

Volume 7, Number 1

ISSN 2576-2699



International Conference Proceedings

April 19 – April 21, 2023

Editor

Dr. Laurent Josien, SUNY Plattsburgh

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FINANCIAL IMPLICATIONS OF TRANSITIONING TO ORGANIC GINSENG FOR AGRIBUSINESS

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ABSTRACT

Originating in Asia, ginseng is a woodland plant with therapeutic benefits that have now attained global popularity. Farmers across the United States primarily grow ginseng using artificial shade and traditional methods involving heavy pesticide use. Pesticide use, in turn, dramatically affects the therapeutic quality of ginseng. This research evaluates the implications of transitioning from traditional methods of producing ginseng to organic ginseng. The study carefully assesses the profitability of each method by analyzing its costs, expenses, and yields. Findings suggest that transitioning organic ginseng reduces the ginseng yield per acre, but net income for farmers increases substantially. The study findings imply that organic ginseng has significant agribusiness entrepreneurial potential that creates profitable and sustainable agricultural practices.

Keywords: Agribusiness, Cost Comparison, Cultivation Methods, Organic Transition, Ginseng Cultivation

IMPACT OF COVID-19 ON BUSINESS AND HUMAN RESOURCE PRACTICES: EVIDENCE FROM A LOCAL SURVEY

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ABSTRACT

Covid-19 has had a tremendous impact on many businesses across the sectors. Many pre-Covid-19 business and human resource practices have changed permanently as new employment patterns, consumer habits, and supply-chain relations emerged. The manufacturing sector was not immune to these changes. This study provides evidence from a local survey of manufacturing companies regarding the impact of Covid-19 on the business practices, human resource practices, and training needs of companies to respond to the changing patterns of doing business in the manufacturing sector.

The findings of this study suggest that the magnitude of the impact of Covid-19 on general business practices is mixed. While 90 percent of businesses indicated that Covid-19 impacted their operations, not all are negatively impacted. For many businesses, the cost of doing business has increased due to employment and supply-chain-related issues. However, some businesses benefited from Covid-19 as their business volumes and profits improved substantially.

Keywords: Covid-19, Human Resource Practices, Business Practices, Training Needs, Manufacturing Sector, Impact

POST-PANDEMIC OPPORTUNITIES IN DARK TOURISM

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ABSTRACT

The global pandemic shut down most of the world, affecting all industries, but none so much as the tourism industry, as governments closed borders and enacted stay-at-home orders leading to cancelled flights, closed restaurants and hotels. Many countries and organizations used the time to re-tool, rebalance and refocus their operations. Now as we head towards a post-pandemic scenario, the tourism industry is looking to re-build their tourist package offerings to attract visitors.

The present paper will provide one underrepresented opportunity in Dark Tourism. Dark Tourism or 'Thanatourism' is travel to sites associated with death or human suffering. It exists on a continuum from the very dark (911 Memorial, Auschwitz) to the light-dark (Cemetery, Ghost, and Voodoo) tours. The paper will argue that Dark Tourism in countries such as Cuba, used as a case study with revolutionary, cemetery, fort, ghost, and Santeria, can enhance their touristic packages in much the same way as cities such as New Orleans, Savannah, and Salem have done in the U.S. by engaging tourists in the tourism metaverse both before, during and after their visit.

Keywords: *Tourism, Dark Tourism, Cuba, New Orleans, Post-Pandemic, Metaverse*

USING MINI-CASES TO TEACH SMALL BUSINESS CRISIS MANAGEMENT

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ABSTRACT

The specific types of crises that small businesses face and the difficulties they encounter are not the same as those encountered by larger, more established organizations. Because small businesses they do not have the necessary resources, personnel, facilities and systems, they suffer disproportionate negative effects compared to bigger organizations. In order to help small business and entrepreneurial concerns mitigate or avoid crises, we propose training scenarios or 'mini-cases' that illustrate a diverse set of critical crisis management issues.

Currently we are in the final stages of developing set of eight 'mini-cases' that can be used for training small business owners and teaching management students about key issues such as risk abatement, advisory boards, contingency planning, relationships with financial institutions, crisis management teams, continuity of operations, public health, disruptive technology, communications and recovery.

Key words: Crisis Management, Small Business, Crisis Management Teams, Crisis Recovery, Crisis Management Training

References, complete cases and notes available on request

THE FUTURE OF EMPLOYEE DEVELOPMENT IMPACTING GLOBAL ORGANIZATIONAL CULTURE

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ABSTRACT

Implementing an employee development program in a global organization can positively impact the organization's culture and future success. By recognizing areas for improvement and addressing them through employee development, organizations can benefit in ways such as improved operations, profitability, cultural acceptance, and more. By analyzing research on employee development and organizational culture, organizations can positively change future operations on a global scale. Utilizing an employee development program within the organization to document, coach, and record information can measure the effectiveness of these changes.

This paper argues that there is a significant connection between employee development and organizational culture through research, globally. The connection between employee development and organizational culture can have desired benefits which can change the behaviors or concepts in a positive way in the organization. When employees in an organization share a common vision and values, the positive impacts can spread throughout the corporate culture and provide a better perspective on the future of the employees, managers and future workers within the organization. This paper provides a general view of existing research surrounding the future of employee development impacting organizational culture and suggested practices for future research globally.

This paper argues that using an employee development program in an organization can be a positive and profitable tool for organizational culture. By recognizing areas that need improvement and addressing them through employee development, organizations can benefit in ways such as improved operations, profitability, cultural acceptance, and more. The paper also highlights the connection between employee development and organizational culture as shown through research and suggests future research practices. This paper takes an analytical approach to understand the relationship between employee development and organizational culture. It begins by reviewing existing research on the topic, examining the connection between the two and the potential benefits that can be achieved through employee development programs. The paper then goes on to suggest practices for future research, providing a framework for how organizations can measure the impact of employee development on organizational culture and identify areas for improvement. Throughout the paper, the focus is on understanding the connection between employee development and organizational culture and how organizations can use this understanding to improve their operations, profitability, and cultural acceptance.

IMPLEMENTING EMPLOYEE DEVELOPMENT IN ORGANIZATIONAL CULTURE

Realizing the ethical and cultural issues that exist within the organization could be the first step in understanding that an employee development program is needed to bring a more healthy organizational culture to the company. Understanding these perspectives could provide a more beneficial understanding of the future of the organization in all locations under the corporate umbrella. Many ethical issues that go on within an organization can be minimized by utilizing an employee development program to better coach individuals toward making the best decisions (Chan, Fung, Fung, & Yau, 2016). This would provide circumstantial situations that allow for the employees to experience the possible outcomes of what could happen if the information is not properly handled within the company.

The first step in implementing this type of program would be to identify the areas of improvement needed within the organization. Once these areas are identified, they can be addressed in one on one meetings between the managers and employees of the organization. This would allow for an open and documented communication stream to come about and be recorded for future reference. Allowing this type of environment within the organization could bring a new shift in organizational culture and provide a better atmosphere for the incoming employees to experience as well when coming to work with the organization. This can also bring a positive shift in the relationships between managers and employees throughout the organization.

APPLICATION OF EMPLOYEE DEVELOPMENT PROGRAMS IN ORGANIZATIONAL CULTURE

When implementing an employee development program within the organizational culture, it is important to ensure that they all understand what is coming. There needs to be a series of meetings that allow the employees to communicate with the individuals in the organization choosing to implement a program like this. They will ask questions to understand further how this will impact their daily lives and provide perspective on the future of developmental conversations within the organization.

It is vital during this time to elaborate in detail on how helpful the employee development program can be in solving organizational gaps within the company. This provides a perspective for the employees to understand what changes could come about and how they could impact the business in a positive way and impact personal relationships within the business in positive ways as well (Holland, Cooper, & Sheehan, 2017). Growth within any organization can be challenging yet rewarding if the desired result is achieved.

Most employees desire to be in a situation where their corporate culture is uplifting and inspiring. Changes like this will bring a more supportive atmosphere for the employee to experience. The personalities of the leaders and the employees will greatly impact how the future of the company's operations is rolled out (Strang & Kuhnert, 2009). This will provide a perspective of how the changes will take place and how the personalities can benefit from implementing positive changes in the future.

OUTCOME OF EMPLOYEE DEVELOPMENT PROGRAMS IN ORGANIZATIONAL CULTURE

The outcome of the employee development programs can be measured by the type of leadership that comes about from the organizational level. The difference in the leaders can be transformational and transactional depending on the industry, which can impact how the employee development program is developed within certain organizational cultures (Harms & Credé, 2010). Understanding that there will always be differences in how leaders manage their employees and develop the systems in their organization to make positive changes will always be a challenge that needs further research (Waldman & Siegel, 2008). The first step in making the organization better will be impacting the development from within.

REFERENCES

- Chan, K., Fung, A., Fung, H.-G., & Yau, J. (2016). A citation analysis of business ethics research: A global perspective. *Journal of Business Ethics, 136*(3), 557–573.
- Harms, P. D., & Credé, M. (2010). Emotional intelligence and transformational and transactional leadership: a meta-analysis. *Journal of Leadership & Organizational Studies, 17*(1), 5–17.
- Holland, P., Cooper, B., & Sheehan, C. (2017). Employee voice, supervisor support, and engagement: The mediating role of trust. *Human Resource Management, 56*(6), 915–929.
- Strang, S. E., & Kuhnert, K.W. (2009). Personality and leadership developmental levels as predictors of leader performance. *Leadership Quarterly, 20*(3), 421–433.
- Waldman, D. A., & Siegel, D. (2008). Defining the socially responsible leader. *Leadership Quarterly, 19*(1), 117–131.

NEW TACTICS FOR THE RAPIDLY CHANGING BUSINESS ENVIRONMENT: HOW COGNITIVE FLEXIBILITY CAN HELP BUSINESSES WEATHER THE NEXT STORM

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ABSTRACT

Emotional intelligence is often touted as one of the most important leadership skills, and with good reason. According to Goleman, emotional intelligence refers to the ability to identify, understand, and manage emotions in oneself and in others. Researchers today define emotional intelligence as the ability to understand and manage your own emotions, as well as recognize and influence the emotions of those around you. Researchers John Mayer and Peter Salovey initially coined the term “emotional intelligence” in 1990 but became popularized later in 2005 by psychologist Daniel Goleman.

Research, however, increasingly points to the importance of cognitive flexibility during rapidly changing conditions, such as the COVID-19 pandemic. Cognitive flexibility provides us with the ability to adapt our behavior to achieve goals under new environmental conditions. In this paper, the authors introduce cognitive flexibility as a critical business skill and offer ways to implement cognitive flexibility in your business or organization.

Key words: cognitive flexibility, reactive flexibility, spontaneous flexibility, bricolage

COGNITIVE FLEXIBILITY AND ENTREPRENEURSHIP

In a variety of experiments with the impact of trauma among young children affecting early adulthood resilience and vibrant adaptation processes, scholars discovered that a positive relationship exists between self-efficacy and cognitive flexibility (Alves & Yang, 2022). The coping styles of medical military personnel involved in COVID-19 prevention and control it and Alves & Yang (2022) observed that people with elevated cognitive flexibility possess heightened mental toughness and creativity and superior self-efficacy which may lead to further effective coping strategies. Thus, during the study of the positive effect of power on cognitive flexibility academicians found that self-efficacy and cognitive flexibility promote each other. Thus, with the improvement of cognitive flexibility individuals become more confident in dealing with problems and possess faster responses have a sharper sense of modernization efficacy and possess a superior impact of innovation efficacy. After grasping valuable social skills people with cognitive flexibility can capitalize on their own distinctive advantages, enhance their confidence, cope with ambiguous considerations in the entrepreneurial self-efficacy. Cognitive flexibility can also help lower anxiety and other undesirable emotions and bolster employees' confidence which might

enhance positive emotions and help build confidence which may enhance positive emotions and entrepreneurial self-efficacy.

Cognitive flexibility and entrepreneurial decision making

In the general sense, decision making may be described as choosing an appropriate course of action Liebrechts, Darnihamedani, Postma, Atzmueeller, & (2019). Decisions in entrepreneurial contexts can be either made by the entrepreneurs themselves or by other employees. Thus, these decisions impact immediately on entrepreneurs. Liebrgts, Darniihamedani, Postma, & Atzmueeller, (2019) Research on how entrepreneurs may decide to make their decisions may be considered a particular interest to small business scholars given the extortionary decisions making that entrepreneurs could be subject to. Consequently, entrepreneurs might need to undertake a general assortment of activities and responsibilities.

Entrepreneurs also need to be cognizant of behavioral cues during social interactions. (Liebrechts, Darnihamedani, Postma, Atzmueeller, 2019). In certain instances, examples of decision making of entrepreneurs may not be exclusively set on a defined set of prior material such as a resume but may be based on a real-life scenario such as a conference. During a conference, people might act in ways to boost the decision power of the entrepreneur both non-verbally and vocally. Additionally, entrepreneurs themselves could frequently try to influence others in a variety of ways to receive financing through non-verbal and verbal actions.

A conceptual framework may exist on decision making involving social interactions Liebrechts, Darnihamedani, Postma, Atzmueeller, & (2019). People who make decisions involve social interaction appear to be highly relevant to entrepreneurs. Overall, an individual needs to implement truthful information and make the best decisions. However, the available evidence might be deficient, and people to be motivated to exclude data that could impair their representation. Impression management behaviors can be extensively applied, and some individuals may be more willing than others.

However, verbal behavior should not be forgotten. Liebrechts, Darnihamedani, Postma, Atzmueeller, & (2019). Verbal behavior might directly impact the outcome of decisions by entrepreneurs or investors. Verbal behavior may be suggested such as conscious or non-relevance of communication. Suitability of the subject matter might be shown to be one of the most critical deterrence of employment decisions in the small business. Candidates who respond succinctly, corporate entirely in answering queries, and state particular opinions may more likely receive a job offer. Consequently, the verbal content will be a strong influence in hiring decisions. Likewise, both nonverbal and verbal behavioral cues can moderate the effects of nonverbal conduct cues on decisions for entrepreneurs (Liebrechts, Darnihamedani, Postma, Atzmueeller, 2019).

Therefore, decision making could be either individual or group based since the latter includes interpersonal tensions and peoples' problems. Liebrechts, Darnihamedani, Postma, Atzmueeller, & (2019) This may suggest the importance of a multilevel perspective in future studies in entrepreneurial decision making. Future studies may be encouraged to implement how entrepreneurs intermingle with clients, contractors, and consultants. entrepreneurs do possess their own ways which can be explored. Unfortunately, entrepreneurs and entrepreneurs and researchers did not develop SSP at this stage currently so data from scientists will need to suffice for future research.

ENTREPRENEURIAL AND COVID DECISIONS

In the current situation, technology can be playing an undeniable and critical role in the lives of people across the world (Polas & Raju, 2021). Various businesses such as manufacturing and finance became significantly automated. Consequently, this allows the entrepreneurs to make marketing decision making after the outbreak of COVID-19 from remote locations without physical personal contact. Polas & Raju (2021) noted that entrepreneurs may be more relaxed if they could work at home with the assistance of technology.

Polas & Raju (2021) supported five of their hypotheses in their research. First, entrepreneurial identification can enhance the marketing decisions. Thus, in COVID-19 pandemic organizations with a larger advantage of technology appear to be helping sustain cohesion between nature, society, and their monetization strategies. Secondly, opportunity development can enhance the marketing decisions. Entrepreneurship management researchers believe that the introduction of technology could possess a long-term effect and that technology will possess an impact on sustainable enterprise activities in the future. Thus, the results suggest entrepreneurs feel a greater commitment to future generations using technologies during the COVID-19 pandemic such as management of natural resources, the efficient application of diversity among employees, and the prevention of inappropriate marketing decisions.

Finally, Polas & Raju (2021) a robust amount of entrepreneurial chance utilization accelerates decision-making with a robust assurance. Prior results appear to be that entrepreneurs who genuinely consider prospects avoid corrupt conduct that affects workers and preferring more sensible marketplace decisions. The conclusions with medium sized businesses and small-scale businesses could suggest that entrepreneurs who honestly believe their prospects can be much more concerned with the interior employment environment but also desire to take more sustainable action. Overall, the calculated actions of entrepreneurs might suggest their beliefs and behavior which could lead to the completion of expertise-based decisions during the pandemic.

Polas & Raju (2021) implied that an ever-improving number of businesses realize the lengthy expecting benefits of machine learning and Artificial Intelligence (AI). AI in business intelligence can be rising daily particularly during the COVID-19 pandemic. From process modernization to configuration assessment AI could be utilized in a selection of market consumers and leaders to new development opportunities. Companies will now be able to use computer to intensify patterns and expectations in immense stores of data and to settle for speedier marketing conclusions might become serious.

The role of the trust in how both the position of confidence in how both contemporary and competent entrepreneurs interpret and make up perception of their corporate environment to enlighten decision making (Cunningham & Anderson, 2018) Cunningham & Anderson (2018) can be considered enclosed along tentative connections to investigate discrepancy in entrepreneurial decision making. Newer entrepreneurs may be more hopeful in the face of environmental peril which could influence their decision making and groundbreaking capacities. However, the more knowledgeable entrepreneurs may cautiously sustain margin and reorganize to become accustomed to environmental fluctuations.

Cunningham & Anderson (2018) implied in their study that entrepreneurial common sense making might be influenced by variants in confidence between different and more reputable entrepreneurs. New entrepreneurs might not be considered more confident about their skills but may be more enthusiastic than skilled owners. However, a sensible methodology, untampered by

enthusiasm and self-confidence may lead to a business startup and may not lead successful innovations that would be sought in today's culture. Thus, new entrepreneurs seem prepared to place emphasis on hope rather than pragmatism and an optimism which infuses their future course.

IMPROVING YOUR COGNITIVE FLEXIBILITY

Ways to enhance cognitive flexibility would be through entrepreneurial intention through the negotiation role of entrepreneurial alertness and diminishing the impact of entrepreneurial self-efficacy (Gill, Bencheva, Karayel, & Usman, 2021). Gill, Bencheva, Karayel, & Usman (2021) indicated that four hypotheses about cognitive flexibility. First, cognitive flexibility incorporated a constructive and substantial influence on entrepreneurial intention and the outcomes line up with previous researchers. Secondly, cognitive flexibility positively affected entrepreneurial alertness, supporting the hypothesis.

Cognitive flexibility may also benefit entities who possess meaningful familiarity and skills to develop into an entrepreneur (Gill, Bencheva, Karayel, & Usman, 2021). Also, entrepreneur alertness boosts a unique level of examining, forming entrepreneurial intention and, performance. Lastly, entrepreneurial self-efficacy controls and reinforces the direct association between cognitive flexibility and entrepreneurial intentions. Consequently, the discoveries might be considered in connection with previous scholars who discovered entrepreneurial self-efficacy as a moderator and mediator.

The rational consequences of this study can refer to the policymakers, educators, and researchers who are directly and indirectly involved in enhancing entrepreneurial growth (Gill, Bencheva, Karayel, & Usman, (2021). So, the educator should consider paying more attention to the students' cognitive abilities and encourage them to pursue a career in entrepreneurship. Thus, they must offer business start-up training programs for individuals and develop their entrepreneurial attitude and skills to start a business. Educators should identify students who possess the cognitive abilities to become entrepreneurs and enhance those cognitive skills so they can see it as the right path. Therefore, researchers should take assessment tools to help identify cognitive flexible people with the confidence that they would see more astonishing fit toward new business development. Assessment tools might include longitudinal data such as cognitive psychology techniques such as EEG, neurology imaging, and individuals brain scanning to predict better cognitive abilities and their entrepreneurial intentions.

Takahashi, Damashin, Grsu, Hingarh, Adachi, (2021) indicated how Kyudo can be utilized in business and especially during the COVID-19 pandemic. Kyudo refers to the Japanese form of archery that involves meditation right up until releasing the arrow. Businesses implementing Kyudo could use meditation as a tool for cognitive flexibility. Kyudo can be considered a new business tactic and can be applied to creating innovative ideas, constructing a modern outcome, and highlighting the significance and value of the moment. In the business world there can be considered the haphazard target situation but in Kyudo right shooting always results in a hit. In Kyodo, the focus is you and the target at the time when in business proper leadership always results in sustainable and profitable growth.

SUMMARY AND CONCLUSION

The COVID-19 pandemic is only one of the more recent significant challenges to business. Challenges can be minor or significant and can come in different forms. In addition to the

pandemic, economic or even weather events, such as hurricanes and tornadoes can also present significant challenges for businesses. Managers with a high degree of cognitive flexibility are better prepared to weather business challenges.

The good news is that we can improve our cognitive flexibility to become better managers and business owners. In Table 1 below, we have outlined ten techniques to improve your cognitive flexibility. Several of these techniques are as easy as exercising or changing your routine. In addition to improving your cognitive flexibility, in the process you will be learning new skills that will help you as a manager or entrepreneur along with your everyday life.

TABLE 1

TEN WAYS TO IMPROVE COGNITIVE FLEXIBILITY	
1.	Pay attention to your thoughts-pay attention to where your mind goes when you are called upon to share your knowledge or experience.
2.	Be intentional-ask the other person what they want to talk about and what they want to know.
3.	Create categories-create categories of information topics and situations in your mind for future reference.
4.	Align encoding and retrieval cues-identifying the meaning of the information and the context you will apply it to will help you remember it when you need it.
5.	Record your experience-clearing our brain of other things, especially worrisome things, allows us to make room for other things and enabling cognitive flexibility
6.	“If you understand it, you’ll remember it.”-if you do not understand a concept, you will have trouble remembering that concept.
7.	Physical exercise-twenty minutes of exercise allows our brain to release endorphins, serotonin, dopamine, and other chemicals that help us feel good and help our brain to grow. In addition, exercise helps us to focus and lowers anxiety levels. In time, exercise also stabilizes mood, increases the size of our hippocampus, and promotes neurogenesis. These are all things that boost cognitive flexibility.
8.	Learn new skills-learning a new skill such as learning to play a musical instrument, learning a foreign language, and even learning a new game help improve your cognitive flexibility.
9.	Shake up your routine-taking a new route home from work, travel to a new place, or meeting new people can help increase your cognitive flexibility.
10.	Cultivate humor-being able to see the humor in situations demonstrates that we can see the big picture in situations rather than getting caught up in the literal meaning of the situation.

Source: Briggs, S. (2018), 10 Keys to Cognitive Flexibility.

REFERENCES

Akinboye, A. K., & Morrish, S. C. (2022). Conceptualizing post-disaster entrepreneurial decision-making: Prediction and control under extreme environmental uncertainty. *International Journal of Disaster Risk Reduction*, 68, 102703.

Alves, J., & Yang, W. (2022). Cognitive Mechanisms in Entrepreneurship Competence: Its Implication for Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(2), 65.

Briggs, S. (2018, December 19). 10 Keys to Cognitive Flexibility. Retrieved November 1, 2022, from <https://www.opencolleges.edu.au/informed/features/10-keys-cognitive-flexibility/>

Gill, S. A., Bencheva, N., Karayel, S., & Usman, M. (2021). Does entrepreneurial self-efficacy moderate effects of cognitive flexibility and entrepreneurial alertness on entrepreneurial intentions? *Entrepreneurial Business and Economics Review*, 9(3), 25-41.

Liebrechts, W., Darnihamedani, P., Postma, E., & Atzmueller, M. (2020). The promise of social signal processing for research on decision-making in entrepreneurial contexts. *Small business economics*, 55(3), 589-605.

Polas, M. R. H., & Raju, V. (2021). Technology and entrepreneurial marketing decisions during COVID-19. *Global Journal of Flexible Systems Management*, 22(2), 95-112.

Takahashi, T., Damaschin, A., Grosu, A. S., Hingargh, N., & Adachi, S. (2021). The Global World After Crisis Toward New Economic and Entrepreneurship Models. Kyudo-Key Concept of Growth Strategy in Japanese

Society. In *Proceedings of the INTERNATIONAL MANAGEMENT CONFERENCE*, 15(1), 629-637. Faculty of Management, Academy of Economic Studies, Bucharest, Romania.

THE IMPACT OF SOFT SKILLS ON EMPLOYEE PERFORMANCE

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ABSTRACT

Soft skills is a term that is gaining a trend of increasing awareness amongst managers and executives. Because of this trend, researchers in the field of human resources and strategic management are steadily researching the subject in academia. A significant number of corporate executives have recognized the importance of soft skills and the acquisition of those skills. Although researchers have not agreed upon one definition of the term, there are evident commonalities in the use of the term. The attributes that are described by the term soft skills consistently include skills such as communication, problem solving skills, teamwork, leadership, adaptability, and interpersonal skills. It is important to understand an easily applicable definition of this term; therefore, this paper provides a comprehensive definition of soft skills.

The comparison of hard and soft skills also presents an essential element in the discussion of soft skills. Many fear that soft skills will circumvent the need for hard skills in the minds of some managers; however, this is not the contention of researchers. On the contrary, soft skills and hard skills work hand-in-hand. Together these skills prove to lead to higher employability and increased employee performance.

THE DEVELOPMENT OF CYBERSECURITY FRAMEWORK WITH IMPLICATIONS FOR COURSE DESIGN – A SYSTEMS THINKING MODEL

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ABSTRACT

This paper demonstrates a systems thinking model of cybersecurity framework based on nowadays information security management setup and theory. The relationships in the model are designed to be simple and functional and do not necessarily represent any particular cybersecurity environment. It is meant to be a generic cybersecurity system model with implications for MIS/CIS security course instructional design. It allows information security instructors to move away from the discrepancy between the courses and the body of knowledge. The interrelationships of five primary sectors that are at the cybersecurity system are presented in this paper. This integrated model includes [1] information characteristics, [2] network security, [3] cryptography, [4] user, and [5] resources management. There are interactions within each of these sectors depicted by the systems loop map.

Keywords: *Cybersecurity system, CIS/MIS, instructional design, Systems thinking, interrelationships.*

INTRODUCTION

The power of the Internet becomes the daily tool for entertainment, business, communication, shopping, and education. Cybersecurity is the protection of internet-connected systems such as hardware, software, and data from cyber threats. The practice is used by individuals and enterprises to protect against unauthorized access to data centers and other computerized systems.

A strong cybersecurity strategy can provide a good security posture against malicious attacks designed to access, alter, delete, destroy, or extort an organization's or user's systems and sensitive data. Cybersecurity is also instrumental in preventing attacks that aim to disable or disrupt a system's or device's operations.

Most MIS/CIS programs in universities/colleges have information or network security courses. However, cybersecurity is a complex topic, encompassing computer system security, network security, authentication services, message validation, personal privacy issues, and cryptography. Those topics can be instructed in a single course to a series of courses. From the instructor standpoints, how to teach students and learners to grab the logical thinking and problem-

solving skills to cybersecurity management is very vital. In general, it is very hard to teach cybersecurity topics without touching on Internet programming. It is impossible to teach the server security setup without knowing the networking protocol. This paper presents a model of a web security instructional system that can be used as a framework for analyzing web security system characteristics to assist the CIS or MIS courses instructional design.

Specifically, this paper demonstrates a model of a cybersecurity system based on nowadays network management setup and theory. The relationships in the model are designed to be simple and functional and do not necessarily represent any particular cybersecurity security environment. It is meant to be a generic cybersecurity system model with implications for course planning sequences. It allows cybersecurity instructors to move away from the discrepancy between the courses and the body of knowledge. The interrelationships of five primary sectors that are at the cybersecurity system are presented in this paper. They include [1] database characteristics, [2] network security, [3] cryptography, [4] user, and [5] resources management. There are interactions within each of these sectors depicted by the system loop map.

A CYBERSECURITY SYSTEM MODEL

The literature provides some guidelines for a generic course development model of a cybersecurity model. Cybersecurity features that are commonly listed under part of information security include operations systems, legal and ethical issues, network security, risk management, and technical disciplines. Some of these features are necessary for or related to other courses. For example, risk management needs to have legal and ethical discipline up front.

