shift in business information systems, not just in the MIS field, but in accounting, banking, finance, economics, law, and beyond.

People across the world have been demanding more “transparency” in corporate and government dealings, and blockchain public ledgers can also satisfy this global need. Finally some relevant and interesting quotes in regard to blockchain’s future are:

“In 2016 we will see the first, limited applications of distributed-ledger technology to wholesale financial markets, based on private permissioned blockchains. And over the subsequent five to ten years we will see these evolve, improve, standardize and proliferate, until eventually they become the new norm” (Masters).

“In time, distributed ledgers will evolve well beyond the world of finance. The blockchain, or something similar, is sure to play a role in the Internet of Things” (Kiplinger), which many forecast to be the major new technology for the next decade.

“It would be wrong to conclude that the blockchain is no more than a fad. Although it will take a while for distributed ledgers to rule the world, they are an idea, to paraphrase Victor Hugo, that will be hard to resist.”(Economist Staff)

“Blockchain technology could become the seamless embedded economic layer the web has never had...and could become the next major disruptive technology and worldwide computing platform” (Swan).

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# GLOBAL HEALTHCARE, EXPATRIATES AND INTERNATIONAL EDUCATION: A FOCUS ON CYSTIC FIBROSIS

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## ABSTRACT

*This research preliminarily advances the notion that the relative sophistication of health care systems in a host country will correlate to increased foreign investment activities because of the strategic placement of appropriate expatriates. Also, host country health care is suggested to be a factor in study abroad decisions and the subsequent benefits to both the home country university and the host country. As an initial entrée into the ability of countries of world to treat various diseases that may limit international work or education experiences, the paper incorporates a case analysis of cystic fibrosis and relates it to comparative and competitive benefits at both the country-level and organizational-level perspectives.*

## INTRODUCTION

For a majority of the world's population, global healthcare is of little concern, but for those that are chronically ill, a cohesive healthcare structure would help ensure life saving drugs and technology. However, despite an increasingly interdependent and globalized society (Clinton, 2016), the 21<sup>st</sup> century has created, there is still a great need for a healthcare system that can bring the best drugs, doctors, technologies, pharmacies, and more into an accessible system. This also represents a strategic imperative for global organizations that are expanding overseas. Many qualified managers and students forego the opportunity to live, work and study overseas because of inadequate healthcare. This represents concerns at multiple levels including the individual, organization, and host country.

Beyond the necessary professional skills, and subsequent cultural adaptation of the expatriate, spouse and family requirements have been deemed critical regarding (1) sending the most qualified expatriate, and (2) the longer-term success of that manager (Adler and Gunderson, 2007). Similarly, from the perspective of international education, Kashlak and Jones (1996) proved that host country health and safety are highly significant factors in students' decisions regarding where to study abroad.

This research is an initial attempt to provide both a theoretical and practical linkage between the sophistication of a country's healthcare system and the strategic placement

of the most qualified expatriates. It begins a future exploration and discussion by focusing on a case study regarding countries' resources and abilities to treat one health concern, cystic fibrosis. Furthermore, it then develops the thinking, consistent with both comparative advantage and international portfolio strategy (Phatak, Bhagat and Kashlak, 2009) that combines the macro-level, country environment with the micro-level, firm resources to link the effect of a country's healthcare on investment and trade patterns by firm's and universities.

## THE GLOBAL HEALTH ENVIRONMENT AND CYSTIC FIBROSIS

### The World Health Organization

In an attempt to promote an international health system, the United Nations established the World Health Organization (WHO) with the mission of attaining the highest level of health for all people.<sup>1</sup> The WHO currently operates in within all of the 193 UN member states; however, their ability to execute all their principles depends on the countries government, the access to basic infrastructure, and the population's access to healthcare. It is important

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1 "Constitution of The World Health Organization," World Health Organization, accessed: December 5, 2013, <http://apps.who.int>

to understand that the WHO was created to establish an international standard of healthcare, but they do not provide the actual care; they believe that the “governments have a responsibility for the health of their peoples which can be fulfilled only by the provisions of adequate health and social measures.”<sup>2</sup> The WHO focuses on evaluating each country's healthcare system, standardizing disease definitions and treatment, and health education. It has created the Global NHA Data and Indicators Database which, “provides internationally comparable numbers on national health expenditures”; but they are often subject to discrepancies due to differences in definitions, collection methods, and population coverage.<sup>3</sup>

Although the WHO's studies are trying to standardize disease definition and protocol for diseases like Cystic Fibrosis (CF), they have been unable to create a meaningful impact. For those that are affected by this disease and many others like it, global healthcare is something that is of the utmost importance, not only for those suffering in countries where there is no healthcare available, but also for those that are looking for new life saving treatments, and a possible cure as well as for organizations looking to expand and send strategically critical personnel overseas.

### What is Cystic Fibrosis?

Cystic Fibrosis is a chronic disease caused by a recessive genetic mutation that affects the lungs, pancreas, liver, and intestine of patients afflicted with the disease. The genetic mutation causes the chloride cell to malfunction, creating thick and sticky secretions that can be found throughout the several organs that are most commonly damaged. Symptoms of the disease include salty skin, increased cough, difficulty breathing, sinus infections, allergies, poor growth, and infertility. The complications from the disease make “the predicted median age of survival for a person with CF in their late 30s.”<sup>4</sup> The abnormal secretions most commonly damage the patient's lungs causing severe scarring and difficulty breathing. Due to the secretions consistency, lungs are prone to bacterial infections, which can become life threatening. Over time, these infections cause irreversible scarring which closes off the patient's airways, reducing overall lung capacity. CF affects the pancreas, liver, and intestines in different ways. The most common issue CF patient's deal with is the pancreas inability to produce sufficient amount of enzymes, in

order to break down food so the patient is unable to absorb the necessary fat. This inability to absorb the proper nutrients causes dangerous intestinal blockages that can lead to constipation, blockages, or the intestine rupturing. The secretions can also inhibit both the pancreas and the liver by causing type II diabetes and cirrhosis, or liver failure.

Today CF affects only 30,000 people in the United States, and is most commonly seen in people of Eastern European descent. According to the American Lung Association, “cystic fibrosis is the second most common inherited disorder occurring in childhood in the United States.”<sup>5</sup> And in 1995 the WHO and International Cystic Fibrosis Associations recognized CF, “to be the most common serious single gene disorder in most Caucasian populations.”<sup>6</sup> A study conducted by the American Lung Association explains that 1 in 2,500 Caucasians are born with CF, opposed to 1 in 13,500 Hispanics, 1 in 15,100 African Americans, and 1 in 31,000 to 1 in 100,000 Asian Americans and Native Hawaiians.<sup>7</sup> It is because CF does not commonly affect people outside the North American and European populations there is little global action against this disease.

### Cystic Fibrosis Treatments

Despite that many pharmaceutical companies are working on possible cures, there is no proven cure for CF today. The American Lung Association recommends common treatment for CF patients includes, “airway clearance techniques and medications to clear secretions from the lungs, prevention and management of infections, and proper nutrition.”<sup>8</sup>

Many of even the basic treatments are extremely expensive, need to be created in specialized pharmacies, and administered by medical professionals, and are therefore difficult to access in countries that do not have adequate healthcare services. But the lack of healthcare is not the only thing that can impact the treatments available to patients; government agencies such as the FDA and other similar agencies affect which drugs are approved for use. In the United States the FDA is very strict when deciding

<sup>5</sup> “Understanding Cystic Fibrosis,” American Lung Association, accessed: October 12, 2013, <http://www.lung.org>.