Based on our review of the literature and our examination of the current network security curriculum, we propose a cybersecurity system model that consists of five sectors: [1] database security, [2] network security, [3] cryptography, [4] user, and [5] resources management. How these areas function together and interact with each other is shown in Figure 1. We next describe each of the sectors in Figure 1. Then, the implications of MIS/CIS course development will be discussed.

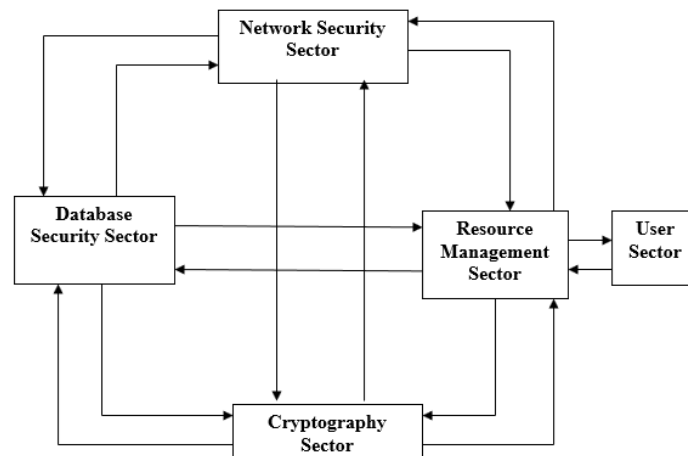


Figure 1. The Cybersecurity system model

Database security

Database security includes a variety of measures used to secure database management systems from malicious cyber-attacks and illegitimate use. Database security programs are designed to protect not only the data within the database, but also the data management system itself, and every application that accesses it, from misuse, damage, and intrusion.

The database security sector for MIS/CIS courses includes database security concepts, data storage security, database administration, and data security and privacy.

Network security

The network security sector provides a way to infuse service into a variety of destinations. In other words, the network security includes three elements, server security, access control, and data transmission security. This involves the security of servers and clients, keeping hackers at bay, and determining access control (who has access to the company's network and the level of access each user has to the network).

The network security sector has a direct relationship to the resource management sector, cryptography sector, and the Web characteristics sector. Using a valid cryptography algorithm to protect the Web site on the basis of effective resource control is the key knowledge in cybersecurity area. In other words, effective network access control and security plan will be feedback from the resource management later on. The network security sector will cover a wide range of body of knowledge in all network design to administration. Course contents can be included in network

operations systems (i.e., Cisco NX-OS, Cisco IOS, Cisco IOS XR7, Junos Network Operating System, UNIX/Linux), cloud security, network security, Web server administration, information security, and database administration.

Cryptography

When an instructor teaches cybersecurity, cryptography is often the first thing that is put into the course content. Cryptography does play an important role in cybersecurity. It enables confidential information to be transmitted from location to location across insecure networks without risk of interception or tampering. In general, a cryptography sector includes four components: cryptographic (encryption) algorithm, network transformation, hardware and software selection, and programming. From the system, some knowledge can be conveyed from network security and Web characteristics sectors. But specifically, cryptography still needs programming and hardware discipline in addition to basic mathematical backgrounds. This is very critical for MIS/CIS curriculum design to consider the pre-requisite from different areas.

User

The user sector includes the inside and outside of the organization. The organization is defined as the working surrounding of network professionals. In other words, for the users, other than the technical aspects, the legal and psychological aspects of security should be included in the course contents. Specifically, it includes the definition of ethical and computer crime, identifying threats, policy and security regulation development, Internet law, and styles of attack. In this sector, it is tightly related to resource management because effective resource management will reduce the risk via user disciplines. The user training will be feedback to effective resource control.

Course topics in the user sector area on legal aspects, standards, and ethics could be taught in a survey course and integrated into the computer and information technology program as well as other programs across the college, including law enforcement, criminal justice, and cybersecurity risk management.

Resources Management

Resource management involves protecting sensitive information on devices attached to a server by controlling access points to that information. In general, it is the center discipline in the Web security area. The resource management will include the business and economics issues related to network security deployment, the network security will be impacted by effective and

efficient management functions. Also, it will be interrelated with cryptography due to the risk management functions in risk-based assessments and disaster planning.

The courses in resource management on project control and reducing risk and vulnerability could be included in specific security courses (i.e., network security, cloud security, cybersecurity administration), computer and information technology courses (i.e. network administration, database administration, computer security), and business and management courses (i.e. general management, economic impact, and planning, project management, risk management, network management).

IMPLICATIONS FOR MIS/CIS COURSES DEVELOPMENT

Many existing courses in cybersecurity can be filled with two years. For a four-year MIS/CIS program, students with the degree can be network or security administrators or technicians and can be security department managers to deploy the security system. The best academic preparation for cybersecurity courses may be three disciplines: network management, organizational security architecture (i.e., cloud, infrastructure, et.), and Disaster recovery/business continuity planning. However, current courses or programs may not effectively provide the holistic required for a cybersecurity management major. Cybersecurity management majors may need specific security training, but this training will be based on the premise that a system possesses fundamental network knowledge and skills for advanced network administration and security. This system model may provide course developers and instructors with an alternative to the body of knowledge of the courses' contents, prerequisites, sequences, and structure. The system sectors are grouped for ease of implementation and thinking but are not necessarily independent or designed to be taught in separate courses.

REFERENCES

- Aitel, D. (2013). Cybersecurity essentials for electric operators. *The Electricity Journal*, 26(1), 52-58.
- Allen, J. *Governing for Enterprise Security*. Pittsburgh: Carnegie Mellon University, 2005. Available on: <<http://www.cert.org/archive/pdf/05tn023.pdf>>. Access: April 15, 2012.
- Bodeau, D., & Graubart, R. (2010). Cyber resiliency engineering framework. MTR110237, MITRE Corporation, September. Available at: <http://www.mitre.org/work/tech_papers/2010/10_3710/10_3710.pdf>. Access in: 15 Apr. 2012.
- Campbell, P., Calvert, B. and Bosewell, S. (2003). Network security fundamental. Boston: Course Technology.
- Carlson, Tom. (2001). Information Security Management: Understanding ISO 17799. White paper, Lucent Technologies Worldwide Services.
- Davis, P. & Lewis, B. (1996). Computer security for dummies. Foster city: IDG Books.
- Hatch, M. J., & Cunliffe, A. L. (2013). *Organization theory: modern, symbolic, and postmodern perspectives*. Oxford University Press.
- ITU-T – International Telecommunication Union (2008). Recommendation X.1205: Overview of Cybersecurity. Geneva: ITU-T, 2008.
- Mackey, D. (2003). Web security for network and system administrators. Boston: Course Technology.
- National Science Foundation Report. (2002). Protecting information: The role of community college in cybersecurity education. Washington, D.C.

- Sorebo, G., Echols, M. (2012). *Smart Grid Security: An End-to-End View of Security in the New Electrical Grid*. Boca Raton: CRC Press.
- Turnbull, S. (1997) *Corporate Governance: Its Scope, Concerns, and Theories*. *Scholarly Research and Theory Papers*, v. 5, n. 4, 180-205.

BUILDING KNOWLEDGE SPILLOVER THROUGH REGIONAL INDUSTRY-ACADEMIC COLLABORATIONS: A CASE STUDY

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ABSTRACT

Knowledge spillover theory suggests that knowledge generated in one industry can spill over into other industries, leading to technological innovation and economic growth. It states that knowledge and innovations developed by one firm, industry, or location can positively or negatively impact other firms, industries, and locations geographically close or connected through networks. Academic institutions drive a prolific amount of fundamental research and are interconnected through knowledge spillover. However, for the knowledge spillover to succeed, strategic management in the collaboration must align. The access to knowledge based on strategic relations is an intermediary for innovative regional growth. This highlights the importance of localized knowledge and public research for innovation and regional economic development.

Innovation and knowledge-based entrepreneurship research focus on drivers of firm growth, the nature of innovation, and the different types of firm performance. Organizations that engage in knowledge spillover are more likely to develop new ideas and knowledge, leading to better products, services, or processes. By tapping into external sources of knowledge and expertise, organizational performance can be improved in various ways, such as by increasing productivity, reducing costs, and enhancing employee and customer satisfaction. Organizations collaborating with academic institutions tend to have higher rates of innovation and growth than firms that do not. This research seeks to identify key elements necessary to establish, nurture, and maintain mutually beneficial collaborations which drive innovation and knowledge spillover between industry and academic partners. Specifically, we strive to discover 1) how an effective collaboration is established, 2) why the collaboration exists, 3) the nature of communication channels within the collaboration, 4) what each party gains from the collaboration, 5) events that can put the collaboration at risk, and 6) activities that can be performed to strengthen the collaboration.

Methods

Eight interviews were conducted to evaluate the collaborative relationships between industry and academia. These data were combined with the interviews conducted in a previous study. Briefly summarizing the study methods, individuals from industry and academia representing executive and functional areas were interviewed. Data were captured through semi-structured interviews. Questions were open-ended, allowing the interviewee to contribute original ideas and details. Interviews were recorded and transcribed with all personal identifiers removed to ensure the interviewee's anonymity. A combination of inductive and deductive coding was

performed. An iterative process was used where each interview informed the next, and issues raised in previous interviews could be explored. Structural coding was utilized to systematically categorize the transcribed interview data and identify existing and emergent categories. The resulting themes were then compared to previous analyses in which themes had emerged from the data. This approach allowed for a rigorous and systematic exploration of the data while also enabling a comparison of the current findings with earlier analyses.

Results/Discussion

The findings from the new interviews were consistent with the characteristics of successful industry-academic collaborations identified in the initial study. Specifically, the interviews confirmed the importance of factors such as the benefits of collaboration, effective communication, clear documentation, well-defined expectations, efficient information flow, and positive relationships between industry and academia. The initial interviews studied collaborations during the COVID-19 pandemic, and data suggested that communication perceptions were mixed between industry and academia. Upon further analysis, feedback emerged as an important factor in communication. Industry collaborators indicate the importance of academic feedback for collaborations to be successful and correctly set expectations for student, industry, and faculty engagement. Communication is essential for project performance, student engagement, relationship development, and knowledge spillover.

In addition to confirming previous findings, the new interviews yielded additional discoveries. It was found that alumni ties between industry executives/owners and academics can facilitate the development of a more robust collaborative relationship and lead to increased industry engagement. Furthermore, when the industry decision-maker considers community impact and student opportunity as a factor of “success” in the collaboration, the industry-academic collaboration is viewed as a more strategic role for the organization.

Another important theme to emerge was the importance of peer-to-peer networks. It was learned that not only did industry partners value the connections made with the university, but engagement with the academic institution also provided opportunities to meet people at other companies. These industry-to-industry connections were often made at capstone project presentations, where dozens of industry partners collect each year to see engineering teams present their senior projects. When discussing the benefits of industry-academic performance, the concept of community impact with like-minded industry counterparts could be a positive factor for the academic institutions' brand reputation and for industry collaborators amongst industry peers. Moreover, such collaborations can facilitate knowledge spillovers between academic and industry partners and different industries. This finding supports the knowledge spillover theory, which suggests that the innovation performance of entrepreneurial firms and their regions is closely linked to their network of inter-organizational interactions and relationships. Effective knowledge collaboration that benefits industry and academia can generate new opportunities and create positive spillover effects. Thus, motivational factors exist behind collaboration intentions, mainly attitudes toward collaboration, perceived behavioral control, and are sensitive to environmental conditions.

Conclusions

This study reaffirmed the identifying characteristics that influenced industry-academic collaborations found in an earlier study. Furthermore, the additional interviews revealed new discoveries about the importance of alumni and networking that was not evident in the initial study. Inspired by these findings, we plan to continue to collect more data to improve our understanding of these complex interactions.

UNDERSTANDING THE PRODUCT CLASSIFICATION METHODOLOGIES FOR CLOUD COMPUTING

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ABSTRACT

With the increased capacity of mobile computing platforms such as smart phones and tablet computers and the proliferation on Internet of Things, computer applications involving cloud computing and virtualization became an important phenomenon. This paper is aimed at understanding whether cloud computing can be considered a new type of an operating system and if so, how could the extant literature on product and brand management be applied to cloud computing. We find that the marketing strategies for cloud computing and virtualization would be similar to other service-based shopping product that fall under think-based high-involvement category as they are emerging as a new type of an operating system.

INTRODUCTION

With the increased capacity of mobile computing platforms such as smart phones and tablet computers and the proliferation on Internet of Things, computer applications involving cloud computing and virtualization became an important phenomenon. Cloud computing provides the flexibility to access computing from anywhere and that is in great demand due to the multitasking lifestyle of the contemporary consumer. Some operating systems designed to serve cloud platforms now provide functionality that goes beyond running on the native operating system and this raises the question of whether cloud computing (virtualization) is now a new type of an operating system. The answer to this question can help direct us in our attempts to apply extant literature in product classification to cloud computing.

While studies in the literature analyze the functionalities of computer software that control computer resources when they connected to other systems, a typology of whether this generates a new product paradigm is not fully developed. This paper is aimed at understanding whether cloud computing can be considered a new type of an operating system and if so, how could the extant literature on product classification schemes be applied to cloud computing. Addressing this gap by reviewing the literature is aimed at contributing to the product and brand management research and guide future research in this technology field.

METHODOLOGY

In order to explore the cloud computing (virtualization) and product categorization, we accessed EbscoHost database with the keywords “virtualization operating systems” and “product classification” keywords in order to create a literature review. We focused on full text academic articles and prepared topical summaries for articles that focused exclusively on cloud computing

and virtualization in the domain of business and operating systems research. We noticed a variety of methodologies and findings that fit the purposes of our research question.

RESULTS

A wide variety of product classification schemes have been introduced in extant product and brand management literature. Miliopoulou (2018) noted that the seminal classification of products under three types, namely as shopping, convenience and specialty products, dates back to 1920s. This is followed by Levitt (1980) and Kotler's (1984) paradigm with the continuum and distinction of goods, services and ideas (Murphy and Ennis (1986). By 1980s and 90s a consumer perception perspective literature stream is introduced with Foote Cone and Belding (FCB)'s four quadrant classification grid with involvement level (high vs. low) versus think/feel dimensions (Rossiter and Percy, 1997). By 2000s, Lush and Vargo (2006)'s influential contribution introduced the service-dominant logic to this body of knowledge where the traditional goods-based view to products is replaced by a service-based emphasis (Zinser and Brunswick, 2016).

All of these frameworks are not just helpful in terms of understanding the product variable from a technical point of view but they also help with forming educated business strategies. Whenever we can decisively classify a product into one or more of these frameworks, we can take advantage of the known strategies and tactics for the respective categories. However, not all products can be readily placed into one of these classifications. This is particularly the case with the new products emerging in technology area such as new operating systems, cloud computing, and mobile computer applications. For instance, it would be straightforward to apply the existing frameworks to operating systems products such as Windows, Linux and MacOS because they have an established presence in the market and they are clearly service-based shopping product that fall under think-based high-involvement category based on the existing typologies. But the same cannot be immediately said about the new and emerging cloud computing and virtualization applications where a debate is still ongoing within the technology domain whether they could be labelled as a new type of an operating system. Therefore, it is exigent to explore the studies in this research segment in order to decide on if we can apply any relevant product typologies to cloud computing.

Cloud Computing and Virtualization

Anandamurugan, S., et al (2017) summarize the history of cloud computing in their book on operating systems. They state that sharing resources, which started with the mainframe computers in 1950s can be considered the fundamental core of cloud computing. The IBM's operating system from 1970 which was called VM is the first virtual machine operating system that could serve multiple computers in a guest operating system structure. This meant that multiple computers were running on the same hardware platform with each VM running the guest operating system with spared memory, networking power and processing capability. 1990s world-wide web revolution and 2000s establishment of data centers such as Microsoft, Google and Amazon gave rise to the cloud computing.

Through Web2.0, where usage of high-speed internet, social networks, proliferation of mobile devices and live streaming caused a shift from traditional client server model to dynamic distributed computing technology, the rise of cloud computing ensued. The new versions of Windows from 2000s started supporting cloud computing. Linux OS also added RedHat, Ubuntu, Fedora, Centos, and similar and these gave support to cloud computing. Android's 2008 mobile application proliferation and Windows OS8 marked widespread and user-friendly cloud technology usage. Also, in the last decade several open-source clouds have been introduced such as Openstack cloud, Eucalyptus cloud, Cloudstack. The benefits of cloud computing include anywhere access, pay per usage, online access, reliability scalability, cost effectiveness, automatic updating, customization, and resource pooling.

A New Type of an Operating System?

Whether virtualization applications and cloud computing can be considered a new type of an operating system is an issue that is debated by several researchers. For instance, Silbetchatz, Galvin, Gagne (2015) state that virtual machine monitor (VMM) (hypervisor), is a type of software that runs virtual machines where the user processes are executed. If this is merely the case, then it is hard to state that cloud computing including virtualization is an operating system in and of itself. But at a higher level, there are cloud management tools including open-source Eucalyptus tools, VWave and VCloud Director that manage these VMM software. When this is the case, these cloud management tools also manage the resources within a given cloud and accommodate interfaces to the cloud components. Then, there is a strong argument that cloud computing (virtualization) must be considered a new type of an operating system.

Similarly, Shuja et al. (2016) states that virtualization can be group into two types: type 1(bare-metal) and type 2 (hosted). The type 1 version runs directly over the hardware in a privileged mode and controls the hardware. Therefore, it must be classified as a special type of OS. Hosted virtualization has limited or no control over hardware and therefore it cannot be considered an OS on its own.

On a different level, Peter et al. (2016) describes a special type of operating system structure that displays OS characteristics for virtualization. Their Remote Direct Memory Access (RDMA) is a model for user-level networking. It bypasses the operating system kernel on both the user and host sides. It provides applications control directly from the user with the property to write and read on the VM on a remote computer, hence acts as an operating system. Therefore, Peter et al. (2016) concurs that when special conditions are met, a cloud computing (virtualization) system is in fact acting as a new type of an operating system.

Tudor (2010) took these ideas one step further and argued flat out that VMs are the next natural step in the evolution of operating systems. They stated bluntly that a they believe VMM is no different than an operating system because it is simply a resource manager. They expect that some of the features provided by the operating systems need to be shifted into the VMM and inherently the Oses should be moved higher on the stack. In fact, the fact that this has already begun to take place is given as a undisputable evidence at the reality of this inevitable trend.

Opposite to these optimistic views, Mishra and Kulkarni's (2018) study made a detailed assessment of challenges that lie ahead of VMM's and demands for OS like functionalities. They highlighted a long list of problems that needs to be overcome in order to advance VM systems. They believe subservience on application features is the most exacting aspect in designing generic MMU hardware frameworks. They add that hardware manufacturers enable limited pliability in terms of configuring the page table hardware. Hardware limitations hinder the hypervisor from dynamically tailor the number of levels in page table translations. They state that only if the future hardware designs allow further software customization options in the MMU hardware, memory virtualization overheads can be dealt with in a systematized manner. Therefore, there are major obstacles that lie ahead of VMMs advancement to OS levels.

Polze and Troger (2012) also point at challenges ahead but still frame cloud computing as a solution to problems that may surface. They state that due to ever increasing number of transistors on chips and clock speeds (Moore's Law), and the usage of multicore CPU's with advanced single thread performance, there is a major challenge to overcome, especially on the server side of the client-server systems. They indicate that the only solution to this emerging problem on the client side is through better operating systems support. In fact, there are two approaches that can address the problem; parallel execution or virtualization. Yet, both of these may result in conflicting performance optimizations in the OS due to resource management and resource protection overhead scales. Furthermore, another challenge is the emergence of orthogonal demands from the server runtime environment architecture. Nevertheless, Polze and Troger (2012) state that integrating virtualization into an OS kernel is a trend and they give the latest versions of Linux, Windows, or BSD as examples that follow suit.

From a macro perspective, we note that there is an agreement in the literature that we cannot immediately reach into a conclusion on whether cloud computing is a new type of an operating system. In order to consider the cloud computing and virtualization methods as a new type of operating system, some conditions must be met. The most important consideration is to check whether the virtualization software only runs the virtual machines to execute user processes on native operating systems. If this is the case, we can hardly argue that cloud computing and virtualization is a new type of an operating system. We also need to see if the virtualization technique runs on the hardware in a privileged mood to control it. If this is the case, then we can argue that this type of virtualization is indeed acting as a new type of an operating system. Finally, there are computer system structures that bypass system kernel on the user and host sides and provide direct control on the VM on a remote computer. If this is the case, then we can say that the virtualization structure closely resembles a full-fledged operating system.

DISCUSSION AND CONCLUSION

In summary, while there is an ongoing debate on whether cloud computing and virtualization methods are a new type of operating system, we note that virtualization is the emerging trend in the operating systems product development. As the computers increase in computing power, reduce in size and cost and become increasingly mobile, we will see this trend accelerating. In addition, it goes without saying that computer users demand access to computing

wherever they go. Hence, there is a clear need to use cloud computing and virtualization to make this a reality. As consumers need better computer architectures and specialized hardware with matching operating systems to satisfy their endless demand for flexibility and utility, there are clear signs that we are on the brink of breakthroughs and trends that will mark cloud computing and virtualization as an emerging new type of an operating system.

Overall, we conclude that the marketing strategies for cloud computing and virtualization would be similar to other service-based shopping product that fall under think-based high-involvement category as they are emerging as a new type of an operating system. If this is not so already, there is a clear indication that it will be so in the near future.

REFERENCES

- Anandamurugan S, Priyaa T, Babu MCA. (2017) *Cloud Computing : An Innovative Technology for Linux and Android Platforms*. Laxmi Publications Pvt Ltd; 2017.
- Kotler, Philip (1984) *Marketing Management: Analysis, Planning and Control*, Englewood Cliffs, NJ: Prentice-Hall.
- Levitt, T. (1980, Jan). Marketing success through differentiation-of anything. *Harvard Business Review*, 58, 83.
- Lusch, R., & Vargo, S.(2006). "The Service-dominant Logic of Marketing: Dialog,Debate and Directions. Armonk, NY: M.E. Sharpe.
- Mishra, Debadatta, and Purushottam Kulkarni (2018) "A Survey of Memory Management Techniques in Virtualized Systems." *Computer Science Review*, 2018, 29 (August): 56–73. doi:10.1016/j.cosrev.2018.06.002.
- Peter, Simon, Jialin Li, Irene Zhang, Dan R. K. Ports,Doug Woos, Arvind Krishnamurthy, Thomas Anderson and Timothy Roscoe (2016) "Arrakis: The Operating System Is the Control Plane." *ACM Transactions on Computer Systems*, 2016, 33 (4): 1–30. doi:10.1145/2812806.
- Polze, Andreas, and Peter Tröger (2012) "Trends and Challenges in Operating Systems-from Parallel Computing to Cloud Computing." *Concurrency & Computation: Practice & Experience*, 2012, 24 (7): 676–86. doi:10.1002/cpe.1903.
- Rossiter, J.R. and Percy, L. (1997), *Advertising Communication and Promotion Management*, McGraw-Hill, New York, NY.
- Shuja, Junaid, Abdullah Gani, Kashif Bilal, Attaur Rehman Khan, Sajjad A. Madani, Samee U. Khan, and Albert Y. Zomaya (2016), "A Survey of Mobile Device Virtualization: Taxonomy and State of the Art." *ACM Computing Surveys*, 49 (1): 1:1-1:36. doi:10.1145/2897164.
- Silbetchatz, Galvin, Gagne (2015) *Operating Systems Concepts Essentials 2nd ed*, Wiley & Sons, ISBN: 978-1118804926
- Tudor Zaharia (2010) "Virtualization as the Evolution of Operating Systems." *Scientific Bulletin of the "Petru Maior" University of Tîrgu Mureş*, 2010, 7 XXIV (1): 20–23.
- Zinser, B. A., & Brunswick, G. J. (2016). "The Evolution of Service-dominant Logic and Its Impact on Marketing Theory and Practice: A Review", *Academy of Marketing Studies Journal*, 20(2), 101-117.

COVIDONOMICS: TEACHING PRINCIPLES OF ECONOMICS DURING THE PANDEMIC USING REAL LIFE POLICY PRESCRIPTIONS – CARES ACT AND FED MONETARY POLICY

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ABSTRACT

The COVID 19 pandemic created a black swan event that resulted in a sudden and drastic worldwide economic slowdown, and in some instances a standstill. Governments across the world, due to health reasons, mandated a total or near total shutdown of almost all interpersonal economic activity, with cities and businesses and places of employment being placed on lockdown. As a direct impact in the US, the unemployment rate shot up from a 3.5% rate for March 2020 to a 15% rate for May 2020. Subsequently with a gradual economic reopening, albeit with brief periods of further restrictions, the economy recovered with a strong trend towards higher growth and lower unemployment. Primary among the policy prescriptions during this period has been extensive Federal Reserve monetary policy prescriptions including a lowering of interest rates and bond purchases as well as injection of cash into bank balance sheets; and three fiscal stimuli form the two administrations during this period. Teaching undergraduate Principles of Economics (both Micro and Macro) during this period necessitates inclusion of all public policy prescriptions implemented during this period. In this paper, I detail the lesson plans that incorporate the CARES Acts and AMERICAN RESCUE Plan into both a Principles of Microeconomics and Principles of Macroeconomics courses. In addition, the monetary policy prescriptions implemented by the Federal Reserve are also incorporated into both the courses. Students learn in detail the basic characteristics of both fiscal and monetary policy plans, and learn the micro effects (in the Principles of Micro course) and the macro effects (in the Principles of Macro course) – in particular while tying the economic concepts learned during the courses to real life policy prescriptions and the effect of the policies, the students in each course submit a project that details the micro and macro (in the relevant courses) effects of the policies on a fictional small business. This creates a real life version of basic economic concepts that are taught in these courses, and help the student understand the live effects of various economic policies as they are being implemented. To incorporate current macro trends I propose to include high inflation and the possibility of a recession as additional factors that students would consider under their business plan. Student evaluation of the pedagogical strategy is documented using surveys for students as well as specific questions placed in the Student Evaluations of Instruction.

Principles of Economics Course Project

1. *Product and Market Demand: Create an imaginary company of your own with a name. Specify and describe the product(s) or services that the company would be selling. Identify the market characteristics (perfect competition, or oligopoly or monopolistic competition), identify your main competitors, and create a strategy on how you will be*

- able to attract customers to your product or services. Give me an idea about the approximate pricing, total revenue targets per month and any seasonal variations. 30 points*
2. *Costs: Describe the various costs associated with your product and specify which are fixed and which are variable. Indicate employees wages rent raw materials machinery and other capital etc. Describe seasonal variations in your costs. Give me an idea of estimated profits per month and seasonal variations you should prepare for. 30 points*
 3. *Marketing and Employees:*
 - a. *Create a brief marketing plan for your product/service, including sales, coupons, advertising etc. that will increase your revenues. 15 points*
 4. *Create a brief employee plan including bonuses, wage increases, and other incentives that will create a happier and more productive workforce for your company.*
 5. *Product and Market Demand and Supply: Create an imaginary company of your own with a name. Specify and describe the product(s) or services that the company would be selling. Identify your main market for the product/services and give a brief explanation of the demand that customers have for your product/services as well as the other suppliers in this market. 30 points*
 6. *Inflation: Describe how inflation will affect your business, you will have to explain the impact of rising inflation rates on your costs of purchasing supplies etc., as well as the impact of inflation on the prices of the product/services you sell. 15 points*
 7. *Fiscal Policy: Describe how the pandemic would affect your business bottom line in the past year, and how the CARES Act provisions would have helped you tackle some of the issues. (For example stimulus checks, unemployment payments for your employees, PPP loans for your business etc.) 15 points*
 8. *Monetary Policy: As we learned, during a recession the Federal Reserve lowers interest rates on Federal Funds i.e. the rate at which banks lend to each other as well as the Discount rate the rate at which the Fed loans money to banks. This leads to a lowering of all interest rates. Explain how this would help your company get loans from banks. 15 points*
 9. *International Trade: Explain the role international trade plays in your business (do you export your products/services, do you import some materials that you use in your business, how does trade policy in the US (tariffs etc.) and trade policy abroad affect your business, how does the value of the US dollar and changes in it affect your business.*

Student Reactions

- *Specific Survey Questions*
 - *How did the Specific Project help you relate real world economic issues and data to managing a business?*

- *How did the tasks within the Project of visiting and incorporating the data in the Government websites (BLS, BEA, Fed etc.) help you relate the text to real world economics?*
- *Was the Project beneficial or not in understanding the course material.*
- *Almost all responses were positive (except for “added a lot of work”)*
 - *“extremely beneficial”*
 - *“helped me understand economics”*
 - *“understanding of finance and markets”*
 - *“better than just reading off slides and exams”*
 - *“good real world examples and experiences”*
 - *“cares act and interest rates”*
 - *“I have a lawncare company. The project helped me understand wages and inflation and the effects on my business”*

Future lessons for Economic Reopening and recovery as pedagogical tools

- *Incorporation of this framework into other courses*
 - *Money and Banking*
 - *Federal Reserve Decisions*
 - *Effects on Financial Markets*
 - *Bond Market volatility*
 - *Oil prices and effects on Inflation.*

FINANCIAL SUCCESS BASED ON MASLOW'S HIERARCHY OF NEEDS: SURVEY-BASED EVIDENCE

Priscilla Hammermeister, Middle Tennessee State University

ABSTRACT

Success appears to have one common denominator —motivation. Abraham Maslow established one well-known motivation theory called the “Hierarchy of Needs” in 1943. The motivation-based theory includes five different levels of needs, including physiological needs, safety needs, love and belonging needs, esteem needs, and self-actualization needs. This research aims to investigate how an individual’s attainment of Maslow’s hierarchy levels during adolescent years affects an individual’s financial success thirty years post-adolescence.