<sup>6</sup> “Implementation of Cystic Fibrosis Services in Developing Countries,” World Health Organization and International Cystic Fibrosis Association, accessed: October 10, 2013, <http://www.cfww.org>.

<sup>7</sup> “Cystic Fibrosis,” American Lung Association, accessed: October 12, 2013, <http://www.lung.org>

<sup>8</sup> Ibid

which drugs to allow in the market, and some of their decisions have impact those struggling with the disease. Furthermore, there is a significant variance among countries. For instance, some drug agencies have allowed more potent drug cocktails to be given to CF patients, which are a great help for those that have run out of any other options.

### International and Country-Level Responses

In response to the lack of global healthcare to coordinate the multiple aspects of CF care, the CF community created Cystic Fibrosis Worldwide (CFW). CFW currently has 67 member countries, and their primary function is, “to spread information about the disease among scientists, medical professionals, caregivers, patients, and families and to act as a platform for the international exchange of information.”<sup>9</sup> Because CF is a predominantly Eastern European disease, those countries are better equipped with how to deal with it; however, developing countries where it is even less common struggle a great deal with diagnosis, treatment, and life-expectancy. Therefore CFW has a special focus on developing countries. They help these countries by “providing capacity-building tools in areas of governing, operating, and fundraising. For instance, CFW supports member countries by helping them develop CF Centers and lobbying for government support.”<sup>10</sup> Lobbying for government is so important for CF, because in most countries it does not affect enough people to be granted government support for testing and other health necessities; it is considered an “orphan disease.”

The CFW and the International Cystic Fibrosis Association is currently working on three international projects, in countries where there is either little healthcare infrastructure or the healthcare system in place is unaware of CF. The first program they are working on is in India, where other incurable diseases take more precedence over CF. The India healthcare system consists of both the public and private sectors. According to the Global Expat Network most people living in India prefer to use the private healthcare because it tends to, “offer a high standard of care that is at the same level as North America and European countries.”<sup>11</sup> Although the private sector offers quality healthcare, a majority of the population has to rely on the government-funded healthcare. The public healthcare funds hospitals that “provide basic care only

<sup>9</sup> “Who is Cystic Fibrosis Worldwide,” Cystic Fibrosis Worldwide, accessed: October 10, 2013, <http://www.cfww.org>

<sup>10</sup> Ibid

<sup>11</sup> “Healthcare System in India,” Angloinfo the global expat network, accessed: December 5, 2013, <http://india.angloinfo.com>

and often lack adequate infrastructure. They can also be crowded and waiting times can be long.”<sup>12</sup> This program is focused on the public sector “to build capacity in India allowing [them] to develop [their] own programs to aid patients.”<sup>13</sup> The next program is a research program searching for the prevalence of CF in Armenia. Due to the insufficient healthcare system in Armenia the “exact data on the incidence of CF is unknown, but there are some reasons to think that it's one of the most common inherited disorders in the region.”<sup>14</sup>

The WHO is working closely with Armenia to try and rebuild their healthcare, but the system has experienced great difficulties since the end of the communist era. According to a new report from the WHO, since the end of communism, “the system has fragmented along partially free-market lines and is today failing the majority of people it is supposed to serve.”<sup>15</sup> It is because of this unorganized healthcare system that those with CF are being overlooked; the system is focused on larger issues that affect a greater number of the population. Finally, the last program CFW is working on is “establishing treatment facilities and care providers in the Republic of Georgia”, where the life span of CF patients is only 16 due to lack of resources for the disease.<sup>16</sup> Like Armenia, the Republic of Georgia was a part of the Soviet Union, and after they gained their independence they were stripped of their functioning state-run healthcare system. According to a study conducted by the Stanford School of Medicine, “the loss of a government's centralized healthcare system has [had] a devastating impact.”<sup>17</sup> It was now up to the people to pay for their healthcare, something most could not afford; as a result the mortality rate in the country began to rise and good basic medical care became a thing of the past. The lack of structured healthcare means that those with diseases, like CF, are at the most risk.

CF is best diagnosed through genetic blood tests. These tests are not universal, and in recent years the WHO has

<sup>12</sup> Ibid

<sup>13</sup> “Capacity Building for the CF-SAT,” Cystic Fibrosis Worldwide, accessed: December 5, 2013, <http://www.cfww.org>

<sup>14</sup> “Cystic Fibrosis Worldwide Programs,” Cystic Fibrosis Worldwide, accessed: October 12, 2013, <http://www.cfww.org>

<sup>15</sup> “Armenians Struggle for Health Care and Medicines,” World Health Organization, accessed: December 5, 2013, <http://www.who.int>

<sup>16</sup> “Who is Cystic Fibrosis Worldwide”

<sup>17</sup> “Health Care Challenges in Republic of Georgia Could Occur in U.S., Stanford Researchers say,” Stanford School of Medicine, accessed: January 3, 2014 <http://med.stanford.edu>.

tried to prompt the European Union to “harmonize” their standards for genomic resources centers.<sup>18</sup> By implementing “certain minimum standards...laboratories performing genetic tests can also collaborate on issues such as best practices and rare genetic disease across national borders.”<sup>19</sup> For patients with CF the lack of standards means possible false positives, or worse, false negatives, which could significantly reduce their quality of life. The WHO report explains the large gaps across the EU; “in the United Kingdom considerable groundwork had been established for the protection of quality in genetic tests.”<sup>20</sup> However, countries such as “Spain and the Slovak republic have no specific recommendations or best practice guidance for genetic testing.”<sup>21</sup> The WHO is also working on enforcing other types of standards that would have huge impacts on the CF community; they are looking to implement CF services in developing countries, where “there are large populations in whom the disease is infrequently recognized and inadequately treated.”<sup>22</sup> Due to the healthcare systems in developing countries, like those previously mentioned, there is a lack of everything from an understanding of the disease to drugs to treat it.

### STRATEGIC IMPLICATIONS FOR FIRMS, UNIVERSITIES AND COUNTRIES

The host country macro-level conditions, including political risk, cultural distance, and economic instability will affect organization-level strategic decisions regarding entry, mode of entry, reciprocal arrangement, and ongoing financial and control systems (Phatak, Bhagat and Kashlak, 2009). Furthermore, the integration of different perspectives learned from various and distinct overseas experiences by either expatriates or students will contribute to the development of new knowledge and subsequent competitive advantage within the corporate or academic setting (Jones, Kashlak and Jones, 2004). Integrating a host country’s health system into this thinking will further delineate strategic possibilities for both organizations looking to expand overseas, and countries looking to reap the benefits of inward investment.

As businesses and universities may enhance their respective competitive postures as more countries become “in-play” for foreign operations and study abroad, host

countries will correspondingly enhance their respective comparative advantages, as the ultimate goal of a nation is to improve the standard of living of the citizens of a country through activities like trade, investment, production, and education (Waheeduzzaman and Ryans; 1996). Likewise, Porter (1990) suggests that appropriate factor conditions are a prerequisite for a nation’s competitiveness. Subsequently, an associated increase in investment and trade will lead to a future increase in both revenues and knowledge. This paper further suggests that health care and health systems must evolve and become a critical factor condition. Thus, both the competitive and comparative points of view, the following propositions are advanced:

Proposition 1: As the health care system of a host country develops, the degree of country-level attractiveness will increase.

Proposition 1a: As the health care system of a host country develops, the pool of qualified expatriates will increase.

Proposition 1b: As the health care system of a host country develops, the demand for study abroad in that country will increase.

Proposition 2: As the health care system of a host country develops, comparative advantage of that country will increase.

Proposition 2a: As the health care system of a host country develops, foreign direct investment will increase.

Proposition 2b: As the health care system of a host country develops, the flow of international students into that country will increase.

### COMPETITIVE AND COMPARATIVE ADVANTAGES OF HEALTH CARE

To fight global diseases, such as CF as well as many others, there is a necessity to develop a set of standards that each country implements in order to get the best outcome for the patients. However, it is important to note that not every country can implement these standards in the same way; the different healthcare structures demand different implementation methods. Because there needs to be a global focus, yet locally different implementations, a globalization (Phatak, 2005) strategy for healthcare would ensure that all those affected by diseases around the world would get the care they need.

Beyond the social and humanity implications, there are also strategic implications for firms, universities and countries. At the firm-level, as health systems become more sophisticated in strategically-targeted countries, firms will have increased flexibility to staff in-country positions with the most qualified personnel. Previous underdeveloped health care systems that historically limited this flexibility would have limitations mitigated, allowing

for the firm to (1) increase likelihood of success in the host country by optimizing expatriate placement, and (2) accrue long-term benefits of knowledge and growth once the expatriate was repatriated. Likewise, universities, competing with each other on the rigor and robustness of study abroad programs, would see added flexibility in overseas offerings, thus attracting a potential higher quality and greater number of applicants.

From the host country perspective, developing health care adequacies and beyond would attract for firm and university initiatives leading to an increase in firm-level investment, and university-level tuitions. Ultimately, the revenues, knowledge, and skills will enhance a country’s comparative advantage.

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<sup>18</sup> “Genomic Resource Centre,” *World Health Organization*, accessed: October 12, 2013, <http://www.who.int>.

<sup>19</sup> Ibid

<sup>20</sup> Ibid

<sup>21</sup> Ibid

<sup>22</sup> “Implementation of Cystic Fibrosis Services in Developing Countries”

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# MOTIVATIONS FOR ENTREPRENEURSHIP

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## ABSTRACT

*This research explored motivating factors for second career entrepreneurship. These second career participant entrepreneurs experienced push and pull factors for self-employment, supporting Shinnar and Young's research (2008). Five common themes emerged from this study. All participants were tired of corporate politics and had experienced a lack of job satisfaction. Some participants began entrepreneurial ventures in the same industry they worked while others ventured into new industries, but all had creative or innovative spirits. Lastly, success was defined as having some form of freedom, happiness, and having a quality of life balance, which all participants stated they had achieved success.*

## INTRODUCTION

Entrepreneurship is a common dream in capitalistic economies around the world. Highly successful and highly visible entrepreneurs, including Elon Musk and Richard Branson, have inspired many others to leave behind the drudgery of their stable, corporate job, and create a new business that will provide freedom, as well as financial and personal fulfillment. The purpose of this research was two-fold: 1] literature needed to be updated to reflect today's entrepreneur and the current economic state; and 2] to provide support to anyone interested in becoming an entrepreneur. This research offered knowledge from those that have successfully made the transition from a stable career to entrepreneurship through a grounded theory methodology. Researchers created a questionnaire to interview 21 participants, ranging in age from 33 to 68. Motivations for starting a business included organizational politics, lack of job satisfaction and/or opportunity, a drive to be creative, and the desire to put their particular knowledge and skills to a more productive use.

The consistent theme of these interviews and research demonstrated how dissatisfied workers are in corporate America. and the lack of attention organizational leadership has a detrimental effect on its workers' satisfaction. However, these influences provide the opportunity for people to leave and become entrepreneurs, where they might otherwise have stayed in an unhappy work environment. People today want satisfaction in their work, and if employees cannot find it with their current company, they will leave. The economic and corporate environments have forced many people to rethink their career paths.

## MOTIVATIONS FOR ENTREPRENEURSHIP

Starting a business and making millions of dollars is not just the American dream, rather it is a dream that is common in capitalistic economies around the world. Fueled by the visions of Steve Jobs, Bill Gates, Mark Zuckerberg, and other highly successful entrepreneurs who started their businesses while still in college and ultimately made millions, many others envision creating a new business that give them freedom, as well as financial and personal fulfillment. Entrepreneurs have generally earned positive perceptions in the media and in state and local governments; bookstores are filled with new volumes on starting and running a business, and colleges and universities are experiencing significant growth in enrollments in their entrepreneurship programs. Entrepreneurship is seen positively both socially and culturally, as evidenced through the thousands of new businesses that are started each year.

While this image of the entrepreneur, working away at a business he or she loves, is one that is both fascinating and frightening, few take the brave step and set out on their own. For all of the garage or dorm room entrepreneurs, there are equally as many famous, or infamous, individuals who have left their successful careers to chart their own paths. There is a particular fascination with the second career entrepreneurs who have left promising careers to start their own businesses. The term "second career" entrepreneur refers to individuals who were previously employed and who chose to leave their jobs and pursue a dream. It includes those accidental entrepreneurs, who began by moonlighting with a hobby or a skill that was in demand, and then the outside activities grew to the point where a greater focus was needed. These are individuals who did not intend to start a business, but found their products or services were in sufficient demand that a business de-

veloped. It also includes those individuals who retire and start their own business, whether their retirement is voluntary or the result of corporate downsizing. This applies to individuals whose employers have offered early retirement packages, which often serve as a cushion in the early days of the business. Colonel Harland Sanders, Martha Stewart, Sara Blakely, and Michael Bloomberg are four of the more highly visible and highly successful second career entrepreneurs.

Colonel Harland David Sanders had a recipe for fried chicken. After dropping out of school in the 6th grade, Sanders went on to work as a fireman, sell insurance, and work any number of other jobs before opening his first roadside restaurant in Corbin, Kentucky. The restaurant was so successful that he decided to franchise the business in 1952, and 12 years later decided the company was too much for him to handle. This was not his first entrepreneurial venture, however, having previously established a riverboat company and later manufactured acetylene lamps. In his 1966 autobiography that was discovered and published in 2012, Sanders explained how he tried and failed in his attempts to work for other people, but was successful in his entrepreneurial ventures and grew his fried chicken brand into a global brand.

Martha Stewart was a gifted hostess with a flair for decorating, who began operating a catering business out of her home. Her shrewd business sense, combined with a talent for business, propelled Stewart from a Connecticut caterer to a media mogul and a style icon. Martha Stewart Living Omnimedia has product lines in Macy's and other large department stores, a very popular magazine, radio and television programs, and the rights to Emeril Lagasse's television shows, product lines, and cookbooks. Even after a prison sentence for insider trading, Martha Stewart remains one of today's most visible and highly successful second career entrepreneurs.