It is widely known that an individual’s upbringing can affect an individual’s adulthood, including the financial aspects of adulthood. One’s financial literacy and one’s perception of financial success can vary significantly among individuals. This research will examine what each level (and all levels collectively) reveal(s) about the correlation between Maslow’s Hierarchy and financial success. This research has two major competing hypotheses (1) Having more/higher levels of needs met in the adolescence phase is associated with greater subjective financial success in adulthood compared to objective financial success; (2) compensation for not having needs adequately met is associated with greater subjective financial success compared to objective financial success. The connection between Maslow’s Hierarchy of Needs and financial success will be assessed utilizing a national survey.

FACTORS INFLUENCING INVESTMENT DECISIONS: THE CASE OF INDIVIDUAL INVESTORS AT THE DHAKA STOCK EXCHANGE

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Hüseyin Dağlı, Karadeniz Technical University, Trabzon, Turkey

Farid Ahmad, Karadeniz Technical University, Trabzon, Turkey

Ziauddin Rahimi, Karadeniz Technical University, Trabzon, Turkey

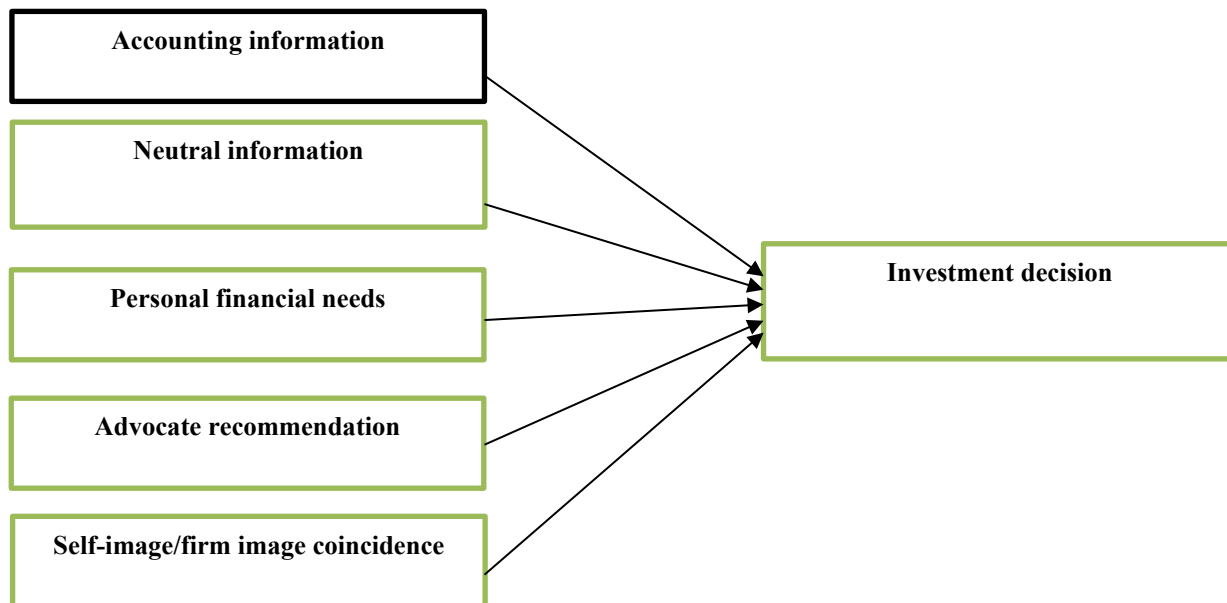
ABSTRACT

Individual investing behavior is concerned with decisions about the acquisition of modest quantities of securities for one's personal account. Decision tools are frequently used to assist investment choices. It is presumable that the market's variables and information structure consistently affect both investor choices and trade results. The objective of the study is to identify the factors affecting individual investors' investment decision on the Dhaka Stock Exchange. To do this, the research also looks at how self-image/firm image coincidence, neutral concerns, personal financial needs, advocate recommendations, and accounting issues may all affect an investor's behavior. Data were gathered from Bangladesh's Dhaka city. SPSS 26 and AMOS 24 were used to analyze the functional data from 300 surveys. The researcher individually delivered a standardized questionnaire to each respondent in order to gather data. There were 27 items in the survey. In this study, frequencies, mean scores, standard deviations, percentages, and the techniques for factor analysis were used to examine the data.

CONCEPTUAL FRAMEWORK OF THE RESEARCH

This suggested approach was developed in light of the literature review that focuses on individual investors' stock market investment decision in Bangladesh. In order to determine the expected relationship with the dependent variable known as investment behavior, researchers have culled out independent variables from this literature review, including accounting information, neutral information, personal financial needs, advocate recommendation, and self-image/firm image coincidence.

Figure 1: Conceptual Framework



EXPLORATORY FACTOR ANALYSIS (EFA)

Since factor analysis departs from a correlation matrix, the used variables should first of all be measured at an interval level. Secondly, the variables should roughly be normally distributed; this makes it possible to “generalize the results of your analysis beyond the sample collected” (Field, 2000: 444). Thirdly, the sample size should be taken into consideration, as correlations are not resistant (Moore & McCabe 2001: 103), and can hence seriously influence the reliability of the factor analysis (Field, 2000: 443; Habing 2003:2).

According to Field (2000: 443) much has been written about the necessary sample size for factor analysis resulting in many rules. Field himself, for example, states that a researcher should have at least 10-15 subjects per variable. Habing (2003:3), however, states that you should have at least 50 observations and at least 5 times as many observations as variables. Fortunately, Monte Carlo studies have resulted in more specific statements concerning sample size (Field 2000: 443; Habing 2003:3). The general conclusion of these studies was that “the most important factors in determining reliable factor solutions was the absolute sample size and the absolute magnitude of factor loadings” (Field, 2000: 443): the more frequent and higher the loadings are on a factor, the smaller the sample can be.

Table 4.17: Rotated Component Matrix

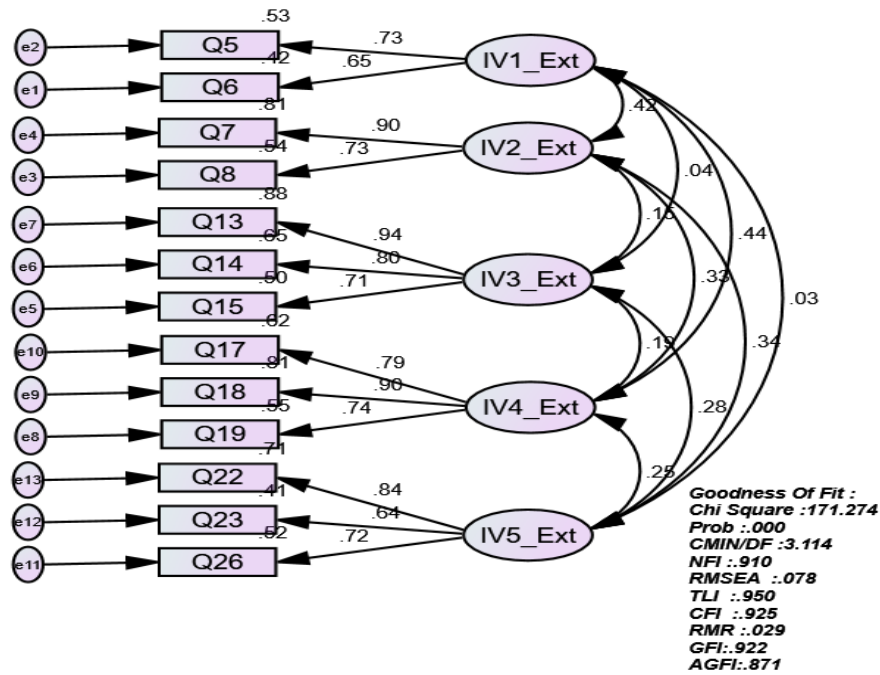
Rotated Component Matrix					
Description	Component				
	1	2	3	4	5
Q5. Do you consider the expected dividends? (IV1)	.839				
Q6. Do you observe the past performance of the firm’s stock? (IV1)	.825				
Q7. Do you collect information about firms from the internet while planning to invest in stocks? (IV2)		.899			
Q8. Do you follow the fluctuation in the stock index? (IV2)		.861			
Q13. Are you interested in non-stock investment? (IV3)			.900		
Q14. Do you think of investment diversification? (IV3)			.887		
Q15. Do you intend to obtain borrowed funds easily? (IV3)			.814		
Q17. How does broker recommendation affect your investment decision? (IV4)				.861	
Q18. How do family members’ opinions influence your investment decision? (IV4)				.857	
Q19. How do friend or coworker recommendations impact your investment decision? (IV4)				.854	
Q22. How important is the company's public reputation to you? (IV5)					.851
Q23. How important is the creation of well-organized financial markets to you? (IV5)					.838
Q26. How important are the ethics of a firm to you? (IV5)					.752

Note: IV1: 1 no. Independent Variable (Accounting Issues); IV2: 2 no. Independent Variable (Neutral Issues); IV3: 3 no. Independent Variable (Personal Financial Needs); IV4: 4 no. Independent Variable (Advocate Recommendation); IV5: 5 no. Independent Variable (Self-image/Firm-image co-incidence).

CONFIRMATORY FACTOR ANALYSIS (CFA)

Confirmatory factor analysis (CFA) was used to purify the measurement scale. The purpose of a measurement model is to explain how well observed variables serve as measurement tools for latent variables (Amin, 2016:289). In this study, a two-stage analysis technique was used to evaluate the measurement model (figure 2) such as reliability test and validity test. In terms of reliability test in the first stage, Cronbach’s alpha (CA) and composite reliability (CR) were examined in which CA and CR values are the most widely used techniques to evaluate reliability for confirmatory factor analysis. Reliability analysis in the research was conducted to test the consistency in dataset among accounting issues, neutral issues, personal financial needs, advocate recommendation and self-image/firm-image coincidence. However, in terms of validity test, the convergent validity and discriminant validity were assessed in this research at the second stage.

Figure 2: CFA Measurement Model



BRIEF DISCUSSION OF THE FINDINGS

This research provides some valuable insights in identifying the main objective of the research which the factors influencing investment decisions in the Dhaka Stock Exchange. Results of exploratory factor analysis (EFA) reveal that the most important factors under the five variables (accounting issues, neutral issues, personal financial needs, advocate recommendation and self-image/firm-image coincidence) are: to consider the expected dividends; to observe the past performance of the firm’s stock; to collect information about firms from the internet while planning to invest in stocks; to follow the fluctuation in the stock index; to have interest in non-stock investment; to think of investment diversification; to obtain borrowed funds easily; broker recommendation influencing investment decision; family members’ opinions influencing investment decision; friend or coworker recommendations influencing investment decision; company's public reputation; creation of well-organized financial markets and ethics of a firm which are also confirmed with good-fit measurement model by confirmatory factor analysis (CFA). This is consistent with the findings of Merilkas & Prasad (2003:17-19); Logitama et al. (2021:278-280).

IMPLICATION OF THE RESEARCH

The implication of any research is very essential part of the study. However, the study would provide investors a better knowledge of the numerous options they must make depending on current conditions and the final outcomes of each action. Additionally, as the investors' investment decisions will define the company's strategy, the study will uncover the most influential elements in their investors' behavior, which will affect their future policies and plans. Moreover, the research will aid in a deeper understanding of behavioral processes and results, which is crucial for financial advisers since knowing how investors react to market changes may help them develop suitable asset allocation policies for their clients. Furthermore, the study will determine the most influential elements on investors' decisions that have an impact on the essential legislations, such as tax compliance and additional processes, in order to meet investors' needs while also supporting market efficiency.

REFERENCES

- Field, A. (2000). *Discovering Statistics using SPSS for Windows*. London – Thousand Oaks – New Delhi: Sage publications.
- Moore, D.S. & McCabe, G.P. (2001). *Statistiek in de Praktijk. Theorieboek*. Schoonhoven: Academic Services.
- Habing, B. (2003). *Exploratory Factor Analysis*. Retrieved from: <http://www.stat.sc.edu/~habing/courses/530EFA.pdf> (accessed 10 May 2004).
- Amin, M. (2016). *Internet Banking Service Quality And Its Implication on E-Customer Satisfaction And E-Customer Loyalty*. *International Journal of Bank Marketing*, 34(3), 280–306.
- Merilkas, A., & Prasad, D. (2003). *Factors influencing Greek investor behavior on the Athens stock exchange*. *Journal of Business*, 66(1), 1-20.
- Logitama, A., Setiawan, L., & Hayat, A. (2021). *Control Behaviors Affecting Investors Investment Decision Making (Studies on Students at Higher Education South Kalimantan)*. *International Journal of Economics, Business and Accounting Research (Ijebar)*, 5(1), 275-288

A 50 YEAR EXAMINATION OF ATTITUDES OF COLLEGE STUDENTS TOWARD VARIOUS DISABILITIES, USING THE DISABILITY SOCIAL DISTANCE SCALE

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ABSTRACT

In 2001 this author adapted a study first conducted by Tringo in 1970 which examined negative and positive reactions concerning various categories of disabilities. Both the 1970 study and the 2001 follow-up studies surveyed college students taking courses at universities located near each other in the same state. The last 20 years have been a time of shifts in cultural awareness and heavy attention to diversity on college campuses. We propose a repeat of the same study with the same general process to track any changes in student attitudes. With the current attention being given to diversity, equity, and inclusion (DEI) efforts at universities, it may be important to gauge barriers to inclusion and social preference found in the thinking of students themselves.

THE EVOLUTION OF SOCIAL MEDIA AND TECHNOLOGY USE POLICIES: A FRAMEWORK FOR EVALUATING ONLINE ERGONOMIC AND HUMAN FACTORS ENGINEERING POLICIES

Charles Jobs, DeSales University

ABSTRACT

This paper is a literature review on evolving so called “Ergonomics” and/or “Human Factors Engineering” (E/HFE) in the workplace as it relates to online policies and practices. Typically, these online E/HFE policies and practices include but are not limited to Social Media, Phishing, Telework, Dark Web and AI hiring algorithms. Many of these policies were created piecemeal in order to address a problem or trend that arose at a certain time. Increases in people and organizations using and relying on networked technologies has also accelerated the types of employer issues related to their use. The novel COVID 19 virus is a perfect example of how exogenous shock changed and accelerated Telework. Applications such as TikTok (which is banned in several countries) create potential security and privacy concerns firms should address.

The contribution from this paper to the literature is a strategic process framework for organizations to use to identify key changes to laws and technologies to determine if they require updating to the existing the E/HFE policies and practices mentioned above. Finally, suggestions are made to consider consolidating some of these ad hoc policies into a master E/HFE policy and expanding its scope beyond what is found in typical templates which are readily available. The goal is to better coordinate and manage what it means to be a networked employee and networked employer consistent with where technology and globalization have evolved and will continue to change.

THE MISGUIDED POWER OF GENERALIZATIONS IN GENDER PAY STUDIES

Tammy Johnston, The University of Louisiana at Monroe
Veronika Humphries, The University of Louisiana at Monroe
Cameron Sumlin, The University of Louisiana at Monroe
**Abdul-Aziz Khanfar, Suncoast Community High School in Riviera Beach,
Florida**

ABSTRACT

The notion of wage disparities remains a prevailing issue today. In our study, we investigated the wage disparities of faculty members at a regional university, taking into consideration the faculty rank, years of total experience as well as years employed at the university, including their teaching disciplines. Overall results show that female faculty members earn 20% less than their male counterparts. However, the results showed when discipline and rank are accounted for the wage gap diminished.

Key Words: Gender Pay Gap; Higher Education

HUMAN-MACHINE RELATIONSHIPS IN THE AUTOMATION INDUSTRY: ROBOTICS, ARTIFICIAL INTELLIGENCE, AND AUTOMATION APPLICATIONS

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Ismet Anitsal, Missouri State University
M. Meral Anitsal, Tennessee Tech University

ABSTRACT

The interaction of robotics and artificial intelligence has profoundly impacted the automation industry. Integration of advanced technology to automation processes opens up new opportunities to achieve levels of quality and productivity not previously feasible. Automated processes are transforming more adjustable and smart systems, utilizing the capabilities of AI and intelligent robots to boost efficiency or reduce costs. AI-enabled robots also provide a safe working environment for operators while assisting people in processing massive amounts of data and making real-time decisions. This research aims to identify and explore these emerging phenomenon trends through a conceptual framework combining human and machine relations. While certain operations may be automated, applying new technology to activities will also enable the creation of new jobs, allowing flexibility for human operators to concentrate on creative problem solutions. Five propositions provide direction for research in this field, including (1) the continuing role of humans, (2) the enhancement of job-related skills, (3) the impacted labor market, (4) the effects on mental health, and (5) the role of trust. The study also provides managerial and research implications.

Keywords: Robotics, Artificial Intelligence, Cobot, Automation, Internet of Things.

AN EXPLORATION OF THE MICROFOUNDATIONS OF STRATEGY UNDER CONDITIONS OF ENVIRONMENTAL UNCERTAINTY

Rajiv Kashyap, William Paterson University
Raza Mir, William Paterson University
Stephen C. Betts, William Paterson University

ABSTRACT

Recent thought is that micro-level behavioral decisions by firms have a disproportionate role to play in making a firm nimble, therefore strategy scholars have begun to focus on the microfoundations of strategy. At the core of the issues is the interplay of two approaches - actions by individual actors and broader changes in the economic environment that lead to a firm being successful. In this paper, we attempt to go beyond the artificial binary between these two approaches, i.e. between external and internal indicators of firm performance to offer a possible integrated model. We propose customer orientation, competitor orientation and technology orientation as microfoundations of strategy, while acknowledging and incorporating the role played by environmental uncertainty in shaping organizational strategy. We also empirically test hypotheses that emerge from our understanding of these variables

Keywords: Strategy Microfoundations, Environmental Uncertainty, Micro-Level Strategy

A POTENTIAL EVALUATION OF INVESTMENT BANK ANALYST PROGRAMS

Steven Kent, Molloy University

ABSTRACT

Nearly every investment bank has a rigorous training program for recent college graduates who have accepted positions at the firm. The training programs typically are four weeks with the first week devoted to broad based topic and the next three weeks devoted to areas that are relevant to their assigned position. The first-year analysts have a wide variety of majors and experiences, so this training is supposed to even the playing field. Expectations for performance are very high once they leave the training program. Since the programs so critical to the success of the individuals and broadly the performance of the bank we believe it is imperative to start an evaluation of the program. In this preliminary paper we examine the history, purpose of the evaluation of the stakeholders and potential use of a logic model.

BACKGROUND AND RATIONALE TO CHANGE TRAINING PROGRAM

The first few days and weeks at any new job can set the tone for one's experience. However, for newly minted undergraduates arriving at their "dream job" as a Financial Analyst at an investment bank, the first few weeks could make or break their career; thus, the training program is critical for a positive outcome. If newly minted undergraduates are successful, they will get an incredible amount of exposure and access to trading, banking, and research in a very short period. There is little hierarchy or barriers between them and the client and within a few months they can have a real impact. However, any missteps are also incredibly visible. The training program proposal is to minimize career ending mistakes.

The ability to be successful is not necessarily a function of the educational background of new Financial Analysts. Investment banks do not exclusively hire business or economics majors for Financial Analyst positions. In fact, Goldman Sachs, a leading investment bank states, "A financial background is not necessary. Your area or major of concentration is less important to us than your potential. Whether you've distinguished yourself in economics or history, the next phase of your career will be shaped by your energy and vision" (personal communication). While the incoming Financial Analysts are very bright and motivated, they still need to be trained so they can take their innate skills and apply them at the bank.

Not all investment banking training programs are the same-they can vary by geography and institution. However, the vast majority of the programs are similar in time and goals. For example, each August, new incoming Financial Analysts are educated at a weeklong firm-wide training program. During this initial training program, they learn about the firm's history and its

culture, and are taught the basics of protocol and rules of the bank. After the initial groundwork is set, the Financial Analysts are separated into divisional training programs. Each major part of the firm (banking, trading, sales, research, operations, technology, etc.) has its own distinct program where specific tools are taught.

As an example I will discuss the divisional programs of investment research (stock analysts, portfolio strategists, commodity specialists and economists). The trainees are taught the core skills to be part of each one of these teams. The research division's broad mission is to generate research ideas which are then disseminated to clients of the bank. The ideas generate trades for which the bank receives a commission. The core of an investment research department is to create ideas, which is explained on the Morgan Stanley website: "Through timely, in-depth analysis of companies, industries, markets, and world economies, Morgan Stanley has earned its reputation as a leader in the field of investment research". The Financial Analyst's role is critical because these junior employees support the lead analyst, strategist or economist by developing financial models and writing portions of the research product. Financial Analysts also interact with clients and salespeople.

For the past 20 years, the training programs for incoming Financial Analysts in investment research department has not changed. Financial Analysts are put through a four-week training program. One week is spent on accounting, a second week on learning valuation techniques for stocks, and the third and fourth weeks are a combination of learning operating systems, compliance, and writing skills. At the end of the four-week training program, the new analysts are assigned to a team where they learn the specifics of either an industry, commodity, or economic area. While the training is broad based, the area each analyst is assigned to join is much more specific.

Since the training programs have not changed significantly the goal of this paper is to guide the human resources team and leadership of the investment research department to begin an evaluation. This is especially important as turnover has been rising, which could be debilitating for two reasons. First, the teams the Financial Analysts are assigned to join are generally comprised of only two to six people in size so that, if a person resigns or cannot perform at a high level, the hole in team infrastructure/dynamic is impactful. Second, Financial Analysts have historically been the next generation of senior analysts; thus, working as part of a team is viewed as an apprenticeship. If the trainees are not given the skills to be successful early on, they may become discouraged, are likely to start to look for other opportunities, and will also not recommend their classmates/friends for positions at the bank.

EVALUATION PURPOSE

The purpose of the proposed evaluation of financial analyst training program is to determine the extent to which the current curriculum meets the needs and expectations of trainees, their immediate managers, and department leadership. The results will determine what modifications, if any, should be made and if any modules should be dropped, added, or augmented.

There are other ancillary goals of the evaluation such as determining what constitutes "success" of the trainees as well as other factors that drive it beyond the training program. Beyond

staying in the job for at least two years' success may also mean that the Financial Analyst contributed to the team in some measurable way and is a candidate for promotion. Another factor in the success of the analyst is that placement on certain teams may lead to greater success as these teams are better at onboarding new Financial Analysts and training them.

STAKEHOLDERS

The primary stakeholders for the Financial Analyst training program are the human resources management and staff who develop and direct the program as well as the leadership for the various geographic regions and subcategories. The human resources team spends a considerable amount of their time and personnel on it, and if it needs to be changed, they would be responsible for executing the revisions. The leaders of the division also need to understand what the shortcomings and virtues are so they can adjust to meet the near-term goals for sustainable staffing as well as the longer-term goals of creating the next generation of senior analysts.

The secondary stakeholders are the participants/recent graduates/Financial Analysts, immediate managers, outside trainers and Global Investment Research administration. The immediate managers have the most invested as the future success or failure of the training program impacts them the most as having the right staff can lead to their own superior performance. A well-trained Financial Analyst helps dramatically. Other stakeholders include two to three outside trainers each August and their compensation or hiring may be impacted by the evaluation. Tertiary stakeholders are varied and include future participants/graduates, sales people and outside clients who interact with the financial and firm wide human resources.

POTENTIAL AREAS TO EXAMINE

Key questions that should be addressed in the evaluation could include:

1. *What knowledge or skills acquired during the recent grad training program are utilized and enable participants to be successful?*
2. *Is the four-week training program long enough to acquire the necessary skills?*
3. *Is there a preference for classroom training versus training on the job?*
4. *To what extent do the participants believe they have acquired the skills to be successful?*
5. *What leads participants to achieve "success": high performance in training program or the right fit with a manager?*

USE OF LOGIC MODEL

In their book *Evaluation in Organizations: A Systematic Approach to Enhancing Learning, Performance and Change* the authors Darlene Russ and Hallie Preskill examine how logic models can be used in to evaluate programs (Russ-Eft & Preskill pp. 160-161).

I have laid out this methodology (p158) as a basis for how researchers could examine analyst training programs. It is a series of questions that can be used to allow for an iterative approach.

- I. ASSUMPTIONS THAT INFLUENCE PROGRAM DESIGN, IMPLEMENTATION, OR GOALS**
 - A. Directors of research and human resources team are willing to embrace and lead change.
 - B. The focus of the leadership team is to develop and retain the best and the brightest financial analysts.
 - C. Changes in the training program can have an impact on success as measured by contribution and retention.
 - D. There are hard and soft skills that are measurable and forecast success.
 - E. Placement on the right team may have an impact on success and needs to be analyzed.
 - F. Formal and informal training is a factor.
- II. RESOURCES—HUMAN, FINANCIAL, ORGANIZATIONAL AND COMMUNITY NEEDED TO ACHIEVE PROGRAMS OBJECTIVES.**
 - A. The human resource team has access to internal and external resources to develop and enhance the financial analyst training program.
 - B. Financial analysts are motivated to take training programs seriously and actively participate.
 - C. Senior research management provides four weeks of uninterrupted training without asking financial analysts to work directly for teams.
- III. ACTIVITIES—THINGS THE PROGRAM DOES WITH THE RESOURCES TO MEET ITS OBJECTIVES**
 - A. Plans a four-week training program to teach recent graduates the skills to be successful as financial analysts on a research team.
 - B. Informs senior leaderships of global investment research on the changes and plans for the upcoming financial analyst training program
 - C. Identifies best in class internal and external teachers for subjects such as accounting, valuation, and teamwork.
- IV. OUTPUTS—DIRECT PRODUCTS OF THE PROGRAM'S ACTIVITIES**
 - A. Leads and manages a four-week training program to teach recent graduates the skills to be successful as financial analysts on a research team.
 - B. Regularly updates senior leaderships of global investment research weekly on the activities of the training program.
- V. SHORT-TERM OUTCOMES-CHANGES IN PARTICIPANTS KNOWLEDGE, BEHAVIOR AND SKILLS BECAUSE OF THE PROGRAM**
 - A. Financial analysts learn the skill necessary to be successful on the first day they arrive with their team.
 - B. Over a six-month period, they can add value and contribute to insightful research product.
- VI. THEY ARE ABLE TO INTEGRATE THEMSELVES INTO A TEAM.**
- VII. LONG TERM OUTCOMES-CHANGES IN THE PARTICIPANTS KNOWLEDGE, BEHAVIOR AND SKILLS BECAUSE OF THE PROGRAM**
 - A. over time the financial analysts develop into the next generation of senior leadership within the department

- B. The value of training and placement is increasingly recognized as a way to achieve success.
- C. The global investment research department becomes more collaborative and focused on mentorship.