Sara Blakely was an office equipment salesperson who was dissatisfied with how she looked in her white slacks. In a fit of frustration, she cut the feet out of her pantyhose. She took \$5,000 out of her retirement account, spent the next several weeks scouting craft stores so that she could make a workable prototype, then headed to North Carolina to locate a hosiery mill that would produce her creation. Blakely could not afford to pay an attorney the \$7,000 needed to patent her idea, so she bought a book from Barnes and Noble and figured out how to do it herself. Spanx was born in her spare bedroom, and the company has expanded to include a full line of undergarments and clothing for men and women. Spanx is a multi-million dollar company, solely owned by Blakely.

Michael Bloomberg was an investment banker who was fired when his company merged with Citigroup. He

formed his own company, Innovative Market Systems, to provide high quality business information, with Merrill Lynch as its first customer. The company later became Bloomberg L.P., and Bloomberg is reportedly the 13th richest person in the world (Forbes, 2013). Bloomberg stepped down as CEO of Bloomberg to enter politics, and served three terms as mayor of New York City. Since stepping down as mayor, Bloomberg has been generous in his philanthropic endeavors, but has stated he intends to return to his company as CEO.

This research set out to explore the driving factors that lead successful individuals to leave established careers and potentially risk their life's savings and lifelong security to open a business. The four entrepreneurs highlighted were certainly successful, but given the perception of risk in starting a new business, this move would not necessarily seem to be a rational one. At the same time, workers have seen their secure pensions disappear, as economic pressures have forced even large corporations to rethink their retiree benefits. The paternalistic attitudes and commitments to employees previously offered by large corporations have diminished, as pension plans have disappeared or been reformatting. These issues, along with other factors, have led some people to take control of their future and start a business, even with the high probability of longer hours and less money. It would seem that money, alone, would not be a significant factor in triggering an individual to pursue an entrepreneurial venture as a second career.

The term copreneurs has been used to describe couples (married or life partners) in business together, who chose to start or purchase a business, with one or both leaving full-time employment to start or purchase an existing business and where both are involved in the day to day operations of the business. Muske and Fitzgerald (2006) further defined copreneurs as two people in marriage or marriage-type relationships, with the spouse actively working in the business and acknowledged as an active part of the business. Muske and Fitzgerald noted that approximately 30% of family businesses were actually owned by copreneurs, and the copreneurs group typically employed other family members than other family businesses. There is little information available about copreneurs as a separate subgroup from family businesses.

According to the Small Business Administration (Nazar, 2013), there are about 28 million small businesses currently operating in the United States and about 22 million people are self-employed. Small businesses employ over half of the workers in the United States, and these firms generate over 65% of the new jobs. While there are approximately 543,000 new businesses starting each month, the number for closures each month is even high-

er than that. While the numbers of new business starts seems staggering, so does the number of small business failures. Less than one-third of all new businesses survive for 10 years, with only about half surviving for five years. This would lead one to question why someone would be willing to accept this level of risk since the successful entrepreneurs are statistically a very small minority.

## LITERATURE REVIEW

The purpose of this research was to explore the motivating forces that would drive individuals with stable careers or comfortable retirements to start a business. Given the uncertainty and risk of new ventures, there would seem to be significant perceived rewards behind the decisions. Josien (2012) discussed the risk-propensity of entrepreneurs within the context of Carland's trichotomy of entrepreneurial orientation. Carland and Carland (1997) noted three categories of entrepreneurs, macroentrepreneurs, microentrepreneurs, and entrepreneurs. Carland defined macroentrepreneurs as risk-takers seeking self-actualization, innovative and creative, and highly driven despite extreme wealth. Macroentrepreneurs were more willing to accept debt and equity financing in order to grow their businesses rapidly. The microentrepreneurs included the smaller family businesses with only a few employees, and these individuals could be described as those who worked to live, rather than live to work. They were also typically much more casual about their businesses. The entrepreneur group fell in between the two groups, and was less likely to take risks, as their goal was to preserve the business. This group would likely include the accidental entrepreneurs, whose businesses developed gradually out of a hobby or a particular interest. The participants in this study would likely be classified as microentrepreneurs or entrepreneurs.

Arora (2014) examined the work motivation of 60 entrepreneurs, in terms of intrinsic and extrinsic rewards, the social aspects and status of the job, and the sense of fulfillment using the Work Motivation Questionnaire, designed by K. G. Agrawal (1988). The study was descriptive and also looked at role stress. The overall result of the study was that the job satisfaction measures were high among entrepreneurs, and their dependency on the job and their status as a business owner made them work harder. The entrepreneurs appeared to feel positive about their ability to work under stress, but also identified the need for additional training to help them be successful in their endeavors.

Berthold and Neumann (2008) compared the motivations of entrepreneurs with those of employed managers, with the risk of uncertainty being one of the distinguishing factors in the work of the two categories. Given that

both needed to satisfy the needs of the consumers and both were generally concerned with the growth of the organization, there were similarities in tasks. Self-fulfillment was a motivating factor in job satisfaction for both groups, but the ability to be innovative and take responsibility for the success of the organization was higher for the entrepreneurs. Stewart and Ross (2007) further identified successful entrepreneurs as high in task motivation and achievement motivation, and found that entrepreneurs preferred a more flexible environment with more autonomy.

Rae (2005) identified the need for entrepreneurial training later in life, as a mechanism to expand economic opportunities and to extend the working years of older individuals with entrepreneurial interests. Similarly, Holmes and Cartwright (1994) found that people between the ages of 35 and 55 had a high level of dissatisfaction, yet were at the peak of their career potential. At the older end of the age range, the "baby-boom" generation has already experienced multiple changes, particularly in terms of technology and communications, and has generally been quick to embrace the changes. Rae found that while these individuals had significant bodies of business knowledge, much of this knowledge needed to be unlearned and replaced with more of entrepreneurial skills and thought processes. The rigidity and predictability commonly found in larger organizations did not accommodate flexibility and a more opportunistic approach, leading to career dissatisfaction. Aldrich and Yang (2013) posited that second career entrepreneurs were more successful when they had established positive habits and routines.

Mallon and Cohen (2001) found that women moved to self-employment, at least in part, due to the frustration of the corporate world. Similar findings were discovered by Hughes (2003), who found that constraints and perceived limitations on women's careers were common drivers in women's decisions to start businesses. Women were found to prefer the risk of self-employment to the issues they felt were unresolved, and the lack of opportunity. Muja and Appelbaum (2012) explored the cognitive processes involved in career change decisions, and found that personal intention was a stronger motivating factor than social networks, indicating that the decision for entrepreneurship was internal, rather than externally motivated.

Weinrauch (1980) discussed the adjustment challenges of second-career entrepreneurs. Despite a wealth of experience and knowledge in the business world, the adjustments to entrepreneurship and its demands were often too great. Weinrauch's research found that it was easier to move from a small firm to a larger organization, and the uncertainty and instability of self-employment, as well as the turbulence, was sometimes too great. For former ex-

ecutives moving to a second career, the sudden absence of some of the privileges of the C-suite or senior management was a challenge. Weinrauch recommended careful planning, and recommended including the family in the decision making process. For some, moonlighting could be an intermediate option while building the business and learning the critical lessons.