REFERENCES

- Goldman Sachs | Programs in the Americas: New Analyst. (n.d.). Retrieved December 5, 2016, from <http://www.goldmansachs.com/careers/students-and-graduates/our-programs/americas-programs/new-analyst-copy.html>
- Morgan Stanley Research. (n.d.). Retrieved December 5, 2016, from <http://www.morganstanley.com/what-we-do/research>
- Russ-Eft, D. F., & Preskill, H. S. (2009). *Evaluation in organizations: A systematic approach to enhancing learning, performance, and change*. Cambridge, MA: Perseus Pub.

CEO AND BOARD CHAIR: FORCES FOR INDEPENDENCE AND SEPARATION

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ABSTRACT

The composition of the corporate Board of Directors, and especially the profile of its Chair, is subject to increasing scrutiny. Environmental, Social, and Governance (ESG) continues to grow with enthusiasm from corporate entities, users of reported information, regulators, and other stakeholders. While climate concerns and diversity, equity, and inclusion may have consumed the headlines in the early 21st century, a historically more predominant request in the ESG toolbox has been gnawing at corporate boards and once again is coming to light in view of overall sustainability.

This paper describes recent trends in investor voting for large corporate proxy proposals on issues pertaining to the independence of the Chair. Prior research alludes to the importance of separation of top corporate management, especially the chief executive officer (CEO), from the overall governance provided by the Board, but does not adequately address the relevant issues and the progress achieved by the movement among some stakeholder groups. This paper analyses key issues and surveys the results of corporate ownership voting, demonstrating progress toward more practical and useful corporate governance, and provides a preliminary step toward this end through the shareholder voice.

DIFFERENCES BETWEEN STUDENTS AND INSTRUCTORS DURING HELP-SEEKING BEHAVIOR

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ABSTRACT

This study attempted to investigate differences between students and instructors in help-seeking context. A self-report questionnaire was administered 95 students and 68 full-time faculty members in a Historically Black Colleges and University (HBCU) located in a metropolitan area. Most students surveyed are characterized as mature nontraditional students who work while taking care of family or other personal responsibilities. The results show there is a significant gap between help that students seek and help instructors give. The results also show that students do not get help from instructors as much as instructors claim. Both students and instructors prefer instrumental help, which helps students learn the subject. However, due to some factors, students end up getting expedient help, which help student complete tasks, rather than learn the subjects. Gender also appears to be a factor that affects student help-seeking behavior. The study provide some insights for instructors who interact with students seeking help.

ZERO TO ONE – NOTES ON STARTUPS, OR HOW TO BUILD THE FUTURE: A REVIEW ESSAY

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ABSTRACT

Finding a focus is an essential goal for entrepreneurial endeavors, asserts Peter Thiel, lead author of the book Zero to One (with co-author Blake Masters). Thiel, co-founder of PayPal, reflects on his experiences then, and until the present, as he is now an influential venture capitalist whose involvement in start-ups has included Facebook, SpaceX, Airbnb, and LinkedIn (among others). From an early age, students are cultivated in an almost assembly-line manner, to conform in accordance with a set of expectations expressed by a culture at large. To escape this pattern, Thiel argues that one must adopt a contrarian mindset and endeavor to see things differently. When considering a business idea, one should attempt to find the valuable company that no one is building. Further, he asserts that competitors should be viewed not as enemies, but as possible allies who are seeking to work in the same space. The book is abundant with real-life examples, such as when he and Elon Musk found themselves on a collision course with similar business aspirations. Instead of fighting, these two turned conflict into collaboration. Competitors may even spend a lot of time and wasted energy sparring with one another, instead of focusing on their own goals.

Keywords: innovation, small business, entrepreneurial mindset, value creation.

INTRODUCTION

Indefinite pessimism, definite pessimism, indefinite optimism, definite optimism: these attitudes regarding the future tend to dictate outcomes, according to Thiel. Indefinite pessimism is characterized by one who looks to a bleak future but has no idea what to do about it; rather such an individual can only wait for it to happen. Definite pessimism is a belief that the future can be known (and it will be bleak) and one prepares for it as best as possible. Indefinite optimism holds the future will be better, but since it is an unknown, no plans are made. Definite optimism means the future will be better than the present, if plans are made and work is pursued, to make it better. “Indefinite attitudes to the future explain what’s most dysfunctional in our world today,” says Thiel (Thiel & Masters, 2014, p. 61). Without concrete plans (a trait of those who fall under the “indefinite” group), they use formal rules, i.e., heuristics, to assemble a portfolio of options that govern their behavior. Hence, at least falling on the “definite” side of the spectrum, one makes plans and takes on the tasks of preparing and working toward the least damaging (or most positive) outcome that may be possible. Thiel has provided an overarching account of lessons he has learned in starting (and/or investing in) numerous successful businesses. To be contrarian is to see

possibilities to innovate from a perspective unlike those of others. With a sort of uniqueness that is a result, the act of innovating allows for operating in a space with fewer causes for fighting with competitors.

THE BASIS OF RETHINKING

In beginning a successful startup, companies must establish a value proposition that leads to optimal results. At the forefront of this pathway is new thinking. There is a plethora of ways in which new thinking can be perceived. Thiel defines this concept as the process of questioning ideas that are received from society at large and rethinking those concepts from scratch. This is key to rethinking business from scratch (p. 11). Taking this a step further, Thiel presents the importance of contrarian ideas as an overarching motif for his work and business mindset, and as a literary motif throughout his international best seller. Expressing the personal answer to the contrarian question about important truths, in which your opinion poses as the anomaly among societal views, can be important to career development as an individual innovator. Thinking for oneself, opposed to just trying to think against the grain of the crowd is how great ideas are born and nurtured. Translating this contrarian question to entrepreneurial business as an entity, can bring forth the question: *what valuable company is nobody developing?* (p. 23).

Competition

Competition in many aspects of society – not just business and marketing – has become a widely adopted ideology, through its internalized necessity. Competition has expanded beyond the economic scope and has a far greater perception than a mere inconvenience that must be dealt with in the marketplace. Due to the tremor surrounding competition, individuals and businesses have trapped themselves within it, despite heightened competition being unhealthy and resulting in less gain (p. 35). The chokehold competition has gained upon individuals, and more specifically, companies, today, has been tightening its grip since, as one might say, the dawn of time. Karl Marx, one of the most well-known philosophers of the 19th century, acclaimed that the proletariat fight the bourgeoisie because they have contrasting goals and ideas, due to their differing class statuses and material circumstances (p. 38). Dating back to late 16th and early 17th centuries, Shakespeare wrote many plays portraying immense, dramatic conflicts triggered among the characters by competition. For instance, his play *Romeo and Juliet* begins with the line, “Two households, both alike in dignity” (Shakespeare. 1597/2014). Throughout the play the two households, Capulets and Montagues, grow increasingly alike; however, the boiling feud between them only escalates. From a bird’s-eye view, there is no logical reason for the two sides to be fighting in the first place, and it becomes marginally more evident that both parties have lost sight of why the fight originated.

These tales, whether fictional or not, have played an instrumental role in our society throughout history. The weight these basic themes, of philosophical ideals and fictional works, hold true to real-life business scenarios, even through the comparatively incredible advancements of our time. As applied to businesses today, many people become infatuated with their

competitors. They feel the need to beat their competitors, in order to reap the successes of their industry and business plans. Companies can lose sight of their mission and plow through business execution with a competition-centric approach, just like the families of Romeo and Juliet. Getting distracted by rivalry can cause businesses and entrepreneurs to stray from the contrarian way of rethinking, leading them to impulsively overemphasize old opportunities and obsequiously recreate what has worked in the past (Thiel & Masters, 2014, p. 39).

Mundane Teachings

The roots of competition throughout many aspects of society run deep. They extend not just to businesses with marketplaces, but to careers, politics (and policies), gaming, social positioning (status) and all manner of discourse. The seeds for a competitive mindset are planted in the foundation of the United States education system. The highest grades and ranks in school systems gain students status and recognition, serving as a measurement of students' competitiveness. Students who are unable to learn to the best of their ability by sitting within the walls of a classroom all day, are taught to feel inferior to their competitors, or academic counterparts. The same subjects are taught to all adolescents in roughly the same patterns and styles (Thiel & Masters, pp. 34-35).

Mundane school system procedures and priorities have catalyzed competition in a greater sense. The argument that school systems don't teach students how to learn, but rather to memorize and perform on paper, may be viewed as an unpopular, contrarian, statement; however, much of society has trended towards agreement on this assessment. A more individualistic view of this topic is the current school systems' praise on "well-roundedness....no one gets into Stanford by excelling at just one thing, unless that thing happens to involve throwing or catching a leather ball," the authors observe (p. 52). Individuals and students are raised to amass dozens of extra-curricular activities to be able to add to their repertoire when chasing the status of elite higher education. The idea of well-roundness, in contrast, can be viewed as a cloak worn by society to hide blatant mediocracy among its population. Society has lost sight of the workings and teachings of a definitive world. People aren't taught to find the singular best thing to do and to do that to a level of excellence. Instead, they are told to immerse themselves in many different fields of life (because that is what gets you into Stanford).

Filling-the-Gap

In bridging the gap between how society has viewed competition since even before the establishment of corporate America, how it is instilled in the impressionable minds of adolescents through school systems, and how these notions should be changed in the face of business startups, looking at PayPal's business model can be an advantageous way to start. Advice in accomplishing this serenity is contrary to focusing on creative destruction (Schumpeter, 1942) as an impressive entrepreneurial feat; it should be regarded as a blackhole into self-destruction. Competition should be avoided to a significant degree when companies strive to expand into adjacent markets. From

the conception of the company, PayPal did not try to challenge any large competitors, instead it sought and was able to gain a mutually beneficial relationship with would-be competitors (if they were framed as such), like Visa; by popularizing online payment methods PayPal expanded the market substantially, benefitting all industry participants (Thiel & Masters, 2014).

Another idea typically coined as a benefit to entrepreneurial motives, is the first mover advantage; however, contrasting views proposed by the authors suggest that the last mover is the one to reap the most success. This concept entails making the last great development within the specific market segment in which the company is anchored (p. 58). Companies that want to become the last mover must study the endgame, rethink the industry by looking ahead to what it will look like in 10-20 years, opposed to being the first mover looking to disrupt the trends and focuses of the currently existing market (p. 163). Furthermore, all entrepreneurs should resist engaging in the predatory competitive environment, seeking to achieve the best marketing and advertising campaigns (which can also become very expensive). PayPal learned this lesson the hard way by hiring *Star Trek* star, James Doohan to be its official spokesperson. The actor was invited to an event for their first software launch to say one of his famous lines, but in the end, the event was a complete flop and did not attract attention or interest from the public as potential customers (p. 136).

In addition to the treacherous waters to be found when diving into external competition, comes their equally dangerous counterpart, internal competition. Job assignments within a fast-moving startup are not only about the relationship between workers and their respective tasks, but also the relationships between the employees completing those tasks, through either working together or alongside one another. At PayPal, each company employee was assigned one distinct task, which was done to simplify the management of all the employees within a fast-paced startup. However, this move resulted in an unanticipated but very positive byproduct, reduced conflict. Since company roles and positions are vastly fluid in the beginning stages of a startup, internal competition among employees is susceptible to generating friction (including to a point of implosion). Eliminating this competitiveness to be the best at one's assigned responsibilities, allows for less disturbance of internal peace and serves as a catalyst for employees to build long-term relationships that surpass standard professionalism, which benefits the longevity and success of businesses (p. 124).

CONCLUSION

As society plummets into the abyss of an indefinite attitude, it is the concepts of contrarian ideas and rethinking, not against others, but for oneself, introduced by Thiel and Masters, that can become the propellant that lifts us back up to definite thinking. In doing so, people can contradict the norms of well-roundedness and GPAs as positive reinforcements of knowledge, and instead begin to see them as ways to invoke unnecessary competition among individuals, starting during adolescence. Displaying the common, indefinite view, results in individuals building a portfolio of options, opposed to a portfolio of definitive successes. People's ability to apply moderate skills to a wide variety of fields becomes a scapegoat for mediocrity. The key to bettering society and gaining noteworthy success is, instead, exploring this range of areas, then homing in one that

allows individuals to harvest personal interests and talents. These skills are not just gathered for societal praise (and admissions applications) but applied to areas of the worldwide market to become the conductor for change and success.

REFERENCES

- Schumpeter, J. A. (1942). *Capitalism, socialism, and democracy* (First ed.). Harper and Brothers.
- Shakespeare, W. (1993). *Romeo and Juliet*. Dover Thrift Editions: Plays. (Original work published 1597)
- Thiel, P., & Masters, B. (2014). *Zero to one: Notes on startups, or how to build the future*. Crown Business.

INNOVATION STRATEGIES: NEW PRODUCT DEVELOPMENT (NPD) METHODS FOR ENTREPRENEURIAL START-UPS

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ABSTRACT

Innovation is an essential activity in a dynamic environment, which simultaneously develops new technologies while also being driven by them. Although many start-ups may be founded in incumbent industries with well-established products, services, processes, and business models, even some of these may be facing unforeseen challenges to traditional ways of conducting business. Robots, for instance, are already being deployed in the food service industry and they can perform such tasks as flipping burgers and making French fries; bartending, salad-making, and automatic pizza making robots are also emerging¹. While these technologies may threaten traditions, they also present entrepreneurial opportunities. The global COVID-19 pandemic, while shuddering some types of businesses, also led to new innovations entirely. It also propelled enhancements and implementation of preexisting ideas – telemedicine being a prime example of a concept that rapidly accelerated in the wake of social distancing strategies. This research explores innovation strategies generally and addresses some constraints, as well as approaches that may be taken by entrepreneurial start-ups as they seek to innovate.

Keywords: *creativity, innovation, small business, entrepreneurship, new product development (NPD).*

INTRODUCTION

As stated by Demir (2018), the only way to create sustainable growth is to innovate new products, services, and business models. This conceptual research explores innovation strategies at large while focusing on their applicability to entrepreneurial development, e.g., new product development (NPD) methods for start-ups. Innovation in the context of new products (inclusive of services: hereinafter these two terms shall be treated as synonymous) involves making significant improvements to previous products or introducing entirely new offerings on the part of a given firm (Carvalho & Madeira, 2021). However, while NPD professionals may have high hopes in “developing ‘the next big thing’ in their respective industries, most product development

¹ Feller, C. (2021, June 21). *10 robots automating the restaurant industry*. Retrieved February 26 from <https://www.fastcasual.com/blogs/10-robots-automating-the-restaurant-industry/>

efforts focus on incremental innovations” (Veryzer, 1998, p. 304). Hence, new products may practically be regarded on an infinite scale of sorts. One end would represent modest variations from prior offerings in a marketplace, while the other more “radical” (O'Connor & Ayers, 2005; Veryzer, 1998) end may be “responsible for creating entire new industries and dramatically enhancing living standards” (Golder et al., 2009, p. 166). Innovation in most business contexts, often entails new or improved technologies, products, and/or processes (Bezhovski et al., 2021, p. 308). Entrepreneurs may innovate in several ways, including initial idea generation, a.k.a., ideation, developing new production methods, organizing (or re-organizing) business operations differently, opening new markets, and implementing new business models (Bruni et al., 2019).

TIMES ARE CHANGING

“Technology and digitalization come as new entrepreneurship opportunities and bring new solutions and possibilities for innovation (3D print, IoT, Artificial Intelligence; Blockchain, etc.)” (Carvalho & Madeira, 2021, p. 2). Ferasso et al. (2018), where certain industries have increased potential for new business opportunities (nanotechnology, biotechnology, and aerospace were indicated, but there are many more, such as A.I. and robotics as applied to myriad uses from services to manufacturing), knowledge and resources from around the globe may also be required. Along these lines, Golder et al. (2009) discussed the relevance of core technologies. Examples would include vacuum tubes in early radios, televisions and computers, which were then superseded by new ones: first transistors, and next, microprocessors. Bezhovski et al. (2021) noted that while traditional means of developing business ideas (e.g., brainstorming, design thinking) are well represented in published scholarly literature, new opportunities have arisen due to information and communication technologies (ICT). Examples they regarded as the most prominent included “entrepreneurial communities, online marketplaces, social networks (as bases of customers), random idea generators, surveying tools and services, tools based on search engine data, competition analyzing tools, idea crowdsourcing, idea mining techniques, idea management systems, etc.” (Bezhovski et al., 2021, p. 325).

Corporations (at least those with the wherewithal to collect and leverage big data) have also been increasingly focusing on business intelligence (Demir, 2018, p. 13), with many using systems incorporating A.I. (Marion et al., 2020; Thiel & Masters, 2014). Also, several e-commerce (e.g., store) platforms are available for business start-ups (Raj & Athaide, 2022), such as Etsy, Shopify, Google Play Store, eBay and Amazon; these have made it easier than ever to establish a business presence and engage in transactions through their respective payment processing systems. “As advanced economies transition through various phases of economic value creation, e.g., from products to processes, from tangible goods to intangible experiences, they can leverage technological innovations to improve efficiency and enhance effectiveness” (Raj & Athaide, 2022, p. 487).

Creativity And Blinders

Creativity is regarded as a skill that can be learned, but like many such character traits and abilities, attribution is often given to innate talent, i.e., natural-born talent. In the context of business innovation, creativity enables idea generation by individuals as well as groups, and may also serve to aid in the identification of worthwhile business opportunities (Bezhovski et al., 2021). In his seminal work, Kuhn (2012) brought to bear his views on science as usual (which he referred to as normal science), how paradigms arise, and how they may gradually be challenged to a point of collapse and replacement by new paradigms. Exhaustively conducted research by Edison scholar Paul Israel (1998) repeatedly showed that the prolific inventor did not always immediately recognize all of the potential applications of some projects, at least not immediately. For instance, Edison's original motivation for working on sound recording technology was so that telegraph transmissions could be captured and later transcribed (by lower paid, lesser skilled workers – thereby saving railroad operators money). Later, musical recordings (and cinema, after that) came to be a dominate application of recording (and playback) technology. “When a new product introduction is significantly different from prior innovations, industry participants cannot adequately assess its impact because the information surrounding the innovation is more uncertain and difficult to understand” (Lee et al., 2003, p. 764).

Flops and failure

“New product development (NPD) projects tend to fail, either in the last stage of the development process or in the later commercial stage. The underlying causes of failure can often be traced to the beginning stage, in what is often called the front end of NPD” (Florén et al., 2018, p. 412). Authors further suggested that for an idea to lead to new product development, those who are key actors in the firm must recognize its potential; as noted above, Edison (as well as many throughout the history of business) may fail in recognizing such potential. “Two major reasons explain a no-go decision. First, an idea is ‘killed’ if decision-makers conclude the proposed product has no or low commercial potential. Second, an idea is abandoned if it does not fit with the firm’s current business model even though the idea may, in some respects, have commercial value.” (p. 414).

START-UPS AND NPD

According to Demier (2018), most startups lack a clear strategy or the processes to execute one in their beginning stages. Also, new ventures are typically confronted by severe resource scarcity, “as they often consist only of the entrepreneur herself. When nascent ventures are of such small size, the entrepreneur herself needs to be a jack-of-all-trades” (Herrmann et al., 2022, p. 479). As observed by Kim and Lim (2018), not only is it necessary to recognize opportunities to innovate, entrepreneurs must also be able to exploit these effectively if they are to realize any benefits (financial or non-financial). One possible way for entrepreneurs with limited time and resources is to engage in cocreation activities. Such is considered a collaborative method among

various potential stakeholders including customers, suppliers, academic institutions (researchers) to develop solutions to problems and possibly produce products as well (Carvalho & Madeira, 2021).

As noted above, there seems to be a mix of advantages and disadvantages based on experience. While Grilli (2022) observed that “on theoretical grounds, it is possible to assert that entrepreneurs characterized by great ‘business acumen’ should be more prone to NPD than inexperienced entrepreneurs” (p. 666), perhaps there is a point of saturation wherein one becomes unable to see other possibilities (consistent with Kuhn). Another challenge to NPD for resource-deficient entrepreneurs may be protecting intellectual property when it is developed. The sufficient condition for patenting is a function of perceived costs and benefits” (Athreye et al., 2021, p. 517). Further, the high costs associated with obtaining (much less protecting) patents pose a barrier among SMEs (p. 525). One possible alternative is to not pursue (one or more patents), opting instead to keep trade secrets. While engaging in the new product development process, nascent entrepreneurs may gain access to crucial resources by establishing external linkages, thereby substantially contributing to a new venture’s performance (Herrmann et al., 2022).

CONCLUSION

Entrepreneurs starting new ventures may develop new products that “can be either successful or not” (Grilli, 2022, p. 663). However, firms must be prepared to constantly innovate due to marketplace dynamism, i.e., evolving customer needs for new products in consideration of competitors (Homfeldt et al., 2019). Also, it takes more than just an idea and an entrepreneurial spirit (Demir, 2018, p. 18). Ventures must engage in planning, establish clear (and attainable) goals, establish defined processes and models, and manage teams effectively; further, they must be willing to engage in revisions to an idea when striving to develop “high-impact innovations” (p. 18). One particular advantage for start-ups is a lack of entrenched routines, which can cause barriers to innovation; startups are often also able to perceive and react to needs with greater agility (Homfeldt et al., 2019).

REFERENCES

- Athreye, S. S., Fassio, C., & Roper, S. (2021). Small firms and patenting revisited. *Small Business Economics*, 57(1), 513-530. <https://doi.org/10.1007/s11187-020-00323-1>
- Bezhovski, Z., Janevski, Z., Apasieva, T. J., & Temjanovski, R. (2021). From traditional to online methods for generating business ideas. *Management Dynamics in the Knowledge Economy*, 9(3), 307-329. <https://doi.org/10.2478/mdke-2021-0021>
- Bruni, E., Bonesso, S., & Gerli, F. (2019). Coping with different types of innovation: What do metaphors reveal about how entrepreneurs describe the innovation process? *Creativity and Innovation Management*, 28(2), 175-190. <https://doi.org/10.1111/caim.12312>
- Carvalho, L. C., & Madeira, M. J. (2021). Innovation management and entrepreneurship—Introduction. *Administrative Sciences*, 11(3), 73. <https://doi.org/10.3390/admsci11030073>
- Demir, F. (2018). A strategic management maturity model for innovation. *Technology Innovation Management Review*, 8(11), 13-21. <https://doi.org/10.22215/timreview/1196>
- Ferasso, M., Wunsch Takahashi, A. R., & Prado Gimenez, F. A. (2018). Innovation ecosystems: A meta-synthesis. *International Journal of Innovation Science*, 10(4), 495-518. <https://doi.org/10.1108/IJIS-07-2017-0059>

- Florén, H., Frishammar, J., Parida, V., Wincent, J., Institutionen för ekonomi, t. o. s., Luleå tekniska, u., & Innovation och, D. (2018). Critical success factors in early new product development: A review and a conceptual model. *International Entrepreneurship and Management Journal*, 14(2), 411-427. <https://doi.org/10.1007/s11365-017-0458-3>
- Golder, P. N., Shacham, R., & Mitra, D. (2009). Innovations' origins: When, by whom, and how are radical innovations developed? *Marketing Science*, 28(1), 166-179.
- Grilli, L. (2022). Entrepreneurship and new product development: Exploring the “advantage of youth” and “business acumen” views. *The Journal of Product Innovation Management*, 39(5), 662-685. <https://doi.org/10.1111/jpim.12625>
- Herrmann, A. M., Storz, C., & Held, L. (2022). Whom do nascent ventures search for? Resource scarcity and linkage formation activities during new product development processes. *Small Business Economics*, 58(1), 475-496. <https://doi.org/10.1007/s11187-020-00426-9>
- Homfeldt, F., Rese, A., & Simon, F. (2019). Suppliers versus start-ups: Where do better innovation ideas come from? *Research Policy*, 48(7), 1738-1757. <https://doi.org/10.1016/j.respol.2019.04.002>
- Israel, P. (1998). *Edison: A life of invention*.
- Khin, S., & Lim, T. H. (2018). Entrepreneurial opportunity recognition, exploitation and new venture success: moderating role of prior market and technology knowledge. *International Journal of Entrepreneurship*, 22(4), 1-6. <https://go.exlibris.link/S71GtD9G>
- Kuhn, T. S. (2012). *The structure of scientific revolutions*. University of Chicago press.
- Lee, H., Smith, K. G., & Grimm, C. M. (2003). The effect of new product radicality and scope on the extent and speed of innovation diffusion. *Journal of Management*, 29(5), 753. [https://doi.org/10.1016/s0149-2063\(03\)00034-5](https://doi.org/10.1016/s0149-2063(03)00034-5)
- Marion, T. J., Fixson, S. K., & Brown, G. (2020). Four skills tomorrow's innovation workforce will need. *MIT Sloan Management Review*, 61(2), 1-7.
- O'Connor, G. C., & Ayers, A. D. (2005). Building a radical innovation competency. *Research-Technology Management*, 48(1), 23-31. <https://doi.org/10.1080/08956308.2005.11657292>
- Raj, S. P., & Athaide, G. A. (2022). Innovation's domain: The need for a sharper yet broader focus. *The Journal of Product Innovation Management*, 39(4), 485-488. <https://doi.org/10.1111/jpim.12638>
- Thiel, P., & Masters, B. (2014). *Zero to one: Notes on startups, or how to build the future*. Crown Business.
- Veryzer, R. W. (1998). Discontinuous innovation and the new product development process. *The Journal of Product Innovation Management*, 15(4), 304-321. [https://doi.org/10.1016/S0737-6782\(97\)00105-7](https://doi.org/10.1016/S0737-6782(97)00105-7)

SETTING NEW RECORDS: IMPACTS ON CONSUMERS, SMALL BUSINESSES AND THE ECONOMY

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ABSTRACT

The U.S. and global economy suffered greatly due COVID-19, with some small business sectors and occupations faring worse than others. Debate exists as to whether we are in the midst of a technical recession, i.e., based upon declining GDP (Gross Domestic Product) over two consecutive quarters, or if we are already in a recession. Data from multiple sources consistently finds that at the very least, a recession is anticipated by a majority of respondents. However, other conditions, such as personal consumption and labor market developments, are being considered by the National Bureau of Economic Research (NBER)² – which remains undecided at the time of this writing. This paper explores emergent patterns associated with inflation, supply chain logistics and disruptions, labor shortages, borrowing and debt, and confidence in the future of the U.S. economy. Whether predictive evidence comes from indices of consumer or small business owners' confidence, banking and other industry leaders, financial markets, or quotes captured in FOMC meeting minutes, it appears there are perils ahead for the U.S. and global economy at large. In their predictions, economists and others have transitioned in framing the likelihood of a recession from impending possibility to inevitable reality.

Keywords: *COVID-19, inflation, recession, small business, entrepreneurship, economic conditions, COVID-19 response and recovery, economic development.*

INTRODUCTION

The U.S. economy has been hit hard by the COVID-19 global pandemic and its lingering effects. Concerns include, inflation, supply chain logistics, labor shortages, rising debt, lowered confidence indices, and a looming recession. This research illuminates current economic conditions with the intention of encouraging and informing entrepreneurial development moving forward. Conditions can inform knowledge. Interestingly, through all these troubled economic conditions and associated impacts from the COVID-19 global pandemic and its lingering effects,

² Business cycle dating procedure: Frequently asked questions. (2022, August 15). Retrieved October 28, 2022, from <https://www.nber.org/research/business-cycle-dating/business-cycle-dating-procedure-frequently-asked-questions>

we see growth in the number of small businesses. According to Robert Fairlie, the lead researcher for the Kauffman Indicators of Early-Stage Entrepreneurship, based on 2021 data “the nation’s startup spirit remained strong” (Meyers, 2022). Small business growth has continued to outpace total pre-pandemic growth (e.g., 2018 – 3.5 million applications, 2019 – 3.5 million applications, 2020 – 4.4 million applications, and 2021 – 5.4 million applications). There was growth in both high-propensity and no-propensity business applications (*Business formation statistics: Definitions*, 2022) year over year. This is a sign of continual growth and development of the U.S. business sector and future growth and opportunity.