The question arose as to how nascent entrepreneurs acquired the knowledge to start and operate their businesses, as these were second career ventures that in most cases varied greatly from the entrepreneurs’ educational preparation. Aldrich and Yang (2013) discussed the differences in skills and knowledge needed in a start-up, as compared with managers in an established business, and found that entrepreneurial learning is dynamic and occurs over a life cycle, and considers the organization. Entrepreneurial learning is not a linear process and must be contextual, at least to some extent. Entrepreneurs learn by what they have done and by what they are doing, and the learning differs in the start-up phase where actions result in deliberate actions. The start-up phase can be thought of as “on the job training”, as there is experimentation during this time and adaptability is essential to survival.

Liang and Dunn (2008) sought to determine the relationship between the outlook of entrepreneurs and their learning. Their study indicated that while entrepreneurs tended to be realistic, they were also optimistic. Realistic business owners indicated that, were they to start over, they would utilize the services of consultants while optimistic entrepreneurs generally indicated they would not do anything differently. While there is no accepted definition for realism and the role of optimism has not been studied in entrepreneurs, this study was interesting in that it found no correlation between attitudes and other entrepreneurial traits.

Most relevant to this study were the findings of Shinnar and Young (2008), who examined motivations for self-employment among the Hispanic immigrant population. Shinnar and Young divided motivating factors into two categories, push and pull. Push factors were negative in nature, while the pull factors were positive. The push aspect included aspects of employment that forced the entrepreneurs into seeking their own opportunities, such as low wages and limited job markets. Discrimination was a key component in the factors that forced the entrepreneurs out of a more traditional career path, as these entrepreneurs felt their options for jobs, living wages, and promotions were limited in the traditional employment market. Language barriers were also considered a push factor.

The pull factors, as identified by Shinnar and Young (2008), included the opportunity to take charge of their

destiny. Autonomy was a key factor, particularly when the entrepreneur had a role model who had started a business. Self-employed individuals in the Shinnar and Young study were generally older and had significant work experience, as well as the capital needed to fund a new business. The participants were more informal in their planning process and generally relied on personal savings and loans from family members to start their business. Where outside expertise was needed, such as accounting or vendors, the Hispanic entrepreneurs in this study tended to seek out other Hispanic professionals. The study was limited to the Las Vegas area and the study demonstrated a strong Hispanic representation in the hospitality industry, but found few Hispanics in managerial positions. Despite this underrepresentation, less than half of the entrepreneurs identified push factors as their reasons for starting their business. Most expressed their long-standing desire to start a business, a pull factor, as their motivation.

Xu (“The Entrepreneur’s Motivation”, 2012) recommended that entrepreneurs start their businesses because of passion, rather than a desire for making money. Xu’s study of over 60,000 people demonstrated that autonomy and self-fulfillment were the driving factors in starting a business. Entrepreneurs were noted to be self-directed and seeking something greater than they were able to achieve in the corporate environment. The vision and the passion, according to Xu, were the key factors in the entrepreneurs’ success.

New Zealand is a country where the majorities of businesses are small and employ fewer than 19 people (Rigby, Mueller, Partridge, & Kriel, 2008). The New Zealand government promotes small business through free support services to entrepreneurs, including advisors, marketing assistance, and assistance in exporting. Rigby et al. confirmed other studies, which indicated that entrepreneurs are more likely to be first-born and have at least one parent who was an entrepreneur, and all characterized themselves as self-starters with a vision for growing their business. The study found the combination of a powerful role model and a strong work ethic to be significant motivating factors, as well as the desire for freedom.

METHODOLOGY

The researchers used a qualitative case study approach to explore the research question—determine the motivations that drove someone to leave a stable career and become an entrepreneur. An interview questionnaire was developed to guide the discussions (Appendix A) and then tested with two interviews. After testing, the researchers discussed the results and decided no adjustments were necessary. The purpose of this research was to update the literature to reflect today’s entrepreneur and the current

economic state, and to provide support to anyone who might be interested in leaving a stable career to become an entrepreneur. This research offered knowledge from those that successfully made the transition from a stable career to entrepreneurship through a case study methodology.

This research provided a practical knowledge of the driving forces that motivated people to become entrepreneurs. Additionally, associated benefits included the gain of practical knowledge that acted as the foundation of individuals wanting to make the change from a stable career to that of entrepreneurship. This included how participants achieved their goals and identifying the resources involved to achieve those goals. Lastly, this case study provided definitions of success, as it related to each participant.

Demographic data was gathered to identify characteristics of each participant: age, gender, marital status, and number of children. Data was reported anonymously and ID numbers for participants were used. Informed consent was obtained by each interviewer in written form, at the time of the interview. Each researcher was responsible for obtaining informed consent for each participant. Coercion was not used and each participant voluntarily gave informed consent. All participants spoke English as a first language.

Each researcher conducted the same activities: interviewed the entrepreneur via Skype or traveled to each participant for a face-to-face interview; both forms captured the interview on a recording so the researcher was not distracted by writing notes while listening and interviewing simultaneously. Wherever possible, the researchers conducted face-to-face entrepreneur’s place of business so that the researcher could gain a more intimate knowledge of the business setting. Entrepreneurs were selected through connections with entrepreneurial organizations and by referral from networking organizations. Potential participants were contacted via email and phone call requests.

This studied focused on motivations of a person leaving a stable career to enter the world of entrepreneurship. As such, the varying demographics of the locations of the

participants were not included as a variable for this study as the focus was motivations. Additionally, with the focal point of this study as motivations, education, experience, and backgrounds were not included as variables of this study.

Participants

The population was limited to individuals who had worked for an organization of any size in a stable career and either left that job to become an entrepreneur, or experienced a job loss at the company but did not re-enter the corporate world. The study used a convenience sample selected from a sample of personally known entrepreneurs of the researchers as well as referrals from participants, which offered a broader avenue of various industries and locations. The cities selected were Atlanta, Georgia, Columbus, Ohio, Denver, Colorado, Salt Lake City, Utah, Spartanburg, South Carolina, Santa Fe, New Mexico, and Campbell, California. These cities were chosen because of their status as small business friendly, with active Chambers of Commerce, and economic incentives for new businesses. Business Networking International is a networking organization that assisted in a broad cross-section of entrepreneurs.

A total of 21 participants were interviewed, 16 male entrepreneurs and 5 female entrepreneurs, with an average age of 49 and an age range of 33 to 68 (Table 1). For the male participants, the average number of children was 1.625 with a range of 0-5. Female participants had an average number of 1.2 children with a range of 0-3. Overall, the average number of children for all participants was 1.52. Interestingly, 48% of participants had zero children. Two participants were married to each other but interviewed separately as each was an entrepreneur with their own, separate business. Another one of the participants was in business with her husband but he was unavailable for interview.

Prior to starting their businesses, participants’ jobs included a hair dresser, U.S. state Senator, minister, engineer,

TABLE 1 NUMBER OF PARTICIPANTS PER SEX, MARITAL STATUS, AND NUMBER OF CHILDREN OF THE TOTAL SAMPLE SIZE (N=21)					
	Marital Status			Total	Average Number of Children
	Single	Married	Divorced		
Male	4	11	1	16	1.625
Female	1	2	2	5	1.2
Total	5	13	3	21	

caterer, marketer/advertiser, school counselor, car dealer, insurance executive, airline pilot, waiter, financial advisor, and delivery courier, all working for someone else. After becoming entrepreneurs, the careers included hair salon owner, international vintner, realtor, innkeeper, restaurant owner, spa owner, landscape designer, instructional designer, marketing/advertising firm, engineering and architectural firm, auto auction company, education technology company, and a boutique owner. All entrepreneurs had been in business from one year to 10 years. This data was gathered as informational demographic material and not as variables in this study of identifying motivational factors to leave a stable career.