In the U.S. post-COVID-19 economy, this research investigates current and projected conditions associated with inflation (Ajello et al., 2022; Rubin & Harrison, 2022), supply chain logistics and disruptions (Santacreu & LaBelle, 2022), and labor shortages juxtaposed to a swing of the pendulum toward hiring freezes and layoffs (Casto, 2022; Henney, 2022). In addition, consumer debt accumulation (Caporal & Albright, 2022; Karakoulas, 2020), borrowing habits and confidence (*CEO confidence deteriorated further heading Into Q4 [Press Release]*, 2022; Daniel, 2022; Elmassah et al., 2022; *US consumer confidence declined again in November*, 2022) indices may provide foreshadowing on the U.S. economy’s future. Reflecting on historical and current trends in the previously listed areas, this research draws on an ongoing effort comprised of several databases (holding artifacts collected across time) and specifically 517 artifacts informing this work. This research illuminates current conditions of our economy with intentions of supporting and encouraging entrepreneurial development, startup creation, and innovation (and adaptation) moving forward. Knowing where we are may help determine where we are going.

Consumers are facing price increases across a range of expenses, and this is considerably straining their financial health (Daniel, 2022). It seems that enduring economic impacts of COVID-19, e.g., long-COVID (Bach, 2022), continue to make long-term funding (home loans), medium-term funding (car loans), and short-term real-time costs (CPI) more difficult to access. Small businesses are also being impacted. From vacancies associated with labor shortages observed in the restaurant industry, to percentage of vacancies across manufacturing jobs still being much higher than pre-pandemic rates, there are not enough workers to fill positions (*Job openings levels and rates by industry and region, seasonally adjusted*, 2022). In turn, there is not enough ‘people power’ to manufacture products and serve existing demand. Cripple (or couple) this with tapering supply that is becoming increasingly costly to produce — and deliver, due to additional labor shortages in the transportation sector — and it is evident that there are still symptoms associated with impacts from the global pandemic (Nummela et al., 2020; Salisu & Akanni, 2020) that are affecting both consumers and small business.

SETTING NEW RECORDS

Due to a dynamic set of economic circumstances and lagging data resources (e.g., government entities and scholarly publications), this research is conceptual. Current impacts of COVID-19 on: record-setting inflation levels, debt accumulation and borrowing, supply chain, labor shortages, and consumer and business owner confidence indices are presented as influencers of post-COVID U.S. economy. While these factors have presented economic difficulties, growth

of small businesses points towards an economy with remaining potential, depending on recession possibilities.

Inflation & Consumer Debt

Costs continue to increase and availability of funding for long-/medium-term investments is decreasing. For consumers, increased costs in accessing funding through loans for homes and cars are rising and may prohibitive continued investment. High inflation and rising interest rates led to mortgage rates that are two-times “where they were just at the start of 2022” (Stauffer & Reed, 2022). December 2020/January 2021 saw the lowest 30-year fixed mortgage rate in the history of home loans at 2.65%, based on data from Freddie Mac (*Primary mortgage market survey*, 2022). Increases in rates from 2.65% in early-2021 to over 7% (or more, depending on borrower) in mid-2022 constitutes one of the fastest escalations of mortgage rates in recent history, corresponding to a 185% increase over an 18-month period. The Mortgage Bankers Association survey noted: “Mortgage applications fell again last week (October), reaching their lowest level in 25-years, while mortgage interest rates hit their highest level since 1997” (Kan, 2022). Nevertheless, some are predicting a return to double digit rates in the 2023 (Wiltermuth, 2022). Car loan average interest rates and prices have increased (Holgate, 2022), and have not returned to pre-pandemic rates.

The CPI is based on urban consumers’ out-of-pocket expenses (McCully et al., 2007). The BLS CPI Calculator computes value and purchasing power of an amount of money in alignment with a market-basket of consumer goods and services compared year-to-year. If a consumer had \$100 in August 2016 to purchase a market-basket, this individual would need \$106 in August 2019 (6% increase). To purchase that same market-basket from 2019 in 2022, one would need \$115 (15% increase), approaching 3x’s the previous comparable interval. This increase (15%) is the largest increase in CPI in 20+ years. To only report erosion in savings would be an inadequate portrayal, because consumers have increasingly been going deeper into debt. “Prices for both homes and motor vehicles have been rising, and the borrowing amounts have risen in tandem-in fact, the average dollar amount for new purchase originations of both autos and homes is up 36 percent since 2019” (Haughwout et al., 2022). Credit card debt balances (Caporal & Albright, 2022) have also been visibly affected by inflation. This visibility of inflation through credit card debt has been attributed to consumer purchases.

Labor Shortages & Supply Chain

While in 2021 businesses reported an unprecedented total number of 3.8 million new jobs, the workforce remains nearly equally and oppositely down at 3.3 million workers available (Ferguson, 2022). In 2022, there are 3.8 million more jobs than the year before, but 3.3 million fewer workers in the market to work. Compound this with impacts of long-COVID on ~4 million workers, and the labor supply challenge clarifies. Observed evidence of this can be found on almost any Main Street across the U.S., e.g., Labor Shortage, Closed and Hiring, signage.

Filling-the-Gap

We have been observing developments of historic proportions. These include record-setting interest rate increases by the Federal Reserve; historic household debt; inflation (record fuel prices); and declines in consumer confidence. From an anecdotal perspective, “Help Wanted” signs, closed dining areas, and difficulty buying certain products at retail, persist. These conditions suggest that documenting, analyzing, and forecasting what may come, and how to respond, is entrepreneurship researchers’ responsibility.

CONCLUSION

The U.S. economy has been impacted in many ways because of COVID-19 (Adams - Prassl et al., 2020). Inflation has struck, affecting individuals as consumers (Rubin & Harrison, 2022) and small business owners (*Small business and inflation, 2022; Survey: Small business challenges worsen amid record inflation and workforce shortages, 2022*) alike; a majority of small businesses have no employees (*Frequently asked questions about small business, 2021*). While the global pandemic brought great human and economic casualty, it also seems to have hit the chord charted by disaster sociologist Charles Fritz (1996). Fritz noted that disaster “disrupts habitual, institutionalized patterns of behavior and renders people amenable to social and personal change” (p. 55). This idea that disaster can perpetuate innovation is consistent with Schumpeter’s (1942) theory establishing the concept of creative destruction. This includes that process “of industrial mutation that continuously revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one” (p. 83).

These theoretical concepts are important to recognize in practice, as they point to economic and environmental conditions (and entrepreneurial ecosystems at large) that must be understood. The perspective, disposition, and mindset of entrepreneurs who take into hand these circumstances and work to rise above and beyond is critical to their success. Difficult times often do present a plethora of teachable moments for future entrepreneurs (and educators). Finally, understanding economic conditions and opportunities is an essential aspect of entrepreneurial education. Conditions (entrepreneurial ecosystems) and opportunity (entrepreneurial response) go hand-in-hand.

REFERENCES

- Adams-Prassl, A., Cloyne, J., Costa Dias, M., Parey, M., & Ziliak, J. P. (2020). The COVID-19 economic crisis. *Fiscal Studies*, 41(3), 489-492. <https://doi.org/10.1111/1475-5890.12248>
- Ajello, A., Benzoni, L., Schwinn, M., Timmer, Y., & Vazquez-Grande, F. (2022, July 12). *Monetary policy, inflation outlook, and recession probabilities: FEDS notes*. Board of Governors of the Federal Reserve System. Retrieved December 7 from <https://www.federalreserve.gov/econres/notes/feds-notes/monetary-policy-inflation-outlook-and-recession-probabilities-20220712.html>
- Bach, K. (2022, August 24). *New data shows long Covid is keeping as many as 4 million people out of work*. Retrieved October 22 from <https://www.brookings.edu/research/new-data-shows-long-covid-is-keeping-as-many-as-4-million-people-out-of-work/>

- Business cycle dating procedure: Frequently asked questions.* (2022, August 15). National Bureau of Economic Research (NBER). Retrieved October 28 from <https://www.nber.org/research/business-cycle-dating/business-cycle-dating-procedure-frequently-asked-questions>
- Business formation statistics: Definitions.* (2022, September 16). Retrieved October 22 from <https://www.census.gov/econ/bfs/definitions.html>
- Caporal, J., & Albright, D. (2022, September 20). *Average American household debt in 2022: Facts and figures.* Retrieved October 28 from <https://www.fool.com/the-ascent/research/average-american-household-debt/>
- Casto, C. (2022, September 6). *Hiring freeze breaks new record: 63% of SMB employers halt hiring, 10% start layoffs.* Retrieved December 9 from <https://www.alignable.com/forum/63-of-smb-employers-put-hiring-on-hold-10-start-layoffs>
- CEO confidence deteriorated further heading Into Q4 [Press Release].* (2022, October 13). Retrieved December 7 from <https://www.conference-board.org/topics/CEO-Confidence/press/CEO-confidence-Q4-2022>
- Daniel, W. (2022, June 24). *Consumers have never hated the U.S. economy this much—It's a huge recession warning sign.* Fortune. Retrieved July 13 from <https://fortune.com/2022/06/24/recession-inflation-consumer-sentiment-record-low/>
- Elmassah, S., Bacheer, S., & Hassanein, E. (2022). US consumers' confidence and responses to COVID-19 shock. *Review of Economics and Political Science.*
- Ferguson, S. (2022, July 15). *Understanding America's labor shortage.* Retrieved July 24 from <https://www.uschamber.com/workforce/understanding-americas-labor-shortage>
- Frequently asked questions about small business.* (2021, December). U.S. Small Business Administration Office of Advocacy Retrieved October 22 from <https://cdn.advocacy.sba.gov/wp-content/uploads/2021/12/06095731/Small-Business-FAQ-Revised-December-2021.pdf>
- Fritz, C. E. (1996). Disasters and mental health: Therapeutic principles drawn from disaster studies.
- Haughwout, A., Lee, D., Mangrum, D., Scally, J., & van der Klaauw, W. (2022, August 2). *Historically low delinquency rates coming to an end.* Federal Reserve Bank of New York, Liberty Street Economics. Retrieved October 28 from <https://libertystreeteconomics.newyorkfed.org/2022/08/historically-low-delinquency-rates-coming-to-an-end/>
- Henney, M. (2022, December 2). *Layoffs mount as job market gets murky.* Retrieved December 7 from <https://www.foxbusiness.com/economy/layoffs-mount-job-market-gets-murky>
- Holgate, T. (2022, August 5). *A race with the economy: How to stay on track with vehicle financing.* Retrieved October 23 from <https://www.thestreet.com/retirement-daily/your-money/auto-loan-financing#gid=ci02a72ff8200026ec&pid=the-role-of-real-estate-in-retirement-planning>
- Job openings levels and rates by industry and region, seasonally adjusted.* (2022, October 4). U.S. Bureau of Labor Statistics. Retrieved October 23 from <https://www.bls.gov/news.release/jolts.t01.htm>
- Kan, J. (2022). *Mortgage applications tumble again.* Retrieved October 22 from <https://newslink.mba.org/mba-newslinks/2022/october/mba-weekly-survey-oct-19-2022-mortgage-applications-tumble-again/>
- Karakoulas, G. (2020). What's next with the forbearance cliff? *The RMA Journal*, 103(1), 20-27.
- McCully, C. P., Moyer, B. C., & Stewart, K. J. (2007, November). *Comparing the Consumer Price Index and the Personal Consumption Expenditures Price Index.* Retrieved July 12 from https://apps.bea.gov/scb/pdf/2007/11%20November/1107_cpipce.pdf
- Meyers, K. (2022, June 28). *Resilience and rebound: Recent trends in United States entrepreneurship.* Retrieved October from <https://www.kauffman.org/currents/kauffman-indicators-series-economic-trends-united-states-entrepreneurship/>
- Nummela, N., Paavilainen-Mäntymäki, E., Harikkala-Laihinen, R., & Raitis, J. (2020). When all doors close: Implications of COVID-19 for cosmopolitan entrepreneurs. *International Small Business Journal*, 38(8), 711-717. <https://doi.org/10.1177/0266242620954127>
- Primary mortgage market survey.* (2022, October 20). Freddie Mac. Retrieved October 22 from <https://www.freddiemac.com/pmms>
- Rubin, G. T., & Harrison, D. (2022). How high is inflation and what causes it? What to know; The consumer-price index rose at an 8.6% annual rate in May, its highest level since December 1981. *The Wall Street journal. Eastern edition.* <https://go.exlibris.link/XffKn545>
- Salisu, A. A., & Akanni, L. O. (2020). Constructing a global fear index for the COVID-19 pandemic. *Emerging Markets Finance & Trade*, 56(10), 2310-2331. <https://doi.org/10.1080/1540496X.2020.1785424>
- Santacreu, A. M., & LaBelle, J. (2022). Global supply chain disruptions and inflation during the COVID-19 pandemic. *Federal Reserve Bank of St. Louis Review*(Second Quarter), 78-91. Retrieved October 22, from

- <https://files.stlouisfed.org/files/htdocs/publications/review/2022/04/21/global-supply-chain-disruptions-and-inflation-during-the-covid-19-pandemic.pdf>
- Schumpeter, J. A. (1942). *Capitalism, socialism, and democracy* (First ed.). Harper and Brothers.
- Small business and inflation*. (2022, April). NFIB Research Center. Retrieved July 12 from <https://assets.nfib.com/nfibcom/Inflation-Survey-FINAL.pdf>
- Stauffer, J., & Reed, J. (2022, October 20). *Compare current mortgage rates for today*. Retrieved October 22 from <https://time.com/nextadvisor/mortgages/rates/#:~:text=Jason%20Stauffer%20is%20a%20personal,and%20mortgage%20market%20for%20NextAdvisor.%E2%80%A6&text=We%20want%20to%20help%20you%20make%20more%20informed%20decisions>.
- Survey: Small business challenges worsen amid record inflation and workforce shortages*. (2022, July 13). Goldman Sachs. Retrieved July 13 from <https://www.goldmansachs.com/citizenship/10000-small-businesses/US/infographics/small-businesses-fear-looming-recession/index.html>
- US consumer confidence declined again in November*. (2022, November 29). Retrieved December 9 from <https://www.conference-board.org/topics/consumer-confidence/press/CCI-Nov-2022>
- Wiltermuth, J. (2022, October 2022). *Why the housing market should brace for double-digit mortgage rates in 2023*. Retrieved October 2022 from <https://www.marketwatch.com/story/why-the-housing-market-should-brace-for-double-digit-mortgage-rates-in-2023-11666302773>

COLLEGE STUDENTS' ATTITUDES TOWARDS MATERIALISM: THE NEW "AMERICAN DREAM"

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ABSTRACT

This paper explores the growing concern that the "American Dream" has been diminished resulting in an increased intensity for material gain and security often at the expense of personal, moral, and societal well-being. In this paper we investigate materialistic values and affective states of business and non-business students to gain insight into the current values of our students.

Key words: Materialism, Positive and Negative Affect, Success, Business Programs

INTRODUCTION

There is a growing popularity of business programs as reliable and apparent venues to career success and happiness. Colleges and universities will confer approximately 390,600 business degrees annually (National Center for Education Statistics, 2021) making business the most popular undergraduate major (21%), distantly followed by social sciences (160,600), engineering (126,700), biological and biomedical sciences (121,200), and psychology (116,500). Further contributing to this trend, graduating MBAs and various master in business programs outpaced previously top-ranked graduate education for the first time in 2013, resulting in 187,000 conferred degrees (2020), followed by education (146,000), and health related professions (119,000). Yet, in spite of this seeming success and the draw to business schools, not all has been well for business students. Somewhat contrary to an anticipated and foundational college outcome, given the recent popularity of business programs, the Gallup-Purdue Web Survey (2014) of 29,560 college graduates revealed that business students were the least deeply interested in their work with only 38% of business graduates indicated they were engaged compared to students in the arts and humanities (43%), sciences and engineering (43%), and social sciences and education (47%). Numerous past studies have also pointed towards materialism as an extrinsic motivator for business students and also as one possible source of work disappointment (Kasser and Ahuvia, 2002). In addition, the effects of a shifting economy and the drive towards shareholder wealth which is still central in most business programs may be coming at the expense of well-being. Little attention has been given to examining student happiness and well-being which in many cases may be inconsistent with the realities of the emerging economic environment. Couple this with the rising cost of higher education, there is mounting concentration by federal and state governments, college administration, parents, and students to view a high paying position as the main purpose of higher education as opposed to personal well-being, civic or environmental responsibility (Senter & Spalter-Roth, 2020). The vocational focus on high paying positions is also contradictory

to those that advocate that the purpose of higher education is to enlighten the citizenry through broad liberal arts.

Given the scope and extent of recent societal changes, it is important to understand the direction of business and liberal arts student's orientations towards materialism and well-being. From an education perspective, this leads to a larger fundamental question: What is the purpose of both management education and liberal arts given the increasingly competitive nature of career entry and direction? Past research has shown that the drive towards shareholder wealth is still central in most business programs, perhaps at the expense of addressing environmental issues and well-being as a critical challenge of our lifetime and that of future generations (Bergman et. al, 2014). We might also question the extent to which liberal arts students are also responding to the competitive work environment, focused career direction and the associated needs for security and material possession.

MATERIALISM AMONG COLLEGE STUDENTS

Business students are more materialistic, show greater signs of distress and depression, have lower levels of well-being and greater substance abuse than students in education, perhaps due to different value associations. Business students place greater value on extrinsic values, wealth accumulation and personal financial success than the education students who placed more emphasis on helping others in need (Vansteenkiste et al, 2006). Extrinsic orientations for material possessions, notoriety, and appearance often result in numerous personal comparisons that heighten one's awareness to both strengths and weaknesses leaving self-esteem more volatile (Kasser & Ahuvia (2002). Business students also displayed somewhat greater levels of motivation to make money than psychology students, but also displayed higher levels of anger and depression (Robak et al., 2007). Interestingly, these negative outcomes were further exacerbated by MBA programs (Bergman, et. al. (2014). Impact analysis after a 2-year program revealed a focus on maximizing shareholder value and a decrease in customer and employee interests (Williams et al., 2000). A strong central focus on financial success also hampered movement towards self-actualization and led to higher levels of angst, lower levels of energy and a need for greater control (Kasser & Ryan, 1993; Vansteenkiste et al., 2006). These students engage less in intrinsically-oriented activities that would generally satisfy psychological drives for autonomy and competency, and hence, they miss opportunities that support well-being. The strength of the drive towards extrinsic rewards appears to replace important psychological need-sustaining activities found in more prosocial behavior. This pattern is consistent with humanistic psychology that postulates that a focus on extrinsic rewards or external affirmation for social recognition raises levels of distress and lowers feeling of well-being (Deci & Ryan, 1987). This may be partially explained by the loss of self-determination as one gravitates from intrinsic to extrinsic reward systems (Robak et al., 2007). Thus, a strong internalized material goods orientation hinders one's ability towards self-actualization.

H1a: Business students will be more Materialistic than non-business students

H1b: Business students will value Happiness more than non-business students

H1c: Business students will value Acquisition Centrality more than non-business students

H1d: Business students will value Success more than non-business students

POSITIVE AND NEGATIVE AFFECT SCHEDULE (PANAS)

Studies on the psycho-physiological construct of affect have consistently shown two dominant dimensions that emerge as the first two components in a factor analysis, namely positive affect (PA) and negative affect (NA). In brief, these traits account for the emotional interaction with stimuli that is realized uniquely by individuals to various situations. PA reflects the extent to which a person feels enthusiastic, cheerful, energetic, pleasantly involved and alert. In contrast, a person low in PA can be characterized by sadness, lethargy, and distress. Low PA, however, does not constitute NA as these two traits, PA and NA are independent of each other (Watson, Clark, and Tellegen, 1988).

NA is characterized by negative emotions that subsumes a variety of aversive mood states including anger, disgust, fear, guilt, and nervousness. Low NA scores indicate a mood state of calmness, tranquility, and peace. Individuals may score high or low in both PA and NA, or high in one and low in the other, and scores remain stable over time.

IMPLICATIONS OF POSITIVE AFFECTIVITY

PA enables individuals to process emotional information with accuracy and efficiency in efforts to formulate plans, resolve problems and accomplish goals. It may broaden the capacity to expand thought-action processes assuming an elevated level of emotional intensity does not interfere with cognitive scope. More commonly, high-PA individuals demonstrate energy, optimism, engagement, and social interest, and are more likely to report life satisfaction and subjective well-being. These characteristics roughly correspond to personality factors associated with extraversion, social interest, optimism, and confidence. This may be manifested in positive or constructive controversy with supervisors where high PA individuals are more likely to broaden their cognitive repertoire, heighten attentional focus, and increase their level of engagement.

H2a: Positive Affectivity is negatively related to Materialism

H2b: Positive Affectivity is negatively related to Happiness

H2c: Positive Affectivity is negatively related to Acquisition Centrality

H2d: Positive Affectivity is negatively related to Success

IMPLICATIONS OF NEGATIVE AFFECTIVITY

Individuals with high negative affectivity generally view the world, relationships, and the future in generally negative terms. Emotions may include anger, contempt, distrust, guilt, fear and nervousness in a general orientation of dissatisfaction with both themselves and the world. These findings, however, compliment evolutionary psychology as adaptive functions in the development of cognitive strategies to deal with challenges. Thus, negative affect (NA) individuals appear to rely more upon controlled analytic approaches drawn from life circumstances than do those high in positive affect (PA). This cautious processing of new or complex information as opposed to leveraging pre-existing knowledge is advantageous in dealing with deception, misinformation or manipulation of received information and the accuracy of details. In either case, however, both PA and NA scores are indicators of life satisfaction and well-being (Fargas, 2013).

H3a: Negative Affectivity is positively related to Materialism

H3b: Negative Affectivity is positively related to Happiness

H3c: Negative Affectivity is positively related to Acquisition Centrality

H3d: Negative Affectivity is positively related to Success

H4a: Business students will have higher Positive Affect than non-business students

H4b: Business students will have lower Negative Affect than non-business students

METHOD

Participants: Business and liberal arts students were selected from a midsize public university in northern New Jersey, U.S.A. Participation was voluntary and consisted of 131 subjects of which 77 (58.77%) were from the university's College of Business accredited by the Association to Advance Collegiate Schools of Business (AACSB). The business students' concentrations included management, marketing, finance, accounting, sales, sports management, entrepreneurship, and music management. The remaining 54 (41.2%) students were from liberal arts and included majors in education, humanities, and social sciences. Demographic information included age, gender, and any work experience. The mean age of the subjects was 24.38 years with a range from 18 to 64 with nine participants who did not indicate age. Gender: 67 were males (51.2%) and 64 were females (48.8%).

MEASURES

Materialism: This study utilized the Richins and Dawson (1992) instrument. It captures three themes that have been consistent in previous research: material acquisition centrality, material success, and material happiness.

The instrument contains 18 questions which make up the above subscales and overall total, and is scored on a 5-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Reliability coefficients in our sample were Materialism (18 items) $\alpha = .87$, Happiness (5 items) $\alpha = .73$, Acquisition Centrality (7 items) $\alpha = .731$ and Success (6 items) $\alpha = .72$ (Chronbach, 1951).

Positive and Negative Affect Schedule (PANAS-SF) This is a 20 item questionnaire that has been developed and extensively validated to measure two subscales: Positive Affect (PA) and Negative Affect (NA) as measured by the subject on a five-point scale. This is the most commonly used measure in scholarly research for affect with 10 PA single word items and 10 NA single word items to be rated. The scale ranges from: Very slightly or not at all, A little, Moderately, Quite a bit, and Extremely. Reliability coefficients in our sample were Positive Affectivity (10 items) $\alpha = .90$ and Negative Affectivity (08 items) $\alpha = .85$ (Chronbach, 1951).

RESULTS

Table 1 shows the results of empirical testing of each of the hypotheses. The results were mixed for all three sets of hypotheses, but generally supported the main ideas. Business students were not more materialistic overall and did not value happiness more than non-business students, but did value acquisition centrality and success more. Positive affectivity was negatively related to materialism overall and happiness, but not to acquisition centrality or success. Negative affectivity was positively related to overall materialism as well as happiness and acquisition centrality, but not to success. There was no significant difference in the positive and negative affectivity scores of business and non-business students.

Table 1 Hypotheses Testing

Hypotheses	Significance
H1a: Business students will be more Materialistic than non-business students	p = .069 not supported
H1b: Business students will value Happiness more than non-business students	p = .415 not supported
H1c: Business students will value Centrality more than non-business students	p = .016 supported
H1d: Business students will value Success more than non-business students	p = .050 supported
H2a: Positive Affectivity is negatively related to Materialism	p = .042 supported
H2b: Positive Affectivity is negatively related to Happiness	p < .001 supported
H2c: Positive Affectivity is negatively related to Acquisition Centrality	p = .320 not supported
H2d: Positive Affectivity is negatively related to Success	p = .341 not supported
H3a: Negative Affectivity is positively related to Materialism	p = .003 supported
H3b: Negative Affectivity is positively related to Happiness	p < .001 supported
H3c: Negative Affectivity is positively related to Acquisition Centrality	p = .031 supported
H3d: Negative Affectivity is positively related to Success	p = .105 not supported
H4a: Business students will have higher Positive Affect than non-business students	p = .412 not supported
H4b: Business students will have lower Negative Affect than non-business students	p = .126 not supported

DISCUSSION

The results of the first set of hypotheses showed no difference in overall materialism and value of happiness between business students and non-business students. This exposes the current pervasiveness of materialistic values. It is clear that materialism is not limited to the business school. The business students did value acquisition centrality and success higher than non-business students. This can be due to a number of causes, including a greater familiarity with and exposure to the material possessions that are indicators of wealth and power. It isn't because of an underlying difference in positive and negative affect, because no difference was found.

The general support for positive affectivity being negatively related to materialism, and negative affectivity being positively related to materialism are consistent with the conceptual bases of the constructs and past empirical tests. The causal link is unclear, however it is likely to be a reinforcing loop. As such, it is possible to volitionally change your behavior and sense making towards positive affectivity and away from materialism. As business professors we should not overly emphasize material gain and profit maximization. Other conceptualizations such as the triple bottom line (People, profits, planet) allow for students to use the tools that are taught for running business while valuing things beyond their own material gain.

An interesting, strong finding that was not addressed in the hypotheses is that age and time on the job were negatively related to materialism. Is this a sign that materialism decreases over time? Or are the levels of materialism stable in individuals, but younger people are more materialistic? This bears investigation so we can make the proper adjustments to our programs.

As much of society is recognizing the powerful impact of industrialization on nature and human well-being, management education must foster a broader and deeper role in developing leaders who are both capable and caring role models of behavior. However, studies have shown that business students have been taught to make analytical decisions based upon hard data with empathy taking a back seat. Self-interests are also higher among business students which may lead

to an exploitation of common resources (Campbell et al, 2005). The big questions are, do we want the new 'American Dream' to be increasingly materialistic? If not, what can we do about it?

REFERENCES, MEASURES and FULL RESULTS available on request

A COMPARISON BETWEEN GENERATION Z AND MILLENNIALS IN REGARDS TO THEIR ATTITUDES TOWARD GENETICALLY MODIFIED ORGANISM (GMO) FOODS

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ABSTRACT

Generation Z, people born between about 1997 and 2012, are expected to have a major impact on the future of the world's economy and society in general. This study reports on a survey of members of Generation Z in the United States regarding attribute dimensions of GMO foods, such as health benefits, safety, ethics, authenticity, innovativeness and environmental friendliness. Results are compared with those of a previous study that was conducted on Millennials' attitudes toward GMOs nine years ago.

Potential benefits of GMO foods include improving agricultural productivity, e.g. insect resistant and drought resistant crops, and alleviating world hunger, particularly in developing countries. At the same time, opponents of GMO foods are concerned about unknown consequences. Understanding the benefits and concerns of GMO foods is important for the agricultural sector and for society overall.

Similar to Millennials members of Generation Z have noticeable unfavorable views toward GM foods: Females tend to be more skeptical about GMOs and GM foods than males. Males are generally neutral in attitude. Generation Z females tend to have stronger disagreement than males regarding statements associating GM foods with being safe, healthy, authentic, environmentally beneficial and ethical. Attitudes toward GMOs with regard to innovative were overall neutral. These results generally mirror the results of the study on Millennials. The colloquial view by some that GMOs are "Franken-foods" still seems to resonate among members of Generation Z. Thus, to effectively market GMO foods, agricultural producers, distributors, and food retailers will need to provide, via corporate websites, news releases to media, and other venues, sufficient information that alleviates consumer concerns.

Keywords: *Genetically Modified Organism, GMO, Genetically Engineered Foods, Generation Z, Millennials, Generation Y*

WHY IS COLLEGE EDUCATION EXPENSIVE?

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ABSTRACT

In the job market today, a college degree is a basic requirement for most professional jobs. Without a college degree can put workers at a major disadvantage in the market. However, the price of going to college has increased substantially over the past few decades.

According to the data from the 2021 Digest of Education Statistics, the average undergraduate tuition and fees for full-time students in 4-year postsecondary institutions had a 52% increase from 1999-2000 to 2020-2021 academic year after adjusting for inflation. During the observation years, the demand on college education increase while the number of institutions also trended upward suggesting an improvement in supply. However, the percentage of tenured full-time faculty in tenure granting institutions declined over the years.

We employ a fixed-effect specification on the analysis of a panel of colleges and universities from 2016 to 2019 in an attempt to identify the factors that contribute to the rising price of college education. Our estimations suggest a 0.91% price elasticity of demand and a -0.43% price elasticity of supply. The above figures indicate that 1% increase in enrollment leads to 0.91% increase in tuition and a 1% increase in the number of institutions in the market drops the tuition by 0.43%. The fact that the estimated price elasticity of demand is higher than the price elasticity of supply suggests that the effects of rising demand outweighs supply. Thus, college tuitions are on the rise over the observation years. Further, more tenured full-time faculty would increase the prices of college education. A one-year lag model was employed for a sensitivity test and the estimations are similar.

USING WIKIPEDIA TO IDENTIFY PATTERNS IN A LOCAL ECONOMY: AN ASSESSMENT

Steven Livingston, Middle Tennessee State University

ABSTRACT

There has been increasing interest in using social media or other internet platforms as tools for prediction or for ascertaining public attention. This sort “incidentally collected” data via “unobtrusive observation” may substitute for other forms of knowledge about the mass public and its behavior, such as opinion polls or panel surveys, when they do not exist or are not available in a timely manner. One of the most recommended such platforms for this purpose is Wikipedia. Records of the number of views of Wikipedia articles are free, available daily, and transparent. Studies ranging from stock market predictions to comparative attention to plane crashes, to public interest in biodiversity issues have made use of these Wikipedia “page views” to assess how public attention to an issue may be changing and how this may signal future trends or events. This paper assesses this strategy. Is it valid and how well does it perform? The paper focuses specifically upon the ability of page views to inform about local economic and business conditions. It maps the page views of topical Wikipedia articles against real economic and business activity to assess their ability to either identify changes in public attention or predict future activity in these areas. It does this at the national level, but then drills down to the local level, where lack of other tools in which to assess near-real time business and economic activity is more acute. The Nashville Metropolitan Statistical Area is used for this purpose.

AMERICA THE UNREADY: THE USA'S EMERGENCY PREPAREDNESS PROBLEM AND HOW TO SOLVE IT

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"Where in the hell is the cavalry on this one?"

--Kate Hale, emergency management director for Dade County, Florida, regarding Hurricane Andrew.

ABSTRACT

The United States of America (USA) has experienced numerous failures to respond effectively to emergencies, including earthquakes, wildfires, tornadoes, hurricanes, oil spills, and medical pandemics. The approach to response—local governments respond, states direct, and the federal government supports—has proved inadequate because local governments are typically stretched too thin to make an adequate response, and there is no federal agency with sufficient resources to respond. We propose an approach based upon repurposing the National Guard as a state-level agency with primary responsibility for all phases of civil defense and emergency response, with sufficient support before the fact from the federal government to ensure adequate levels of headcount, resources, training, and funding.

INTRODUCTION

The picture of emergency response in the United States of America (USA) is not a pretty one, particularly in recent years. There have been a number of fairly disastrous emergency responses, such as:

- 1989, Exxon Valdez in Alaska

On March 24, 1989, the oil tanker Exxon Valdez ran aground in Prince William Sound, Alaska, spilling 11 million gallons of oil. The ecologically sensitive location, season of the year, and large scale of this spill resulted in one of the largest environmental disasters in U.S. history. Exxon settled in 1991 with funds disbursed in three discrete parts: criminal plea agreement (\$25 million), criminal restitution (\$100 million), and civil settlement (\$900 million). The spill affected more than 1,300 miles of shoreline, with immense impacts for fish and wildlife and their habitats, as well as for local industries and communities. The oil killed an estimated 250,000 seabirds, 2,800 sea otters, 300 harbor seals, 250 bald eagles, as many as 22 killer whales, and billions of salmon and herring eggs. (EPA, 1989)

- 1992, Hurricane Andrew, Florida.
FEMA and the federal government at large were accused of not responding fast enough to house, feed and sustain the approximately 250,000 people left homeless in the affected areas. Within five days the federal government and neighboring states had dispatched 20,000 National Guard and active-duty troops to South Dade County to set up temporary housing. Andrew directly caused 26 deaths in the U.S. and indirectly caused 39 more, with \$27.3 billion in total damages. (National Weather Service, 2022, “Hurricane Andrew”)
- 2004, Hurricane Frances, South Florida.
9,800 Miami-Dade County applicants (where storms were “like a severe thunderstorm”) received \$21 million from FEMA in storm claims for new furniture, clothes, televisions, microwaves, refrigerators, cars, dental bills, and funerals even though the hurricane hit over 100 miles north of Miami-Dade and the Miami-Dade Medical Examiner recorded no deaths from Frances (Kestin, 2004, June 2005, August 2005).
- 2005, Hurricane Katrina in New Orleans and Louisiana.
A Bipartisan House of Representatives Select Committee determined that, among other things, “DHS and FEMA lacked adequate trained and experienced staff for the Katrina response. ...The readiness of FEMA's national emergency response teams was inadequate and reduced the effectiveness of the federal response. ... Long-standing weaknesses and the magnitude of the disaster overwhelmed FEMA's ability to provide emergency shelter and temporary housing. ... FEMA logistics and contracting systems did not support a targeted, massive, and sustained provision of commodities. ... Before Katrina, FEMA suffered from a lack of sufficiently trained procurement professionals.” (Bipartisan Committee, 2006, “Executive Summary”)
- 2010, The British Petroleum oil spill offshore Louisiana.
“On April 20, 2010, BP’s mobile offshore drilling unit Deepwater Horizon exploded, burned, and subsequently sank in the Gulf of Mexico 52 miles southeast of Venice, Louisiana. Eleven of the 126 workers on the rig were killed and, over the following 87 days, an estimated 3.19 million barrels (~134 million gallons) of oil spilled into the Gulf (4.0 million barrels minus 810,000 barrels of collected oil). This was the largest oil spill ever reported in U.S. history.” (MMC, 2021)
- 2017, Hurricane Maria in Puerto Rico.
“When Hurricane Maria made landfall in Puerto Rico and the U.S. Virgin Islands [in 2017], it put on full display two big problems with how our nation deals with disasters. The first problem is the preference for reacting after a disaster happens, rather than remedying vulnerabilities before a storm or hurricane becomes a disaster. The second problem is that the Federal Emergency Management Agency (FEMA) does not have the

capacity to do its mission, much less handle four catastrophic disasters simultaneously, especially when one devastates islands a thousand miles away from the mainland.” (Moore, 2018)

- 2020, The CORONA-19 virus nationwide.
“Despite the United States’ enormous wealth and unparalleled medical and scientific capacity, the country’s epidemic dwarfs that of any other country. The U.S. reports more than 28 million cases and 500,000 deaths, accounting for 25% of global cases and 20% of global deaths despite comprising only 4% of the world’s population. Life expectancy in the U.S. shrank by a full year in 2020. Had the U.S. responded with the swiftness and effectiveness of East Asia, more than 400,000 American lives could have been saved.” (Institute for Global Health Sciences, 2021)
- Various earthquakes and wildfires, primarily in California.
“In a year of superlatives, some statistics stand out for California’s 2020 fire year: Four million acres, 112 million tons of greenhouse gases, thousands of lightning strikes, 11 million gallons of fire retardant. And 31 lost lives. ... The most telltale number is 4.2 million. That’s the stop-in-your-tracks figure — the total acreage burned — from last year’s fire siege, the worst year in California’s long history of wildfires.” (Cart, 2021)

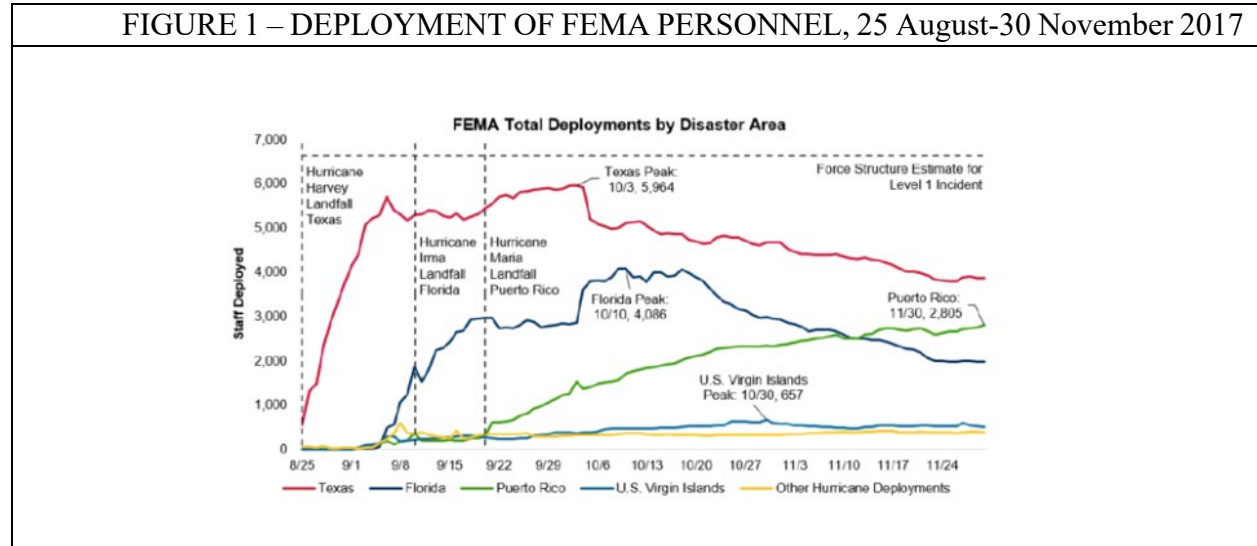
PROBLEM

This recent history of disasters and flawed responses strongly suggests two significant conclusions:

- Disasters of numerous types are not going away, and
- The USA’s current ability to deal with them is inadequate.

The big problem with the response to COVID-19 is the same as with the response to Katrina, and Maria in Puerto Rico, and the BP oil spill, among others. There is no organization that is ready to put boots on the ground and begin emergency response from day one. FEMA cannot do it—with a total headcount of 20,000 nationwide (FEMA, “About Us”) they are not staffed to do it, and their mission is not "response" but "management.” CDC, FDA, and NIH were obviously not up to the task in the case of COVID-19, because response is not their mission either. The prevailing philosophy in the USA is is locals respond, states direct, and the federal government supports them and backs them up, including financially. But local governments cannot afford or maintain the capacity needed to respond to a major hurricane or earthquake or pandemic or oil spill. FEMA has taken much criticism for not providing adequate emergency response. In fact, that is not its mission. FEMA is an emergency management agency, not an emergency response agency. That means that it does administrative tasks like lining up contractors in advance and executing agreements with them, pursuant to which they will provide goods and services in case of an emergency, and reimbursing state and local governments and agencies, who

are actually responsible for response under the current USA system. One problem with the Katrina response was that the contractors that FEMA had lined up and entered into contracts with for the purpose of supporting response efforts were themselves wiped out by Katrina. To get an idea of the weaknesses in that system, consider the situation in 2017, when Hurricane Harvey in Texas, Hurricane Irma in Florida, and Hurricane Maria in Puerto Rico and the Virgin Islands made landfalls within a month of each other. FEMA clearly struggled to staff all those emergencies, as shown by the personnel headcount graphs in Figure 1 (Moore, 2018).



FEMA was not able to deploy sufficient headcount to respond to one Level 1 incident at any of the four locations. Another problem is that putting together organizations of this size requires taking on a large number of untrained personnel. Additionally, they are not equipped for the required response activities. And the *ad hoc* manner in which response teams are assembled results in poorly established command and control functions.

PROPOSED SOLUTION

What is needed is an emergency response agency that satisfies each of the following conditions:

- has sufficient personnel to respond to multiple and various emergencies,
- can be equipped and trained to do so,
- has an established command and control structure that can be activated immediately, and
- exists on a standby basis, so that taxpayers do not have to fund the personnel year round, but can be mobilized in a hurry.

The authors' proposed solution is to repurpose the National Guard (Guard) from a sort of backup Army/Air Force Reserve to a civil defense, disaster response, and police auxiliary agency. Give up its national defense military mission to the Army and Air Force Reserve, in order to focus on civil defense and emergency response. As opposed to the 11,200 maximum headcounts that FEMA managed to muster, the Guard currently has 443,00 members. They are standby, typically drilling one weekend a month plus two weeks for training in summers, which means that they are typically paid for 60 days a year instead of 24/7/365. They could be equipped very well by swapping their tanks and artillery for bulldozers and backhoes and such. They could receive intense training for their two weeks of summer duty, and ongoing training at their monthly drill meetings. They have a significant disaster recovery, administrative, and medical components already. In fact, response to most emergencies tends to flounder until the states affected mobilize their respective National Guards. Because the Guard is a state-level organization, it would be able to work more closely with local government and law enforcement than would a federal agency. The model could also have auxiliary policing and civil defense functions, borrowing from the Italian Carabinieri and/or French Gendarmerie.

The proposed National Guard would have about 150,000 personnel nationwide, or roughly an average of 3,000 personnel per state (with the understanding that per state numbers would vary widely between, say, Wyoming and California). Three thousand per state would, on average, be about half the maximum number of people estimated by FEMA to be required for a Level 1 response. They would form a highly trained and organized nucleus which would then be supplemented by other state agencies (law enforcement, welfare), local government (law enforcement, public works), private organizations (Red Cross, churches) and Guard units from neighboring states. Having a trained cadre on the ground from day one would be a huge benefit to any response effort.

The remaining roughly 300,000 current Guard personnel would move to the Army and Air Force Reserves, which would also grow from the transfer of roughly 200,000 personnel from active to reserve status (a proposal not discussed herein). As presently constituted, the Army Reserve consists primarily of administrative commands to facilitate mobilization, with the actual fighting forces in the National Guard. This approach would move the fighting forces to the Army and Air Force Reserves, and leave personnel more inclined toward civil defense and disaster response in the National Guard. Units moving from the Guard to the Army Reserve would include:

28th Infantry Division (PA)	2nd Infantry Brigade Combat Team (PA)
29th Infantry Division (VA)	34th Infantry Division (MN)
35th Infantry Division (KS)	36th Infantry Division (TX)
38th Infantry Division (IN)	40th Infantry Division (CA)
42nd Infantry Division (NY)	1 st Battn., 168 th Field Artillery (CO)
1 st Battn., 168 th Field Artillery (NE)	2 nd Battn., 134 th Infantry Rgmt. (Airborne)
101st Signal Battn.	28th Signal Battn. (USA)
1st Battn., 107th Cavalry Rgmt.	2nd Squadron, 107th Cavalry Rgmt.
1st Battn., 145th Armored Rgmt. (USA)	1st Battn., 153rd Infantry Rgmt. (USA)
2nd Battn., 153rd Infantry Rgmt. (USA)	192nd Tank Battn.
223rd Military Intelligence Battn. (USA)	230th Brigade Support Battn.
429th Brigade Support Battn.	250th Expeditionary Military Intel Battn. (USA)

834th Aviation Support Battn.
1st Battn., 120th Field Artillery Rgmt.
1st Battn., 258th Field Artillery (USA)

927th Combat Service Support Battn.
1st Battn., 161st Field Artillery Rgmt. (USA)

Units having utility in both combat and civil defense/emergency response actions would be split into two units, one to Army Reserve and the other to National Guard, including:

101st Engineer Battn.
117th Military Police Battn.
133rd Engineer Battn.
203rd Engineer Battn. (USA)
205th Engineer Battn. (USA)
545th Brigade Engineer Battn.

107th Engineer Battn.
132nd Engineer Battn.
168th Military Police Battn.
204th Engineer Battn. (USA)
700th Support Battn. (USA)
211th Military Police Battn.

Personnel who choose to serve in a Guard capacity rather than a military capacity would be transferred to Guard units, and vice versa. Some capabilities would be maintained by all Guard organizations—administrative and command, medical, civil defense, and auxiliary law enforcement. Other capabilities would vary by region—hurricanes along the Gulf and Atlantic coasts, blizzards in the northeast, tornadoes in the Midwest, earthquakes and wildfires on the west coast, for example. Each area would obtain equipment and conduct training most appropriate for its focus area or areas.

As for Air Guard units in this concept, they would focus on transport of needed equipment and supplies, medical evacuations, and direct support of relief operations. One area where they could add considerable capability with the right equipment is air drops of water to combat wildfires, and specialized units could be created for that mission.

With respect to command relationships, the Guard is part of state government and would remain so. They could still be federalized under specified need conditions. The units transferred to the Army Reserve would come under the Army chain of command.

How It Could Have Worked: COVID-19.

One major problem with the response to COVID-19 was the lack of an emergency response organization of sufficient size and capability to deal with the problem. Centers for Disease Control (CDC), National Institutes for Health (NIH), and Food and Drug Administration (FDA) are regulatory agencies, not response agencies. FEMA is an emergency management agency, not a response agency. None of them have sufficient personnel, or are sufficiently trained, to mount a competent response to the problem. Response was pretty much left up to local health care providers, who were not represented among the decision makers. In the COVID-19 case, the Guard could have been mobilized as soon as there were indications of a major problem. Guard personnel would have been trained regularly in responding to medical emergencies. The Guard could have deployed multiple testing tents in Walmart, Target, and shopping mall parking lots all over the country, and begun testing as soon as tests were available, getting off to a much faster start on

testing and moving testing away from over-crowded hospitals, doctors' offices, and emergency rooms. Then if hospitals started to get over-crowded, the Guard could have erected mobile hospitals to handle the overflow. The Guard would have had the headcount and the capabilities to respond, and proper training would have made them able to approach the problem from an emergency response frame of mind, and would also have observed, documented, and corrected shortages of critical supplies during training evolutions, all of which were missing in the response as it actually proceeded. Having the Guard in charge would also have facilitated the establishment and maintenance of an integrated command authority to direct and coordinate response actions.

Offshore Oil Spills

One thing that Guard units as presently constituted are not well equipped to handle would be offshore oil spills. But a \$1 surcharge on every barrel of oil imported or produced offshore (something well less than 2.5 cents per gallon of gasoline, since a barrel is 42 gallons, and not all oil comes from offshore or overseas) would pay for constructing and maintaining a fleet of oil cleanup ships, similar to the German Bottsand-class oil recovery ships (Global Security), that could have cleaned up a substantial portion of the BP and Exxon Valdez spills. Another approach would be to construct several of the SeaClean (Schellstede, p. 4) “Environmental Battleship” vessels proposed by Herman Schellstede. The USA currently produces about 500 million barrels a year offshore, so the \$1/barrel surcharge would produce roughly \$500 million a year in revenues. Each Bottsand should cost about \$150 million, and each SeaClean should cost about \$450 million, and operating costs should be about \$100 million/year (authors’ estimates). Over a 10-year period the surcharge would generate \$5 billion in revenues. Four SeaCleans would cost \$1.8 billion, and 12 Bottsands would cost \$1.8 billion, plus \$1 billion in operating costs over ten years, for a total of \$4.6 billion. Deploy one SeaClean and 3 Bottsands each in the Houston, New Orleans, Santa Barbara, and Valdez areas, and the USA would be well prepared to deal with another Exxon Valdez or BP blowout. Operating and maintaining these systems would be beyond the capability of the Guard as presently constituted, so the USA should create a Sea Guard with a relationship to the Navy and Coast Guard similar to the relationship that the repurposed National Guard would have to the Army and Air Force.

CONCLUSION

The USA has been caught unprepared for emergencies too often in the recent past. The current system is not working. Placing responsibility for response in the National Guard, and relieving it of some of its military duties, offers the possibility of significantly improved response to future emergencies—be they hurricanes, earthquakes, wildfires, tornadoes, blizzards, oil spills, or pandemics.

REFERENCES

- Cart, Julie (29 July 2021), "California's 2020 Fire Siege: Wildfires by the Numbers," Cal Matters, retrieved 9 February 2023 from <https://calmatters.org/environment/2021/07/california-fires-2020/>.
- Environmental Protection Agency (EPA) (1989), "The Exxon Valdez Oil Spill: A Report to the President," retrieved 15 February 2023 from <https://www.epa.gov/archive/epa/aboutepa/exxon-valdez-oil-spill-report-president-executive-summary.html>.
- "Executive Summary, Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina" (February 15, 2006), U.S. Government Printing Office.
- FEMA, "About Us," retrieved 15 February 2023 from <https://www.fema.gov/about>.
- GlobalSecurity.Org, "Oil Collection Ship 'Bottsand' class (738)," retrieved 15 March 2021, from <https://www.globalsecurity.org/military/world/europe/type-738.htm>.
- Institute for Global Health Sciences (2021), "The United States' Response to COVID-19: A Case Study of the First Year," retrieved 9 February 2023 from https://globalhealthsciences.ucsf.edu/sites/globalhealthsciences.ucsf.edu/files/summary_us_case_study5.pdf.
- Kestin, Sally, and O'Matz, Megan (October 10, 2004), "FEMA Gave \$21 Million in Miami-Dade, Where Storms Were 'Like a Severe Thunderstorm,'" Deerfield Beach, FL, USA: Sun-Sentinel, retrieved 15 March 2021, from <https://www.sun-sentinel.com/news/florida/sfl-fema10oct10-story.html>.
- Kestin, Sally (June 8, 2005), "Homestead Women Sentenced to Probation for Cheating FEMA". Deerfield Beach, FL, USA: Sun-Sentinel, retrieved 15 March 2021, from <https://www.sun-sentinel.com/news/florida/sfl-fema10oct10-story.html>.
- Kestin, Sally (August 10, 2005), "FEMA Paid for at Least 203 Funerals Not Related to 2004 Hurricanes," Deerfield Beach, FL, USA: Sun-Sentinel, retrieved 15 March 2021 from <https://www.sun-sentinel.com/sfl-fema10aug10-story.html>.
- Marine Mammal Commission (2021), "Deepwater Horizon Oil Spill in the Gulf of Mexico," retrieved 9 February 2023 from <https://www.mmc.gov/priority-topics/offshore-energy-development-and-marine-mammals/gulf-of-mexico-deepwater-horizon-oil-spill-and-marine-mammals/>.
- Moore, Rob (19 September 2018) "Maria Exposed Problems With U.S. Disaster Policy," retrieved 25 June 2022 from <https://www.nrdc.org/experts/rob-moore/maria-exposed-problems-us-disaster-policy>.
- National Oceanographic and Atmospheric Administration (NOAA) (17 August 2020) "Damage Assessment, Remediation, and Restoration: Exxon Valdez," retrieved 25 June 2022 at <https://darrp.noaa.gov/oil-spills/exxon-valdez>.
- National Oceanographic and Atmospheric Administration (NOAA) (17 August 2020) "Damage Assessment, Remediation, and Restoration: Deepwater Horizon," retrieved 25 June 2022 at <https://darrp.noaa.gov/oil-spills/deepwater-horizon>.
- National Weather Service, 2021, "Hurricane Andrew," retrieved 9 February 2023 from <https://www.weather.gov/lch/andrew>.
- Schellstede, H.J. & Assoc., Inc., "Oil Spill Cleanup Vessel," accessed 15 March 2021 from <http://schellstede.com/page4.html>.

TOUCHDOWN OR TURNOVER: THE OFFERING DRIVE OF THE PRO FOOTBALL HALL OF FAME

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ABSTRACT

Hall of Fame Resort & Entertainment Company is a resort and entertainment company which went public through a merger with a Special Purpose Acquisition Company or SPAC in July of 2020. It operates sports, entertainment, and media enterprises connected with the Pro Football Hall of Fame in Canton, Ohio. In this paper, I examine their path to becoming a publicly traded company and their operations after their IPO. The goal of the paper is provide insights into the unique characteristics of a SPAC public offering, some typical opportunities and pitfalls with such an offering, and indications of the appropriate circumstances which lead to success for both the business and for investors.

MANUFACTURERS' REPRESENTATIVES: INFLUENCE OF THE PRINCIPAL'S CONDUCT ON THEIR SATISFACTION

Michael W. Pass, Sam Houston State University

ABSTRACT

Manufacturers fulfill the sales function by employing their own salespeople, outsourcing to Manufacturers' Representatives, or by using a combination of these methods. Manufacturers' Representatives fulfill all or part of the sales function on a contract basis and typically do not take possession, or ownership, of products. The current study refers to Manufacturers' Representatives as MRs and the manufacturers they represent are termed Principals. Managing MR satisfaction is important because the boundary-spanning role performed by these valuable intermediaries influences the Principal's visibility with customers and subsequent revenue generation. Therefore, it is important to consider the nature of a Principal's conduct and its relationship to MR satisfaction.

Principal conduct is conceptualized as the MR's perceptions of two dimensions. They are the leadership style of the principal and the quality of support provided for the selling function. Two leadership styles, instrumental leadership and participative leadership, were examined because they are two contrasting styles derived from the strongly supported path-goal theory of leadership. Instrumental leadership exists when the principal interacts primarily through written contracts, clearly defines responsibilities, sets standard procedures to follow, and explains how to complete tasks. In contrast, a principal exhibiting participative leadership encourages interactions by having meetings to discuss issues and making joint decisions about aspects of the sales function. The quality of support was examined as the MR's quality perceptions for planning, product, and promotion categories of sales support.

A survey of executives with Manufacturers' Representative firms was completed using a membership list provided by the Manufacturers' Representatives Educational Research Foundation. From the membership list, a total of 2,000 randomly selected individuals were asked to participate in the research. A total of 328 questionnaires were returned, thus yielding a 16.4% response rate.

Study findings suggest that an MR's perceptions of the quality of sales support and perceptions of the Principal's leadership styles are intertwined, so a Principal must give attention to both dimensions of conduct in order to fully influence MR satisfaction. Principals need to communicate reasons for involving the MR in decisions (participative leadership behavior) and requiring that procedures be followed by the MR (instrumental leadership behavior). To the extent that these behaviors relate to sales support, the MR will more than likely attribute them to the Principal maintaining the quality of support. The findings also indicate the relative influence of different types of sales support on the MR's satisfaction with the Principal.