## DISCUSSION

Through a case study qualitative methodological approach, this research revealed the key motivators of why someone left a stable career and transitioned to engage in a new venture as an entrepreneur. Through this research, all participants were classified as either microentrepreneurs or entrepreneurs, and interesting facts and themes were revealed about the entrepreneurs who were interviewed. Almost half of the participants chose to start their entrepreneurial business in the same career they were working in, while others went in a different direction. For instance, a hair stylist left to open their own hair salon while a U.S. State Senator became an international entrepreneur in a partnership of owning and operating a winery in Italy. While those who left careers to become entrepreneurs in the same field had some working knowledge of that type of business, the participants that started in a new career did not have industry knowledge. The latter moved into careers that were of interest to them or something they had always dreamed of doing.

The male participants, regardless of age, tended to have more self-confidence while the female participants, regardless of age, did not. The men participants seemed to use that confidence and moved into the entrepreneurial world quicker than the women did, who took more time in researching and planning before making the move. However, all participants were equally successful, by their own definitions. This could be because they had established positive habits and routines, which was suggested by Aldrich and Yang (2013) as a reason why second career entrepreneurs were more successful. At some point during their decision-making to leave their stable careers, all participants decided the risk of leaving and becoming an entrepreneur was less of a risk than staying in a corporate world where they were dissatisfied, felt undervalued, and hated the corporate politics that went on in the companies. Those driving factors were, in part, the reason that all participants stayed entrepreneurs. This study updated

current literature as a contributor to the business industry and five common themes arose from this study.

### Theme 1 – Organizational Politics

All participants stated they had had enough of corporate life and politics and felt there must be something better in life. They did not want to be “tied” to an organization where they did not feel valued. Some participants stated they would make suggestions to management but those suggestions would go unnoticed, not taken seriously, or management would look at them as if to say, “Who are you to make this suggestion?” One of the participants was forced to retire while another participant was not reelected to the state Senate. One female participant felt “forced” to leave for putting family first and was told she would not amount to anything. This is right in line with Mallon and Cohen’s findings (2003) that women moved to self-employment because of corporate frustration.

While Shinnar and Young’s (2008) study focused on the Hispanic immigrant population, it has been surmised here that this study supported the push and pull motivating factors for self-employment. All participants experienced a negative push factor, as evidenced by the participants: “discrimination,” “downward mobility,” “male domination of reported research and leadership positions,” “owner of company wasn’t growing and business was failing,” “corporate politics and harassment,” “corporate restructuring,” and “I craved management responsibility but did not get it.” These push factors made the entrepreneurs feel as though they were not valued. They believed job opportunities or promotions were scarce or nonexistent, and there was a limit to wage potential. Organizational politics were very difficult for these entrepreneurs to handle.

Participants wanted to take charge of their own career, a pull factor designated by Shinnar and Young (2008). The entrepreneurs also had an internal desire to start a business, be their own boss, control their own career and destiny, and take charge of their happiness. Now, these participants were all happy, though they felt stressed at a different level. The participants agreed their stress was manageable, that they now have job satisfaction, and they thoroughly enjoy being entrepreneurs. No longer do they have the fear of losing their job or surviving in a disruptive work environment. They have satisfied their desires for freedom and self-value by eliminating corporate politics.

### Theme 2 – Lack of Job Satisfaction

A glaring theme from all participants was the lack of job satisfaction or recognition at their former organizational jobs. Participants in this study ranged in age from 33 to 68; those who were not in retirement but working for

companies were highly dissatisfied with their job and/or their environments. These participants were at the peak of their careers, yet experienced job dissatisfaction, supported by Holmes and Cartwright’s research findings (1994).

Job dissatisfaction has been an unfortunate by-product of corporate culture for decades. As the years progress, the generations vary. Corporate loyalty has not been as prevalent as it once was in the 1950’s by either side – the company or the employee. Companies have changed the pay structure, benefits, eliminated pensions, and eliminated seniority. This has spurred the change in loyalty and job satisfaction in generations. As the researched entrepreneurs stated, they could not foresee themselves staying with one company until retirement age as their parents or grandparents did. Companies today are not the same as they were with their parents’ generation; corporate politics has heightened and as a result has provided motivation for workers to leave and become entrepreneurs. For some participants, the buildup of corporate politics over time was the “final straw” for the decision to leave and become an entrepreneur. Others who experienced a job loss of some form did not want to re-enter the corporate world because of these factors and made the decision to become an entrepreneur. The rigidity and inflexibility of the companies, in part, led to job dissatisfaction of the participants.

### Theme 3 – Creative or Innovative Spirit

Most participants felt as if they were “always into something,” meaning they had always been creative or innovative in some form, from the time they were young children into adulthood. For most participants, their current business or venture was not their first. All participants described themselves as having creative or innovative spirits, whether it was recognized early as young children or later in life as adults. While a few entrepreneurs had parents that were entrepreneurial, most participants faced this as a second, new career; but the internal motivational drive was there for both. This result was contradictory to Rigby, Mueller, Partridge, & Kriel (2008), who found most entrepreneurs had at least one parent that was an entrepreneur. Having family and friends to support that spirit was present at some level with the participants. While some entrepreneurs had unconditional support, others had support but their friends and family thought they were “crazy” for trying this new venture. The decision to move to entrepreneurship can vary by person, context, and support from family and friends. All participants had some level of family/friends support and that helped to make the transition and to keep the creative and innovative spirit alive.

Most tried some form of entrepreneurial spirit in their younger years but did not recognize it as being an entre-

preneur. Today, when they reflected on yesterday, they saw the progression of that spirit. Being a young entrepreneur did not mean taking a high level risk or trying something huge. Participants in this study noted some simple yet effective innovative ventures, such as buying fireworks at a discount and reselling to friends, becoming a disc jockey to meet girls, recreating photographer backdrops, and painting murals. These would be considered as moonlighting jobs as adults, but as children and young teens, these were an exercise in the creative and innovative spirit while at the same time being fun and learning the basics of an entrepreneurial start-up. Those same lessons would follow them through life to the entrepreneurial stage today as an adult. Examples that helped to shape their career today were:

1. Participant 11, an artist, as a young adult innovated a way to paint backgrounds for photographers taking photos of people. The problem this entrepreneur was solving was that the backgrounds were a major expense for the photographer. The solution was cost effective for participant 11 to recreate the backgrounds with a savings at a fraction of the cost to the photographer, while both still made a profit.
2. Participant 16 had been working at a local hair salon and had the passion for the business but had a “burning” for more responsibility, “craving it.” He felt he was not given the opportunities he needed to grow, both personally and professionally. Not being able to have that “burning” met by working for someone else, participant 16 moved to another hair salon but still that need was not met. Participant 16 decided it was time to open a business – a hair salon; that “burning need” has been met.