A CASE STUDY IN THE USEFULNESS OF DISCLOSURES AROUND AUDITOR CHANGES

Brad Reed, Southern Illinois University Edwardsville
Jeff Hemker, Southern Illinois University Edwardsville

ABSTRACT

This case relies on a media story that identified ten OTC companies that were all using the same technique(s) to defraud investors. The ten companies were all controlled by the same group of individuals and the CEOs of the companies rotated from company to company. During the years that the fraud(s) were occurring at these ten companies there were multiple auditor changes at most of the ten different companies. This case provides a breakdown of the auditor changes at these ten companies to determine what proportion of the changes were initiated by the auditor(s) and what proportion of changes were initiated by the companies being audited. This case requires students to research Generally Accepted Auditing Standards to identify the communication requirements between predecessor and successor auditors. Students are required to analyze if the common communications between predecessor and successor auditors would have led to the successor auditor learning about any of the frauds from the predecessor auditor. Additionally, the case requires students to research and explain the Securities and Exchange Committee's requirements for reporting auditor changes on the current report (Form 8-K). Examples of some of the ten companies' 8-K reports are provided in the case. This case is most appropriate for an undergraduate auditing course.

RESOURCE-PRODUCT-MARKET MODELS: A NEW FRAMEWORK FOR STRATEGIC ANALYSIS

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ABSTRACT

The resource-product-market (RPM) model is a new analytical framework in the field of strategic management. The framework provides a means for modelling the strategy of the firm in terms of its resources and capabilities, products and services, and external markets. The framework thereby integrates the resource-based and industry perspectives. Strategic alignment may also be measured from an RPM model. The framework includes a taxonomy of 13 strategic moves which may be used to increase the alignment of resources, products, and markets. RPM modelling is a new and potentially useful tool in the strategic planning toolbox.

INTRODUCTION

Strategy researchers and practitioners utilize a variety of tools and frameworks to analyze firms and formulate strategic moves in the pursuit of competitive advantage. For example, from the external perspective, we use the PESTEL framework to assess environmental trends, five forces analysis to understand industry structure and profitability, and strategic group maps to position the firm in the industry vis-à-vis its competitors (Hatten & Hatten, 1987; Porter, 2008). From the internal perspective, we use the VRIN framework to identify strategically valuable resources and capabilities, value chains to understand where and when the value is created, and activity systems to evaluate strategic fit (Barney, 1991; Porter, 1985; Siggelkow, 2002). What we seem to be lacking are frameworks which combine the internal and external views into an integrated model of firm strategy. While the venerable SWOT analysis may be said to combine internal strengths and weaknesses with external threats and opportunities, it does so with little rigor for modelling and measurement (Bell & Rochford, 2016; Learned et al., 1965).

The purpose of this paper is to address this gap by presenting a new method of modelling firm strategy which balances the resource-based view (RBV) with the industry positioning view (Barney, 1991; Barney et al., 2021; Porter, 1980). The new framework is called the *resource-product-market (RPM) model*. Reed (in press) introduced the approach as a method for modelling and measuring strategic alignment (Hendersen & Venkatraman, 1993; Sabherwal et al., 2019). The framework uses a network structure to identify and align the firm's strategic resources and capabilities with its products and services. The products and services are then aligned with the firm's external target markets. Graph theory is used to mathematically measure the degree of alignment represented by the network. This measure is called the *strategic alignment index*. Once modelled, strategic alternatives which improve the index value may be identified by applying a taxonomy of 13 strategic moves.

The rest of this paper is organized as follows. First, the RPM model and strategic alignment index are derived from the literature on diversification indexes. Next, an example RPM model is provided and analyzed using graph theory. The discussion section describes the generality of the model and how it represents strategy structurally. The paper concludes with a brief summary of the approach as a new framework for strategic analysis.

THEORETICAL BACKGROUND

Researchers of corporate strategy have long used diversification indexes to measure the degree of diversification of the firm. A firm is said to diversify when it chooses to provide more than one type of product or service, thereby participating in more than one industry. Early diversification indexes simply counted the number of product types (Carter, 1977; Gort, 1962). The higher the number, the more diversified the firm. Later indexes grew more sophisticated by considering the size of each product line and the degree to which product lines are related (Caves et al., 1980; Jacquemin & Berry, 1979; Palepu, 1985). Two equal sized products lines would be considered more diversified than one large and one small product line. Two product lines in the automotive industry would be considered less diversified than one automotive and one aircraft product line.

The concentric index (D_C) used industry SIC codes to measure the relatedness of two product lines or industries (Davis & Thomas, 1993; Montgomery & Hariharan, 1991). It is defined as follows:

$$D_C = \sum_{i=1}^{n-1} \sum_{j=i+1}^n P_i P_j d_{ij} \tag{1}$$

where P_i is the firm’s revenue share in four-digit SIC industry i , P_j is the firm’s revenue share in four-digit SIC industry j , and d_{ij} is a weighting factor such that $d_{ij} = 0$ when i and j belong to the same three-digit SIC industry, $d_{ij} = 1$ when i and j belong to different three-digit SIC industries but the same two-digit SIC industry, and $d_{ij} = 2$ when i and j are in different two-digit SIC industries. By multiplying revenue shares together and weighting them by SIC code distance, the D_C index represents the degree of diversification of the firm.

The strategic alignment index was derived by adapting the concentric index to the structure of an RPM model. The strategic alignment index (A_R) is defined as follows:

$$A_R = \sum_{i=1}^m \sum_{j=1}^n \sum_{k=1}^o R_i P_j M_k d_{ijk} \tag{2}$$

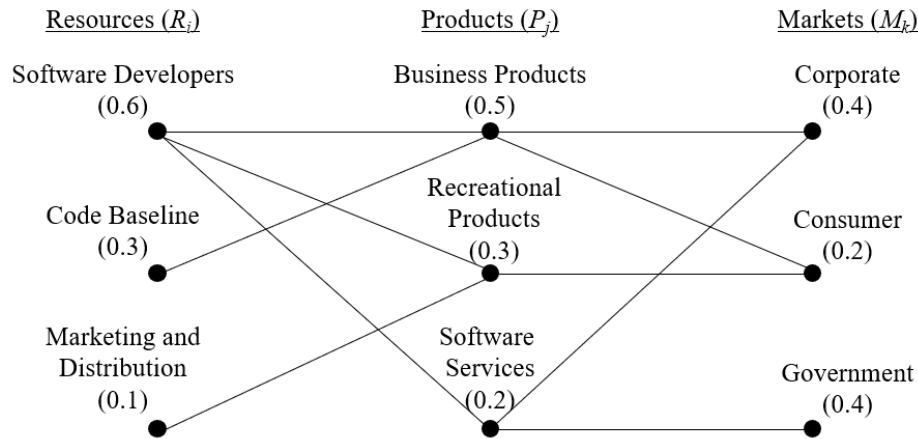
where R_i is the cost share of resource i , P_j is the revenue share of product j , M_k is the market share of market k , and d_{ijk} is a weighting factor such that $d_{ijk} = 1$ when resource i is leveraged by product j which is sold into market k , and $d_{ijk} = 0$ otherwise. By multiplying the resource, product,

and market shares together and weighting them by whether or not they are aligned, A_R measures the degree of strategic alignment of the firm.

RPM MODEL

Figure 1 illustrates an RPM model for a commercial software company. Three resources, products, and markets (nodes) are shown with lines (edges) depicting their alignment. The left-hand side of the model represents the resource-based view while the right-hand side represents the industry view. These are essentially two sides of the same coin (Wernerfelt, 1984). Software Developers are the most expensive resource, representing 60% of the firm’s costs, which are leveraged by all three product lines. The Code Baseline is used only by Business Products, and Marketing and Distribution is required for Recreational Products. The Business Products generate 50% of the company’s revenue and are sold into Corporate and Consumer markets. The Recreational Products are sold only to Consumers. Software Services represent the provision of software staffing to Corporate entities and the federal Government, which are the two largest market segments accounting for 80% of the total market addressed by the company. Following Equation 2, $A_R = .408$ for this firm.

Figure 1. RPM Model of a Software Company



Applying graph theory, the properties of the strategic alignment index are attractive (Chartrand & Zhang, 2012). A fully connected graph utilizing all resources in all products, and selling all products in all markets, results in $A_R = 1.0$. A fully disconnected graph, while not a very practical business, results in $A_R = 0$. The range of the index is continuous from 0 to 1.0. Essentially, the index uses the share percentages as weighting factors to compute and sum the multiplicative values of all paths through the graph. The highest weighted path in Figure 1 connects Software Developers to Business Products to Corporate, contributing $0.6 \times 0.5 \times 0.4 = 0.12$ to the index. This high-value resource, product, and market are well aligned. The sum value of all the paths represents the degree of alignment across the entire set of resources, products, and markets. The

index may therefore be used to measure strategic alignment and to identify alternatives for improvement.

Analysis of the software company model shows that Marketing and Distribution is only contributing $0.1 \times 0.3 \times 0.2 = 0.006$ to the index. One might ask, why align this resource with just one small product line? The asset is not well leveraged. By removing the resource (i.e., discontinuing or outsourcing it) and adjusting the remaining cost and revenue shares accordingly, A_R actually increases to .447. However, while improving alignment, this alternative may impact the Recreational Products revenue which may be undesirable. Another alternative would be to enhance the resource so that it is more widely used. Applying Marketing and Distribution to Business Products increases A_R from .408 to .438. A third alternative would be to sell Business Products to the Government, increasing A_R to .588.

Given the structure of the RPM model, consisting of three types of nodes (resource, product, market), two types of edges (resource to product, product to market), and three types of shares (resource shares, product shares, market shares), there are a total of 13 discrete changes that can be made to a model. These are listed in Table 1. Each change is called a *strategic move*. A *strategic alternative* is defined as a combination of strategic moves. For example, establishing a new market may involve four moves: Develop Product, Deploy Resource, Enter Market, and Position Product. A strategic alternative represents a new potential configuration of the firm’s resources, product lines, and markets.

Table 1. Taxonomy of RPM Model Strategic Moves			
Strategic Move	Description	RPM Model Change	
1 Deploy Resource	Start using resource in product line	Add edge between resource and product nodes	
2 Withdraw Resource	Stop using resource in product line	Delete edge between resource and product nodes	
3 Acquire Resource	Create new resource	Add resource node	
4 Divest Resource	Eliminate resource	Delete resource node	
5 Adjust Resource Mix	Modify resource investments	Change share values of resource nodes	
6 Position Product	Start selling product line into market	Add edge between product and market nodes	
7 Recall Product	Stop selling product line into market	Delete edge between product and market nodes	
8 Develop Product	Create new product line	Add product node	
9 Discontinue Product	Eliminate product line	Delete product node	
10 Adjust Product Mix	Modify product line sales	Change share values of product nodes	
11 Enter Market	Address new market	Add market node	
12 Exit Market	Eliminate market	Delete market node	
13 Adjust Market Mix	Modify addressable market sizes	Change share values of market nodes	

DISCUSSION

The RPM model is general in that it does not prescribe the categories to be used for resources, products, or markets. Any relevant typologies for the industry or firm being analyzed may be used. Resources could be individuals, departments, equipment, or intellectual property.

Markets could be customer profiles, geographical regions, or government agencies. The share measures used to quantify resources, products, and markets are also tailorable. If we are more interested in product line profits than revenues, we could substitute profit shares for revenue shares (P_j). If we are more interested in the growth rates of markets than the sizes of markets, we could substitute growth shares for size shares (M_k). In effect, the RPM model is operationalized for a given application by selecting the node categories and share measures to be aligned.

It may also be observed that the RPM model represents strategy in a structural manner which is generally lower level than traditional, broad conceptualizations of strategy. For example, Porter's (1980) "focused cost leadership" strategy describes the offering of a narrow set of products at lower cost than competitors. This conceptual strategy would be evident in an RPM model by a small number of product lines drawing upon low-cost resources. Porter's "broad differentiation" strategy would appear as a wide range of product lines leveraging R&D and other high-cost resources. Miles et al.'s (1978) "prospector" strategy would be seen in an RPM model as several markets targeted by small pilot product lines with small resource investments, while the "defender" strategy would appear as fewer markets tied to large product lines defended by large resource investments. These high-level strategies are not represented directly in an RPM model but are manifested indirectly in the structure of the model.

CONCLUSION

Resource-product-market (RPM) models represent a new and intuitive method for modelling firm strategy which balances the resource-based view and the industry positioning view. The degree of alignment within an RPM model can be measured using the strategic alignment index. By modelling the current state of the firm, future strategic alternatives can be identified, measured, and compared. Strategic moves may then be planned to implement the selected alternative(s). It is hoped that the RPM model becomes adopted by strategy researchers and practitioners as a new and useful analytical framework for strategic management.

REFERENCES

- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. B., Ketchen, D. J. Jr., & Wright, M. (2021). Bold voices and new opportunities: an expanded research agenda for the resource-based view. *Journal of Management*, 47(7), 1677-1683.
- Bell, G. G., & Rochford, L. (2016). Rediscovering SWOT's integrative nature: a new understanding of an old framework. *International Journal of Management Education*, 14, 310-326.
- Carter, J. R. (1977). In search of synergy: a structure-performance test. *The Review of Economics and Statistics*, 59, 279-289.
- Caves, R. E., Porter, M. E., Spence, A. M., & Scott, J. T. (1980). *Competition in the Open Economy*. Harvard University Press.
- Chartrand, G., & Zhang, P. (2012). *A First Course in Graph Theory*. Dover Publications.
- Davis, R., & Thomas, L. G. (1993). Direct estimation of synergy: a new approach to the diversity-performance debate. *Management Science*, 39(11), 1334-1346.
- Gort, M. (1962). *Diversification and Integration in American Industry*. National Bureau of Economic Research, Princeton University Press.

- Hatten, K. J., & Hatten, M. L. (1987). Strategic groups, asymmetrical mobility barriers and contestability. *Strategic Management Journal*, 8(4), 329-342.
- Henderson J. C., & Venkatraman, N. (1993). Strategic alignment: leveraging information technology for transforming organizations. *IBM Systems Journal*, 32(1), 472-484.
- Jacquemin, A. P., & Berry, C. H. (1979). Entropy measure of diversification and corporate growth. *Journal of Industrial Economics*, 27(4), 359-369.
- Learned, E., Christensen, C. R., Andrews, K. R., & Guth, W. D. (1965). *Business Policy: Text and Cases*. Irwin.
- Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. Jr. (1978). Organizational strategy, structure, and process. *Academy of Management Review*, 3, 546-562.
- Montgomery, C. A., & Hariharan, S. (1991). Diversified expansion by large established firms. *Journal of Economic Behavior and Organization*, 15(1), 71-89.
- Palepu, K. (1985). Diversification strategy, profit performance, and the entropy measure of diversification. *Strategic Management Journal*, 6(3), 239-255.
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press.
- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press.
- Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard Business Review*, Jan 2008, 5-40.
- Reed, J. H. (in press). Modelling and measuring strategic alignment. *Journal of Strategy and Management*.
- Sabherwal, R., Sabherwal, S., Havakhor, T., & Steelman, Z. (2019). How does strategic alignment affect firm performance? *MIS Quarterly*, 43(2), 453-474.
- Siggelkow, N. (2002). Evolution toward fit. *Administrative Science Quarterly*, 47, 125-159.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5, 171-180.

CAN THE VOLATILITY INDEX (VIX) SERVE AS A HEDGE AGAINST A BEAR MARKET AND BE A GOOD INDICATOR TO PREDICT THE END OF A BEAR MARKET OR THE START OF A BULL MARKET?

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ABSTRACT

This study examines the reliability of the Volatility Index (VIX) to predict the end of a bear market or the start of the bull market. The VIX and the S&P 500 have a negative correlation and it is important to understand these two variables since they are the objects of the study. The S&P 500 is the most important index listed on the American stock market and is made up of the 500 companies with the largest capitalization in the United States. On the other hand, the VIX is a real-time index that measures the volatility of the market. Volatility, or the rate at which prices vary, is frequently used to evaluate market sentiment, particularly the level of fear among market participants. Analysts and investors are eager to find reasons to determine the bottom of the market. While it is true that there can be a large number of indicators to predict the end of a bear market probabilistically speaking, the inverse correlation that the VIX and the S&P 500 have can give analysts a lot of information about the level of investor panic. And that word is key, because market bottoms are usually formed in the middle of panic. In this study we will obtain a hypothesis about whether certain levels of the VIX can mean a probable end of a bear market. And this word, probable, is very important, since we are always talking about probabilities. If there is one thing we know about financial markets is that there is nothing for sure. To analyze the hypotheses of the study, we have used the trading zone of 45-55 for the VIX since it has been a historically important range of capitulation. This study found that 60% of times that the VIX has entered trading in the 45-55 range, the S&P 500 has generated a new low and from then on, new lows have not been recorded again that would confirm the continuity of a bear market. The findings of this study conclude that we cannot state with a high probability that the VIX is a good indicator to predict the end of a bear market but we can conclude that an investor should seriously consider buying the S&P 500 every time the VIX hits the 45-55 range.

INTRODUCTION

How reliable is the volatility index (VIX) to predict future market movements? This index is one of the most popular among derivatives market traders and this study aims to find out how useful it can be in predicting the end of a bear market or the beginning of a bull market. There is a saying that goes: "history does not repeat itself but it often rhymes". The behavior of the market

at a specific time will never be the same at another time. There are a large number of factors that always make a difference: price, number of buyers and sellers, volume, and other circumstances outside of the market.

That being said, it seems that throughout history, financial markets have behaved in cycles that seem to rhyme with each other. This study does not intend to analyze the behavior of the market throughout history, but rather to evaluate the reliability of the Volatility Index to predict the end of a bear market. By this last term we understand the formation of a bottom that changes the market trend and does not continue to produce lower lows. The current moment that we are living in the financial markets emphasizes the importance of the Volatility Index (VIX). Apart from having many derivatives traders trading this index, most of the big analysts are continually paying close attention to the VIX in order to draw their own conclusions about the market (in this study we will call it S&P 500).

LITERATURE REVIEW

The stock market is the result of the set of buyers and sellers, who are the participants. To understand the relationship between the VIX and the S&P 500, one must understand the theories that exist about bear and bull markets, and about the psychology of market participants. The importance of the VIX in financial markets and, specifically in this study, lies in understanding the level of panic and risk perceived by investors. This is why the VIX plays such an important role in the current bear market.

The Cboe Volatility Index (VIX) is a real-time index that indicates the market's expectations for the relative strength of the S&P 500 Index's near-term price fluctuations (SPX). It generates a 30-day forward estimate of volatility because it is generated from the pricing of SPX index options with near-term expiration dates. Volatility, or the rate at which prices vary, is frequently used to evaluate market sentiment, particularly the level of fear among market participants. The VIX seeks to quantify the amplitude of the S&P 500 price changes (i.e., its volatility). The greater the price fluctuations in the index, the greater the volatility, and vice versa.

Theoretically, we know that the comparison between the VIX Index and movement in the S&P 500 Index is close, about an 80% correlation, which confirms the reality of the two generally tending to move in opposite directions most of the time. In addition, the correlation generally tends to remain relatively stable throughout different market conditions.

METHODOLOGY

To study the reliability of the VIX as an indicator to predict the end of bear markets, the following two variables were used: the S&P 500 index and the VIX. To answer the question of whether the VIX can serve as a hedge against bear markets for investors, I used a sample of 5 periods in history in which I analyzed these two variables. To answer the question of whether the VIX is a good indicator for predicting the end of bear markets, a sample of seven periods was used in which I analyzed the two variables and their correlation. The data for the VIX and S&P 500 was

obtained through “screener.finance.yahoo.com”. The holding period returns for the VIX and the S&P 500 were calculated by using the formula:

$$\text{(Current day close price - Previous day close price) / Previous day close price}$$

The average returns for each variable were calculated by adding the returns of each period and then dividing that number by the number of periods.

QUANTITATIVE TESTS AND RESULTS

For the first part of the study to test if the Volatility Index can serve as a hedge against a bear market I tested the following six periods and I got the following returns. For the period that goes from July 13th 1998 to October 19th 1998, the S&P 500 showed a return of -22.52% and the VIX had a return of +78.98%. For the period that goes from March 20th 2000 to October 7th 2002, the S&P 500 showed a negative return of -50.58% while the VIX had a positive return of 109.61%. For the period that goes from October 8th 2007 to March 9th of 2009, the S&P dropped -57.55% and the VIX appreciated a +217.62%. For the fourth period, from May 2nd 2011 to October 3rd 2011, the S&P had a negative return of -21.54% while the VIX had a positive return of 210.47%. In the Covid-19 stock market crash that went from February 18th 2020 to March 23rd 2020, the S&P 500 dropped -35.49% and the VIX went up 439.32%.

For the second part of the study I used the correlation between the VIX and S&P 500 for eight dates in which the VIX hit the range that we are measuring (45-55) and I got the following results. On October 5th 1998, the VIX hit 49.59 and that same week the S&P 500 hit a new low at 922.82 and it stopped producing lower lows (bear market ended). Also that day was the start of a bull market that lasted until September of 2000. The return for the S&P 500 for the next two years since the VIX hit the range 45-55 was 47.82%. On July 22nd of 2002 the VIX hit 48.48 and the S&P 500 bottomed at 776.64 and from there it didn't hit lower lows. We had a lateral market until May of 2003 and from there we had one of the biggest bull markets that lasted until October 2007. The return for the next two years since the VIX hit the studied range was 45.49%. On October 6th of 2008 the VIX hit 45.91 and the S&P 500 hit 839.74. This did not mean the end of the bear market since it continued to produce lower lows. The return from that day for the next two years was 34.74%. For added information, the VIX hit 89.50 that month but the bottom of the bear market was not created until March 9th 2009. On May 17th 2010 the VIX hit 48.26. At this time we were not having a bear market because the stock market did not drop 20% or more from its all time high. Still, the return for the next two years since the VIX hit the range of 45-55 was 24.40%. On October 3rd of 2011 the VIX hit 47.17. That same week, that short bear market ended with the S&P 500 hitting a low of 1,078.11 and a bull market started, which lasted more than 5 years. The calculated return for the next two years was 56.40%. On August 24th of 2015 the VIX hit 53.57 and at that time we were not in a bear market since the S&P 500 hadn't dropped more than 20%. The return for the next two years since the VIX hit 53.57 was 30%. On March 2nd 2020 the VIX hit 54.31. This didn't signal an end of the market crash: The VIX continued to go up and the S&P 500 generated lower lows in that stock market crash produced by the Covid-19. Still, the return for the next two years since VIX hit 54.31 was 40.81%.

CONCLUSION

These two studies have managed to analyze two variables (VIX and S&P 500) and how they are related to each other, studying their correlation and, specifically, the behavior of the market in relation to volatility. After testing six different periods in which the S&P 500 had corrections greater than -20%, we can conclude that buying the VIX in periods of market correction can be a positive move. In the six periods in which the S&P 500 fell more than 20%, the volatility index (VIX) appreciated in each of these periods in a very significant way. Depending on the panic of investors and the speed of the market fall, the VIX rose more or less strongly but the average of the six periods was +176%. These results obtained in the study demonstrate that the VIX can serve as a hedge against a bear market.

For the second part of the study, we analyzed the behavior of the market (S&P 500) when the VIX traded in a range that we consider important since it has been a very important resistance in many periods of history. The VIX range that I have analyzed is between 45-55 and I have tried to test if this area of the VIX can indicate the end of a bear market. To see if it can be a good indicator, I have also obtained the returns of the S&P 500 during the two following years after the VIX has reached the range under study. I have analyzed seven periods in which the right circumstances were present. Of the five periods in which the S&P 500 was in a bear market, three of them ended their bear market when the VIX hit the 45-55 range. In other words, 60% of the times that the VIX has entered trading in the 45-55 range, the S&P 500 has generated a new low and from then on, new lows have not been recorded again that would confirm the continuity of a bear market. This tells us that the range we are studying is a relevant zone but it does not give us such a clear probability when it comes to predicting whether the bear market has ended. On the other hand, the returns of the S&P 500 over the next two years after the VIX entered the 45-55 range have always been positive. This means that if an investor had bought the S&P 500 every time the VIX entered the 45-55 range, he would have obtained a positive return in the medium term (two years). The average return of the S&P 500 in these seven calculated periods has been 39.95%. With these results we cannot conclude with a high probability that the VIX is a good indicator to predict the end of a bear market but we can conclude that an investor should seriously consider buying the S&P 500 every time the VIX hits the 45-55 range.

REFERENCES

- Inside Volatility Trading: Breaking Down the VIX Index and its Correlation to the S&P 500 Index. Cboe Global Markets. (n.d.). Retrieved February 15, 2023, from <https://www.cboe.com/insights/posts/inside-volatility-trading-breaking-down-the-vix-index-and-its-correlation-to-the-s-p-500-index/>
- Yahoo! (2023, February 15). S&P 500 (^GSPC) charts, Data & News. Yahoo! Finance. Retrieved February 15, 2023, from <https://finance.yahoo.com/quote/%5EGSPC?p=%5EGSPC>
- Kuepper, J. (2022, December 19). Cboe volatility index (VIX): What does it measure in investing? Investopedia. Retrieved February 15, 2023, from <https://www.investopedia.com/terms/v/vix.asp>
- Fidelity International. (n.d.). Retrieved February 15, 2023, from <https://www.fidelity.com.sg/beginners/what-is-volatility/volatility-index>
- What is the vix volatility index? why is it important? - thestreet. (n.d.). Retrieved February 15, 2023, from <https://www.thestreet.com/dictionary/v/vix>

IMPACT ON RETURNS AFTER IFRS ADOPTION IN EMERGING STOCK MARKETS

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ABSTRACT

International financial reporting standards (IFRS) adoption has been accepted by most of the countries around the world. In this study we investigated the impact of the adoption of the IFRS on returns of some select emerging markets. Emerging markets are generally characterized by poor quality of disclosures resulting in over pricing of securities. Since Most of the emerging stock markets are inefficient, it would be interesting to test whether the International Financial Reporting Standards (IFRS) has a positive impact on returns on selected securities to validate the added value of the information created by the IFRS. Thus, the purpose of this study is to investigate the possible impact of the adoption of IFRS on market efficiency in the emerging stock market. IFRS adoption is being utilized to understand the enhancements of informational contents and transparency of Financial Statements. The study uses the autocorrelation test and unit root tests on the stock market to test the weak form of efficiency in emerging markets. Additionally, we studied the impact of the IFRS adoption on the emerging equity markets performance through conditional volatility.

Keywords: Market efficiency, IFRS, Autocorrelation Test Conditional Volatility, Emerging Stock Markets

EXAMINING ESG AS A PERFORMANCE- ENHANCEMENT FACTOR FOR MUTUAL FUNDS DURING COVID-19. A DATA ENVELOPMENT ANALYSIS

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ABSTRACT

Empirical evidence suggests that Environmental (E), Social (S), and Governance (G) criteria have a significant effect on financial performance. Many studies provide evidence for the crucial role of socially responsible investments during periods of crisis. This study contributes to the literature on the performance implications of sustainable investments, investigating the effect of ESG score on the performance of mutual funds with ESG criteria during COVID-19. For the purposes of our research, we first apply the Data Envelopment Analysis (DEA) to estimate the efficiency scores of mutual funds and second, we analyze the mutual fund efficiency with respect to both the ESG quartiles and the type of mutual fund. The dataset contains 9,864 worldwide mutual funds with available ESG scores during the pandemic-induced crisis. To analyze the performance of mutual funds a two-stage DEA is applied: (i) in the first stage of the analysis, the efficiency scores are estimated using two inputs (beta and standard deviation of mutual fund return) and three outputs (Sharpe ratio, Treynor Ratio and Information Ratio); (ii) in the second stage of the analysis, the efficiency scores of mutual funds are analyzed using the ESG quartiles as well as the mutual fund status (equity fund / non-equity fund).