### Theme 4 – Knowledge and Training

All participants had some knowledge of either owning their own business or knowledge of their industry but needed additional knowledge about being an entrepreneur. Supporting Rae (2005), these entrepreneurs identified a need for entrepreneurial training and used their network for connections, researched and planned the transition into a new career. Supporting Weinrach’s research (1980), some participants carefully planned starting their career while other participants described their process as “very quick” or “I thought about it for three and a half years.” Some form of planning occurred, whether quickly for someone moving into the same industry as an entrepreneur, to taking some time for those moving into a

new career. There was some level of entrepreneurial training for all participants.

One participant stated that she and her business partner, who had previously worked together, decided to leave and start their own company in the same field. However, they had no experience in a start-up of this scale and sought help from their bank loan officer, who provided valuable advice, “Don’t leave your current job until you have established your new business.” It took nine months of careful planning before they were ready to leave. Another entrepreneur (with a future partner) took about six months to leave the company after solid planning. Because they had been trying to help their current employer grow and brought in a business coach, and that business owner not being interested, they used that knowledge to help make the decision to leave. Another entrepreneur researched and conducted informational interviews as part of the entrepreneurial training process and stated, “I couldn’t have done it [made the transition] without those.” Most entrepreneurs have evolved through the years of self-employment. The entrepreneurial training is ongoing and should never end. When asked if they would do this all over again, most said, “Yes!” Others stated, “Well, I’m not sure; but probably yes.” It is hard work to make the transition, to create customers, to build relationships, etc. but well worth the return of success.

### Theme 5 – Success

Success can have different meanings to different people. All entrepreneurs in this study defined it as some form of having the freedom of choice with money, security, or being in charge of their own destiny, happiness, and having a quality of life balance. To many people, not just entrepreneurs, success means having interesting work, feeling valued, feeling excited about something, and feeling satisfied. All entrepreneurs interviewed for this study have achieved that success. To them, money was only a part of success – money is needed to live – but it was not the overarching factor of success.

No entrepreneurs defined success as being enormously wealthy. To them, success meant living a life where they were in control and living comfortably with money or being financially secure. Being wealthy for the participants meant “having enough money to do what I want, and to make a difference.” Others described success as “living well, doing what I want to do, not having to be careful [financially].” Have quality of life or work-life balance was a response that occurred repeatedly during the interviews. Many started the business or venture with that in mind and being able to “maintain and hang on to a quality of life that [I] started the business for” meant they were successful. One entrepreneur defined success quite eloquent-

ly, “[Success] is the courage to follow your own path and improve the world in some way. It’s a life-long process.”

### FUTURE CONSIDERATIONS

While this study revealed five common themes and information, the research revealed additional paths. Entrepreneurs in this research study had some knowledge of how to get started or were able to use their network for help and advice. Additional research should include an exploration into the knowledge entrepreneurs wish they had before starting their business. As part of this future consideration, the level of entrepreneurial training needed should be included. How do entrepreneurs learn? Does lack of knowledge on how to become an entrepreneur correlate to the amount of entrepreneurial training needed? What is the rate of training transference to the second career and how does that correlate to success? Additionally, do entrepreneurs who have the help of a role model or mentor have more success than those that do not? Alternatively, do they achieve success quicker than those without a role model or mentor do? Is formal education more beneficial than practical experience?

Additionally, more focused research on generational characteristics and entrepreneur career changes is needed. How do generational differences influence entrepreneurial career changes? Are some generations more apt to make the change than others are? The different generations have different acceptable levels of risk; does this affect their decision to leave a stable career or industry? To what extent does company loyalty overshadow lack of job satisfaction and the risk to leave, based on generational characteristics? Is company loyalty still prevalent?

Do entrepreneurs of today have similar personalities? This could provide information as to the chance of success based on personality. It would be interesting to see if there is a relationship between personality research and generational research. Gender similarities and differences could also be included with gender and personality differences. Studying entrepreneurs in foreign locations and comparing those to American entrepreneurs could provide information for literature and American entrepreneurs as to similarities and differences of being an entrepreneur. Do American entrepreneur personality characteristics vary from foreign entrepreneurs? On the other hand, are they similar? If so, are there universal personality characteristics for becoming an entrepreneur? Are there personality characteristics that correlate to success, no matter the culture, background, or location?

### CONCLUSION AND IMPLICATIONS

Research has found that entrepreneurs are likely to have at least one parent who was an entrepreneur (Rigby, Mueller, Partridge, & Kriel, 2008); this was different from what was found in this study. It is possible that parents who are entrepreneurs have set the stage for their children; they become role models to the children. Is entrepreneurship hereditary, innate, or both? These children are growing up in a household that promotes entrepreneurship, promotes innovation and creation, and supports the ideas their children have. Children are gaining invaluable entrepreneurial training early in life, which may help to promote confidence and success.

The economic and corporate environments have forced many people to rethink their career paths. The entrepreneurs who participated in this study chose to take advantage of both. They did not want to return to the corporate politics that had plagued them during their first career; they knew another company would likely have the same environment. Participants wanted something better for themselves and their families, especially those with children. All were realistic and optimistic. All participants of this study were internally motivated to become entrepreneurs. They felt a push, whether a loss of job, job dissatisfaction, or being forced out, to do something better, to do something different, and they also felt a pull. Their life needed to change for the positive and that internal drive led them to make the decision to leave a stable career to start their own venture. For these participants, entrepreneurship was the clear solution.

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## APPENDIX A

### Demographic Questions

1. What is your age?
2. What is your sex?
3. What is your marital status?
4. Do you have children? How many?

### Interview Questions

1. What were you doing before?
2. What are you doing now?
3. Is this your first transition to be an entrepreneur?
  - a. If yes: What drove you to leave your prior career and become an entrepreneur?
  - b. If no: What motivates you to keep pursuing an entrepreneurial career?
4. What were the attractors/distractors from your decision?
5. Were your friends/family supportive of your transition to become an entrepreneur? Please explain how they were/were not supportive.
6. What motivates you to be an entrepreneur?
7. Are you successful? How do you define success?
8. Were you the single "bread winner?" How did your economic/financial situation influence your decision to leave your career and become an entrepreneur?
9. Did your income reduce, stay the same, or increase after becoming an entrepreneur?
  - a. By what percent? (if reduced or increased)
10. How has your lifestyle changed?



# THE LIFE PROJECT: A CASE OF SOCIAL RESPONSIBILITY

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## ABSTRACT

*This pedagogical work consists of a case study designed to provide an opportunity for students to improve their analytical skills in a business context. The case engages students in a multidisciplinary research project that requires them to consult literature in business, education and social science journals. The case presents Jonus Company, a fictitious fashion retailer whose chief executive plans to launch a social responsibility project to address the literacy problem among African-American males. Students are asked to serve as lead-researchers on Jonus' Community Development Team to assess 1) the scope of the literacy problem in the chosen demographic and possible interventions, and 2) the types and profitability impact of social responsibility projects on comparably-sized businesses. Finally, students are asked to make an informed recommendation about the direction and feasibility of the proposed project.*

*Keywords: literacy, African-American males, social responsibility, business case, interdisciplinary research, achievement gap*

## INSTRUCTOR'S NOTES

Students confronted with research projects often find themselves adrift. For many, the most difficult aspect of the research project is starting. It is difficult for students to know what they are really looking for.

The benefit of this project is that it provides students with a clear set of questions to guide their search. Additionally, the project can create cooperative linkages among students, faculty and information literacy specialists at the college or university library. Finally, the role-play component of the assignment places the student in the position of researcher, advisor and decision maker. Critical thinking is required as students make recommendations to a fictitious corporation based on their interdisciplinary research.

The LIFE Project case encourages students to think along interdisciplinary lines by providing engagement with different streams of peer-reviewed scholarly articles. This helps wean students from dependence on non-scholarly sources such as those found in traditional Internet searches, which present reliability concerns (Calkins & Kelley, 2007). The goal is to bring about a more mature

and robust use of scholarly resources and to help students transcend the discipline of their major in preparation for functioning in a world of complex, interdependent systems (Trewella 2009). Nevertheless, instructors face a challenge in finding methods to move scholarly sources from the realm of suggestion to requirement. Robinson and Schlegl (2004) found that effective collaboration with information literacy specialists at university libraries, the formulation of projects with the formal requirement of scholarly sources, and the inclusion of penalties for failing to use scholarly sources resulted in significant increases in the use of required source type.

After the introduction of the assignment, a library information literacy specialist should be invited to train the students in the use of library databases and the value of scholarly sources. Following this, students should be reminded of the assignment requirements and penalties for failure to use scholarly sources.

Having read the case and consulted the literature, students are to write a paper that addresses case questions covering two main areas: 1) a comparative look at the scope of the literacy problem in the chosen demographic and possible interventions, and 2) the types of projects conducted by



and the impact of social responsibility projects on profits of comparably-sized businesses. Though Jonus Company is a fictitious entity, its size, composition and earnings are based on those of actual companies in the retail fashion industry. Students will have little trouble finding peer corporations for comparison. Finally, students are asked to make an informed recommendation about the direction and feasibility of the proposed project.

The assignment also helps students to learn a research paper style (e.g., APA style. The Purdue Owl website is a great resource for APA and other style instruction. <https://owl.english.purdue.edu/owl/resource/560/01/>). Specifics for the paper will differ depending on the instructor’s objectives and course requirements. Following are sample requirements used in a sophomore-level Business Communication course:

- APA Style including:
  - Cover Page
  - Abstract
  - Reference Page
  - In-text Citations
- 5 References, Minimum
- 5 Page Body, Minimum (excluding cover, reference page, abstract)

The completed assignment is graded using Turnitin.com to encourage students to avoid plagiarism.

CASE INTRODUCTION

Founded in 1973, Jonus Company’s core business is fashion merchandise. It targets mid- to high-income consumers in the 20-35 year-old, college-educated bracket. Jonus is committed to being a socially responsible organization. They exist to earn long-term profits, maximize shareholder earnings, and become the most influential retailer of fashion merchandise globally. Jonus has decided to create and engage in activities that contribute to the wellbeing of the communities it serves. This type of activity is referred to as a social responsibility project.

Some stakeholders (including CFO, Nigel Altman) argue that since social projects have little to do with the primary purpose of the company, Jonus should avoid expensive and potentially controversial social responsibility ideas. The stakeholders feel that nothing should be done that could prove damaging to the brand.

Nevertheless, Jonus CEO, Dallas Fortrel, believes that strong, credible, involvement as a good citizen strengthens the community, builds customer loyalty, promotes

brand recognition, and results in greater profits. Nevertheless, Fortrel realizes that his hunch is based on anecdotal evidence. He needs solid data to support and inform this journey into social responsibility. This is the delicate balancing act profitable corporations face—in which direction should they move on the social responsibility spectrum: to the no-social-contribution end or to the proactive-contribution end?

THE PROJECT

With this in mind, you have been asked to serve as a researcher for Jonus Company’s Community Development Team (CDT). Under the direction of Lisa Granger, VP for Community Development, this team is tasked with developing a social responsibility project that addresses a passionate concern of Mr. Fortrel: literacy deficits among young African-American males, nationwide.

You will assist with creating the LIFE project: Literacy Is For Everyone. To initiate this program, the CDT needs to conduct research to understand the literacy problem and to determine the appropriate intervention strategies. The following is a list of critical information that must be ascertained to develop an effective program:

Literacy

- How big is the literacy problem facing African-American males? How does it compare to other major groups in the U.S.?
- What are some of the contributing factors to the literacy gap between the target group and other groups in society?
- Which interventions or methods have been proposed to resolve the crisis?

Social Responsibility Projects

- Who are Jonus Company’s chief competitors? What other companies are comparable in size and net income?
- What are some of the more successful social responsibility projects initiated by these companies?
- How have social responsibility projects affected profitability of large companies?
- Are there any risks associated with such programs?
- Based on your research, how can a retailer with little experience in the field of education make a difference in addressing the literacy problem?

Your research is critical to making this project a reality.

Company Facts

Jonus Company
Net Income 2013: \$1.2 Billion
Global Chain
36 Countries
60 Countries Online
289 Stores
119,000 Employees
HQ: High Point, NC
Executives
Dallas Fortrel, CEO
Nigel Altman, CFO
Lisa Granger, VP Community Development
Stores
Jonus Company
BOX
DEPLOY Men
FoReel Fashion Shoes

APPENDIX

Student Feedback

Following is a sample of comments received from students who completed the assignment:

- “Putting this project together was not as simple as I thought it would be. To complete this project successfully, intensive research and forward planning is definitely required. It was a great project overall and it forced critical thinking, which is an excellent thing.”
- “I thoroughly enjoyed working on this project. . . . It opened my eyes to see that projects are not given just to be a pain but to help educate in the process. My only concern was developing a starting point and having to work two different topics into one paper. Once I found the starting place, it began to flow together with ease.”
- “It required us as students to think outside of the box to understand what the assignment was. At certain points I would find myself at a dead end because the information I would search would not be sufficient. I had to go to the library a couple times and once I had a little push I was able to complete the assignment.”

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We encourage the submission of manuscripts, presentation outlines, and abstracts pertaining to any business or related discipline topic. We believe that all disciplines are interrelated and that looking at our disciplines and how they relate to each other is preferable to focusing only on our individual 'silos of knowledge'. The ideal presentation would cross discipline borders so as to be more relevant than a topic only of interest to a small subset of a single discipline. Of course, single domain topics are needed as well.

All too often learning takes a back seat to discipline related research. The International Conference on Learning and Administration in Higher Education seeks to focus exclusively on all aspects of learning and administration in higher education. We wish to bring together, a wide variety of individuals from all countries and all disciplines, for the purpose of exchanging experiences, ideas, and research findings in the processes involved in learning and administration in the academic environment of higher education.

We encourage the submission of manuscripts, presentation outlines, and abstracts in either of the following areas:

### **Learning**

We encourage the submission of manuscripts pertaining to pedagogical topics. We believe that much of the learning process is not discipline specific and that we can all benefit from looking at research and practices outside our own discipline. The ideal submission would take a general focus on learning rather than a discipline-specific perspective. For example, instead of focusing on "Motivating Students in Group Projects in Marketing Management", you might broaden the perspective to "Motivating Students in Group Projects in Upper Division Courses" or simply "Motivating Students in Group Projects". The objective here is to share your work with the larger audience.

### **Academic Administration**

We encourage the submission of manuscripts pertaining to the administration of academic units in colleges and universities. We believe that many of the challenges facing academic departments are not discipline specific and that learning how different departments address these challenges will be beneficial. The ideal paper would provide information that many administrators would find useful, regardless of their own disciplines.