Two DEA models are applied and compared based on the resulting efficiency scores. To enhance the robustness of our results, two types of DEA models are employed: (i) the DEA Portfolio Index (DPEI) for mutual fund performance; and (ii) the Range Direction Measure (RDM) DEA due to the presence of negative values in inputs and outputs. Efficiency scores are calculated on both approaches and second stage analyses are conducted based on hypothesis testing. The results reveal that: (i) non-equity mutual funds present significantly higher performance compared to the performance of equity mutual funds; (ii) mutual funds with high ESG scores are associated with significantly higher performance compared to those with low to medium ESG scores; (iii) funds with high ESG scores experience higher performance irrespective of the mutual fund type; and (iv) efficiency scores derived from the RDM DEA are significantly higher than those derived from the DPEI model.

Overall, this study suggests that, amid the COVID-19 pandemic, mutual funds with high ESG scores performed better compared to more conventional funds regardless of the mutual fund type. The results imply that investing in mutual funds with greater ESG scores may constitute a

more profitable investment strategy during periods of high downward risks related to environmental, social, and governance concerns such as those that existed amid the COVID-19 pandemic. The results provide several implications for investors, market participants and fund managers suggesting that investing in mutual funds with high ESG scores constitutes an optimal investment choice amid the COVID-19 pandemic.

Keywords: mutual funds; financial performance; Data Envelopment Analysis; ESG; socially responsible investments.

JEL Classification: C61, C67, G11, G15, Q56



The research project was supported by the Hellenic Foundation for Research and Innovation (H.F.R.I.) under the 4th Call for Action “Science and Society”- Emblematic Action – “Interventions to address the economic and social effects of the COVID-19 pandemic” (Project Number: 5098).

INTERNAL CORPORATE SOCIAL RESPONSIBILITY: DETERMINANT OF THE ORGANIZATIONAL COMMITMENT OF EMPLOYEES IN THE PHILIPPINE PRIVATE BASIC EDUCATION INDUSTRY

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ABSTRACT

The interest of the study was to conduct an inquiry into the behavioral patterns involved in the relatively high turnover phenomenon of employees, particularly teachers, in the private basic education - teachers' annual resignation. Two constructs were considered in the inquiry process. One is a relatively new concept in the academic literature (Sanchez-Hernandez et al., 2021), that is, Internal Corporate Social Responsibility (Internal CSR). And the other is organizational commitment, an antecedent of an individual's decision to leave or stay in the organization (Bluedorn, 1982; Chacon et al., 2007; Lee & Mowday, 1987; Perrachione et al., 2008; Sirin & Sirin, 2013). The study has explored Internal Corporate Social Responsibility (Internal CSR) as a determinant of affective and normative organizational commitment of the teachers in 17 educational institutions that are non-stock, non-profit, private basic education (Catholic) schools located in the different regions of the Philippines. The internal CSR was regarded through its four factors identified empirically by Mory et al. (2017) such as 'CSR enabled Organizational Transparency,' 'CSR enabled Organizational Justice,' 'CSR related Organizational Ethical Culture,' and 'CSR related Organizational Engagement.' The study utilized the survey design of quantitative method having descriptive, correlational, and multiple regression as statistical tools to process and analyze the data of 448 completed responses. The findings indicated that CSR enabled Organizational Transparency, 'CSR enabled Organizational Justice,' and 'CSR related Organizational Engagement' are determinants of affective and normative organizational commitment. They have a positive and significant impact on affective and normative organizational commitment. The findings, moreover, showed that the strength of the relationship between affective commitment and internal CSR is higher than the strength of the relationship between normative and internal CSR. This indicates that Internal CSR is a rather emotional issue for employees and should therefore be implemented with an according orientation. The study recommended that private basic education schools should approach Internal CSR especially by catering to employees' emotions. The study further recommended that the same study be conducted in other educational institutions in the country to get an insight into how management attends to their internal practices on employees' well-being and engagement.

EMERGING FUTURE OF TRUCKING INDUSTRY WITH AUTOMATION: INTEGRATING HUMAN DRIVING CAPABILITIES AND ARTIFICIAL INTELLIGENCE

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ABSTRACT

The trucking industry occupies a unique position in the U.S. economy. About 71% of the country's cargo is transported by truck, and almost all tangible goods are transported by truck at some point in the supply chain. Despite its importance to the economy, the trucking industry has faced several challenges. The combination of labor shortages, increased competition, deregulation, fuel prices, and the constant search to reduce costs and improve efficiency have forced the trucking industry to turn to technological solutions to stay competitive. Companies are turning to innovative automated transportation technology and artificial intelligence (AI) to transform the transportation industry's costs, organization, and efficiency. Logistics companies, for example, have started to adopt automated trucks that combine AI and human capabilities at different levels to compensate for labor shortages and improve road safety mainly.

The options currently offered by automated driving systems are extensive. According to the Society of Automotive Engineers (SAE), there are currently six automation stages in which the human driver gradually transfers responsibility to the vehicle to the point of not needing a human on board. This current study investigates the trucking industry with automation in mind to better understand the emerging industry and the potential options it provides. Additionally, this paper presents a model of technology-based trucking options involving automation, AI, and driver components. This proposed model includes the traditional trucking options, as well as options that are pending. In addition, it includes some options that are likely to be available in the future. This study ends with managerial implications and future avenues of research.

BLOCKCHAIN TECHNOLOGY AND WEB3

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ABSTRACT

The Internet and the Worldwide Web has become an integral part of modern life. The first version of the Web used the Internet to display information about anything posted on the Internet. Companies like Google enabled us to easily search the contents of the Web, and made it easy to disseminate and consume information. The next generation of the Web enabled users to not only view information, but also conduct transactions like buying and selling things and services, and started the trend of e-Commerce. This was the start of the Big-Tech era, when companies like Google, Amazon, Microsoft and Meta Platforms (formerly Facebook) dominated the Internet. Many people took issue with the fact that these Big-Tech companies took ownership of the data created by the users of these platforms – and became extremely powerful, profitable and intrusive mega entities. Big Tech knew a lot about its users and, hence potentially had control over the users. User data was used for influencing decisions, targeted advertising, and upselling and cross selling of goods/services. Concerns about these powerful and intrusive companies has led to the beginning of Web3.

Web3 builds on the notion of a decentralized worldwide web in which users do not have to trust third party entities or give them control of user data. Blockchain technology provides the means by which Web3 goals can be achieved. Blockchain has been the foundation of cryptocurrencies for many years, and now has the potential to play a crucial role in the buildout of the Web3. The Blockchain is a digital database or a ledger that contains transactional information, that can be simultaneously used and shared within a large decentralized computer network. The Blockchain can be public on the Internet, or be available on an organizations private network. It can specify verifiable ownership of digital assets, or physical assets that are represented digitally, and also allows transferring ownership in a transparent, trusted, and provable way.

The idea of building trust around information without third party intermediaries like banks, legal companies, and the Big-Tech companies makes the Blockchain truly revolutionary. Standard databases store information in tables, whereas the Blockchain stores data in “blocks of data,” that are then strung together, creating a structure that makes an irreversible (cannot be tampered or altered) timeline of the data. As new information comes in, a new block is created. In summary, the goal of Blockchain is to allow digital information to be recorded and distributed, but not alterable. This makes the Blockchains act as immutable digital ledgers, or records of transactions that cannot be altered, deleted, or destroyed. It is easy to see how the Blockchain can be a very suitable technological solution for Web3.

This research is a study of Web3, its applications. and the role of the Blockchain technology in making Web3 a transformative force for businesses and society. This paper will be prove beneficial to business managers, entrepreneurs, financial institutions and their customers, as it

will introduce them to the various ways in which the next generation of the Web might disrupt and transform the way things were done traditionally. Academic researchers will gain a good understanding of the great potential of Web3 and the Blockchain, and will be able to prepare their students for the next generation workforce.

DIGITAL MULTINATIONALS FOR ENGAGING FDI IN THE DIGITAL ECONOMY

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ABSTRACT

The digital economy increasingly encompasses our lives and the pace of change has simply expanded over the past decade. Digitalization is present in most facets of life, to include health, educational, political and economic. An increasing number of countries engage the digital space for their economic activity. The authors examine foreign direct investment's part in influencing the digital economic space. Digital firms tend to be more influential in attracting FDI. The influence of digitalization on FDI is apparent in the increasing digital economy. Associated dynamics include enhanced ways of conducting business via the increased use of technology and digital platforms as a critical part of the business model. A key element to participation in the digital economy for firms are the lower barriers to entry in terms of start-up costs. A synergy has begun to take hold in terms of digital economic development. In light of the foreign revenue ratio to FDI assets is increasing, governments should maintain a balanced focus on strategic more than more immediate tactical pursuits. National policies should align with their competitive advantage including business ecosystems, technological capabilities, and human resources.

Keywords: digitalization, multinational enterprises, foreign direct investments

ANALYZING COMMUNITY REPRESENTATION WITH TWITTER CONTENT

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ABSTRACT

With the rise of digital communication and social media usage, organizations seek both economic and social visibility as they interact with their consumers via various media (Capriotti, 2009). Behm-Morawitz and Ortiz (2013) encourage the study of racial and ethnic representation in online spaces to explore virtual application of social norms. Since more than 70% of Americans of all races and ethnicities regularly engage in social media usage (Pew Research, 2021), racial and ethnic representation via those platforms is highly visible to consumers.

Popular in the U.S. since the early 1900's, Chambers of Commerce offer paid memberships to businesses in a given area and exist to support the interests of their member organizations. Some of the main benefits for member businesses include networking opportunities, increased publicity, advocacy in decision-making, and a voice in shaping policies that affect local businesses (Clouse et al., 2022; Johnson, 2021). Research shows that chamber membership gives business owners a feeling of instant credibility and evokes trustworthiness from their customers (Noel & Luckett, 2014). In recent years, chambers have started to introduce formal efforts toward capitalizing on diversity and inclusion, with many popular programs focused on women-owned and racial minority-owned businesses, and attracting membership of young professionals in business. Since chambers are led independently, these efforts vary in both aim and scope in different areas (Association of Chamber of Commerce Executives, 2022)

This project is a pre-cursor to several other projects in this research stream. We explore methods of qualitative data collection and coding to advance the literature by highlighting opportunities for organizations to align their visibility with their efforts to attract and maintain a diverse audience of employees and customers. The first in this stream of related projects aims to analyze demographic representation projected by the Chambers of Commerce for the 100 most populated cities in the United States, using photos posted on Twitter in 2021. The researchers used a hybrid process of inductive and deductive thematic analysis to capture emerging themes of interest (Fereday & Muir-Cochrane, 2006). Race of the individuals depicted in the images under review was the primary theory-driven data point in the initial review, and we worked to identify additional data-driven themes of interest during this analysis that will inform future work.

The purpose of this study is to highlight opportunities for organizations to align their visibility with their efforts to maintain a diverse audience of employees and customers.

Our research questions include:

- *Were photos posted on Twitter by Chambers of Commerce located in the United States' 100 most populated cities in 2021 representative of the demographic characteristics of their geographic areas?*
- *Are significant differences present in percentages of demographic representation in photos posted on Twitter by Chambers of Commerce in 2021 for organizations that have proclaimed specifically to be committed to formal efforts in improving diversity, equity, and inclusion in the local business community?*

CURRICULUM VITA: HIGH IMPACT LEARNING THAT LOOKS GOOD ON EVERYONE’S RESUME

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ABSTRACT

This paper describes a tax class’s involvement with the IRS Voluntary Income Tax Assistance program. The paper first discusses what Curriculum VITA is and how it meets high impact learning goals and benefits students, the professor, the business college, and the community. The paper then discusses the development and evolution of Curriculum VITA over thirteen years and offers comments and examples as to how other business courses can provide similar high impact learning experiences.

INTRODUCTION

This paper describes a tax class’s involvement with the IRS Voluntary Income Tax Assistance (VITA) program. The paper first discusses what Curriculum VITA (CV) is and how it meets high impact learning goals and benefits students, the professor, the business college, and the community. The paper then discusses the development and evolution of CV over thirteen years and offers comments and examples as to how other business courses can provide similar high impact learning experiences.

CV AND HIGH IMPACT LEARNING

Under CV, tax students are required to participate in the IRS VITA program, which counts for over 50% of the points offered in the course. Student participation includes successfully studying for and passing the IRS VITA online training modules for both intake and quality review for basic and intermediate level tax preparation. Students use the IRS-customized TaxSlayer Practice Lab software to complete several practice returns as homework assignments and take a course exam before being given access to TaxSlayer Pro to prepare actual returns for clients. Once qualified, students meet with clients and then complete their federal, state, and school district income tax returns.

These CV activities meet any number of high impact learning goals set forth by various authorities. For example, they help meet the University mission of preparing “students for...service to their communities” and integrating “practice with theory” (Ohio Northern University, n.d.) and the College mission of engaging “students in high-impact learning experiences to develop professional leaders with an ethical, analytical, and global mindset.” (College of Business, n.d.). The CV activities also meet each of the levels of learning set forth in Bloom’s taxonomy of educational achievement (knowledge, comprehension, application, analysis,

synthesis, and evaluation) (Bloom, 1956) along with Fink's taxonomy of significant learning (foundational knowledge, application, integration, human dimension, caring, and learning how to learn) (Fink, 2014).

Not only do these CV activities meet institutional missions and pedagogical goals, but they also meet business accreditation standards, such as those set forth by the Association to Advance Collegiate Schools of Business (AACSB). AACSB requires business schools to continuously improve the quality of education with respect to engagement, innovation, and impact. Schools need to provide experiential learning opportunities that can increase engagement between students, faculty, and professionals. Schools also should have an innovative approach to curriculum that demonstrates currency, creativity, and forward thinking. Finally, schools should have elements within coursework that promote a positive social impact (AACSB, 2022). CV is an example as to how a course can help meet those accreditation requirements, including the requirement of impact on various stakeholders such as students, faculty, college, and community.

CV BENEFIT TO STAKEHOLDERS

CV provides many benefits to students. The experiential learning that students obtain from participating in CV yield greater benefit than simply reading a textbook. CV allows students to act as business professionals and prepare tax returns for actual clients. In addition to preparing returns, they are learning what it is like to be in a professional and pressurized atmosphere and having to use their own problem-solving skills when an issue arises instead of asking for help with every minor problem.

The real-life component of VITA helps students understand the importance of paying attention to detail. They can learn this while being in an educational environment where their work gets reviewed twice instead of on the job where one mistake could get them fired. Students can apply their tax knowledge as they are learning it in class which is a unique opportunity that many otherwise would not have until they enter the workforce. VITA provides a platform for students to not only utilize practical tax skills, but students also gain interpersonal skills from interacting with clients.

Through CV, students engage in service learning by providing a needed, valuable service to members of the community while also learning themselves and becoming better all-around business professionals. Students also learn how rewarding giving back to their community can be. For example, accounting graduate David Gorman said, "Participating in this program has opened my eyes to how much tax laws mean to individuals, and it has helped me determine that I want to pursue a career path in this area and eventually work for the IRS." Another accounting graduate Megan Kerr expressed her fondness of VITA by saying, "What I am doing is connected to a tax class I take but also allows me to have the life experiences you cannot normally get in a 50-minute class."

CV has also become an important benefit to the community, benefiting all the clients in the community that qualify to have their taxes done for free and alleviating the financial burden it may cause some people. Many retired individuals utilize this service, and they enjoy the conversation and company that comes with it. For some, getting their taxes done may be one of the rare times

they get out, so conversing with the students often makes their day. Other clients benefit from being able to get their refunds in full, rather than having their refunds offset by the amounts that they would have to pay to professional tax preparers.

The tax instructor and the College also benefit from CV. The instructor is required to stay current for certification purposes and to learn more each year by researching unusual client circumstances. The instructor also can better teach students. Because of activities such as CV, the College is viewed more favorably by the community, by the accreditors, and by current and prospective students and their families. CV's benefits have continued to grow as the program has evolved through the years.

CV EVOLUTION

The ONU VITA program originated in the College of Law more than 40 years ago, but it migrated to the College of Business in Spring of 2011. In 2010, the College of Law prepared 30 returns. Since that time the College of Business has prepared the following number of returns each year:

2011 – 51	2012 – 104	2013 – 147
2014 – 150	2015 – 175	2016 – 203
2017 – 254	2018 – 300	2019 – 298
2020 – 269 (Covid)	2021 – 284 (Covid)	2022 – 254 (Smaller class)

The increase in practical business activity of this program has necessitated many changes to the tax course during the last thirteen years (including this year 2023). In 2011, the only mention of VITA in the tax syllabus came in the section on class participation as follows:

Students who do not bring at least one official client to the ONU-VITA program cannot earn in excess of 90% for participation. Students can use themselves as clients. Students who bring in more than one client to the ONU-VITA program will receive one extra point on their final grade for each additional client up to a limit of five additional clients.

In attempting to grow the program, the 2012 syllabus indicated for participation that students had to bring in two official clients and help prepare at least two returns. Moreover, by 2012, the syllabus indicated that student homework assignments for the first four weeks of the course would be designed to help students pass the IRS VITA certification tests for advanced returns and to be able to use the IRS VITA tax preparation program, CCH TaxWise. In 2012 an accounting internship position was developed and filled to help with the program. The 2013 syllabus added a reflection assignment for this service-learning project. The 2014 syllabus permitted students to earn 1 to 3 percentage points on their final grade if the total number of returns exceeded 150, 175, or 200, respectively.

Because of the growing number of clients, the 2015 syllabus added a new section on practitioner activities that totaled 300 of the 1000 total course points and included points for bringing in new clients, preparing at least 2 returns, reviewing at least 2 returns, and volunteering during client lab times. The 2016 syllabus streamlined the practitioner activities section and required bringing in two new clients and preparing at least 5 returns. The syllabus also added the

proviso that the returns would be graded, with the top 5 grades counting toward the student class grades.

The 2017 syllabus remained the same, but the IRS switched the tax preparation software from CCH TaxWise to TaxSlayer Professional Online, which required significant adjustments to the course procedures. The syllabi for 2018 and 2019 were essentially unchanged, but because of the need to deal with the increased number of clients and returns, the professor informally permitted students to use their scores on extra returns prepared in place of grades on first one exam and then eventually in place of grades on the second exam. By this point, the number of interns for CV had increased from the original one intern per year to six interns per year.

In 2020, Covid interrupted the tax season. Several VITA sites in the area shut down, but ONU VITA continued to operate for the rest of that year and for the next year (with several area sites remaining closed) by establishing procedures for other than face-to-face preparation, including drop off and wait in the car, drop off and pick up later, and all virtual. Because of fewer sites and the concomitant increase in demand for the ONU site, the 2021 syllabus formalized the procedure for allowing return preparation to take the place of one or two exams.

In 2022, because of the plentitude of clients, the syllabus no longer required students to bring in new clients. Because there was some concern about poor exam performance and course learning likely caused by the substitution of return preparation for exams, that provision was eliminated. However, because the students work very hard on returns, the grading scale was adjusted so that students have 1100 points to achieve the usual 1000-point based grade. For example, 900/1100 would be an A. The extra 100 points came from an extra exam – an initial exam (different than the IRS certification) to determine if students were ready to deal with clients.

The 2023 syllabus has been further revised because this year's tax class is smaller and because ONU has changed its calendar, which allows for a CV season of only 5 weeks, rather than 6 weeks. Accordingly, students are required to prepare at least 10 returns, with 7 of those returns being done with face-to-face clients.

The course evolution above was done to make sure the CV program continued to meet learning objectives and continued to provide value for the students, the professor, the business college, and the community. Depending on how much service learning is involved, other courses that use these types of active, high impact learning also will need to evolve.

CV APPLICATION TO OTHER COURSES

These types of learning activities can be adapted to any class. Following are but a few examples.

The authors have engaged in a legal studies course that combines the curricular with the co-curricular with an idea pitch assignment followed by a legal planning assignment. The students in the course participate in a university-wide idea pitch competition for ideas that better society and then write a paper on the legal aspects of that idea. Another business professor from the same university has a similar assignment that requires participation in the idea pitch along with a paper on the accounting aspects of the idea presented. Those assignments have taken place for over a decade, but they remain vibrant with new and exciting ideas each year.

This faculty author also teaches a healthcare policy and regulation course. Assignments over the last couple of years have been to draft Covid policies and to draft a model statute dealing with abortion. In a similar, although less substantive vein, the class was asked to recommend legislation with respect whether the U. S. should continue with a combination of Standard Time

and Daylight Saving Time or whether it should adopt permanent Standard Time or permanent Daylight Saving Time. The faculty member and three students also researched and presented a paper on this topic (Woods et al, 2023).

Faculty members in any course can develop these types of active, high impact, often service-learning assignments. Learning theory research articles and practical “how to” articles are readily available to provide guidance and creative ideas (Woods & Klouvas, 2018).

CONCLUSION

In conclusion, CV serves as but one very good example of how to implement high impact learning into a course curriculum to facilitate learning and benefit university stakeholders. Faculty members who want to develop their own high impact learning activities have many other examples and much pedagogical guidance to assist them. Both the professor co-author and the student co-authors of this paper highly recommend such activities.

REFERENCES

- Association to Advance Collegiate Schools of Business (2022). 2020 Business standards. Retrieved March 1, 2023 from <https://www.aacsb.edu/educators/accreditation/business-accreditation/aacsb-business-accreditation-standards>.
- Bloom, B. S., Engelhard, M.D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: The classification of educational goals; Handbook I: Cognitive domain*. Longmans, Green.
- College of Business (n.d.). Envisioning the future of business education. Retrieved March 1, 2023 from www.onu.edu/sites/default/files/business-donorsheet-2021.
- Fink, L. Dee (2013). *Creating significant learning experiences: An integrated approach to designing college courses*. Jossey-Bass.
- Ohio Northern University (n.d.). Mission, core values, vision, and strategic plan. Retrieved March 1, 2023 from <https://www.onu.edu/mission-vision-and-core-values>.
- Woods, D., Arquette, K., Bowmar, K. & Woods, M. (2023, Mar. 23), Standard and/or daylight saving? A timely example of legislative conflict: Personal health versus economic health. Presented at Midwest Academy of Legal Studies in Business at MBAA International annual conference, Chicago, IL, United States.
- Woods, D. & Klouvas, A. (2018). High impact learning: definition and implementation in legal studies courses. *Proceedings of the Midwest Academy of Legal Studies in Business*, 47-71.

DOES NFT SECTOR MATTER FOR THE CHINESE FIRM PERFORMANCE OF BLOCKCHAIN INDUSTRY?

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ABSTRACT

With the development of blockchain technology, Non-Fungible Tokens emerged in the market at a high-speed growth rate and gradually expanded their application scope. Although the development trend of NFT in China is later than that in the United States and other developed countries, it is becoming a new market segment with a fast growth rate. As a new sector, whether the NFT sector can positively help with the firm's performance remains a mystery. By regression analysis and Coefficient of Variation (CV) analysis, this study focuses on 28 companies in the NFT sector and 236 companies in the blockchain sector. The data of these companies from the first quarter of 2021 to the second quarter of 2022 is collected from the Choice Financial Terminal. The alternative measure of the firm performance and fixed effect model is used for the robustness check. We find that there is a significant positive relationship between the NFT sector and the firm performance, which means that the Firm in the NFT sector tends to have a better performance than the other blockchain companies in the Chinese market, and the firm in the NFT sector tends to have a better firm performance stability in Chinese market comparing with the other blockchain companies. The findings of this research help investors better understand the performance of companies in China's NFT concept and play a guiding role in the investment decisions made by various types of investors, and support the hypothesis that the NFT sector positively relates to the firm performance.

Keywords: *NFT, Firm performance, Blockchain*

JEL Classification: *G10 · G11*

THE EFFECTS OF THE 9/11 TERRORIST ATTACKS ON THE TOURISM INDUSTRY: A TEST ON MARKET EFFICIENCY

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ABSTRACT

The terrorist attacks on September 11, 2001 had ripple effects into every aspect of American life, one of which being the economy. An event as devastating as this one is bound to have lasting effects, and one of these is a shrinking of the economy. The falling of the twin towers spread fear and uncertainty through the nation, two emotions that will lead people to shrink their investment portfolios and overall spending.

Following this event, there was very little demand for tourism/travel, especially air travel. Drastic shifts in market-wide demand such as this one have drastic effects on the stock market. The purpose of this analysis was to determine how severe of an impact the 9/11 Terrorist Attacks had on the Tourism industry, more specifically to determine if the market, particularly the Tourism Industry, reacted efficiently to the 9/11 Terrorist Attacks.

An efficient market is one that accurately and fully reflects all information to the investors (Madura). Through the analysis of an event, we can look at the data prior to and following an event date. This will allow us to determine when the reaction happened, and how severe of a reaction there was. In order to be efficient, all information must be available to the public, so there should be no change in the market prior to the event date.

Through a regression analysis on periodic stock returns and corresponding market returns, the stocks' betas alphas can be calculated. These values are then used to be able to calculate the Average Excess Returns (AER) and the Cumulative Average Excess Returns (CAER). Using these values over the event and pre-event periods, we will be able to see the tourism industry's reaction to the event. We are predicting a drop in returns following the event period. In order to measure if the market reacted efficiently, we need to analyze when the market reacts to the event. If a change in stock price occurs prior to the event, it shows there was insider information influencing the market. Through the study, it was concluded that the stock market's reaction to the 9/11 attacks occurred after the event date, which means that it reacted to the event and fully reflects all information regarding the event, making it an efficient reaction.

The attacks on 9/11 had an immense impact on the United States of America, and economic repercussions would be expected, but due to analyzing the Cumulative Average Excess Returns of companies in the Travel industry during the pre-event and event periods we are able to conclude that the market was efficient in regard to the terrorist attacks on September 11, 2001.

INTRODUCTION

Background

The 9/11 terrorist attack is one of the most devastating moments in the United States' history. This event hit the people of the United States and much of the world very hard, and had a slew ripple effects spread throughout the country, one of which was an economic downturn. Following 9/11, the United States economy, particularly industries such as Travel, Tourism and Insurance suffered hard losses (Davis).

Research Problem/Purpose of Study

The problem being researched is the economic repercussions of the 9/11 attacks. The purpose of this research study is to determine how severe of an impact this event had on the Tourism industry, and whether the impact shows the market to be efficient or inefficient. This will be done through stock price analyses and testing for market efficiency.

Literature Review

An efficient market is one that accurately and fully reflects all information to the investors (Madura). If information is not relayed correctly or not at all, the market will not be able to effectively react to the new information, leading to inefficiency. An efficient market is important because it eliminates the possibility that somebody could earn an above average return by using information that is not publicly available (Madura).

ANALYSIS

Methodology

1. The first step in conducting an event study is determining which event is going to be studied on order to conduct the research. For this study, the terrorist attacks on September 11, 2001, is the event being observed.
2. Next, an event period must be determined; for this study the event period will be from 180 days prior to the event to 30 days post event date. Due to the stock market being closed for a short period due to this event, there technically is no event date, but for examination purposes, the event date for this study is September 11, 2001. The whole period examined is from March 15, 2001, to October 11, 2001.
3. Third, a sample of companies must be chosen to research. The sample used in this study is a random compilation of some of the larger companies in the tourism industry, including airlines, hotels/resorts, and other companies involved in tourism.
4. The fourth step is data analysis. This step involves finding the Holding Period Returns of the S&P 500 (market) and each stock during the analysis period, the Cumulative Average Returns for the period, and run regression analyses on each stock relative to the S&P 500. The alpha and beta values for each stock is calculated through the Regression Analysis,

and these values can be used to solve the expected returns with the formula: $E_r = \alpha + (\beta * S\&P500 \text{ HPR})$. Alpha is a variable that measures the speed at which the market reacts to newly presented information. Excess return is calculated by subtracting the expected return from stock's HPR.

5. The Average Excess Returns are calculated by dividing the sum of the individual stocks' daily excess returns and dividing it by 10 (the size of the sample). Using the AER values, the Cumulative Average Excess Returns are able to be calculated.
- 6.

Quantitative Tests and Results

By calculating a regression analysis on periodic stock returns and corresponding market returns, we are able to calculate the stock's alpha and beta. These values are useful in calculating risk and returns over the examination period. The table below shows the companies in the sample and their calculated alpha and beta values.

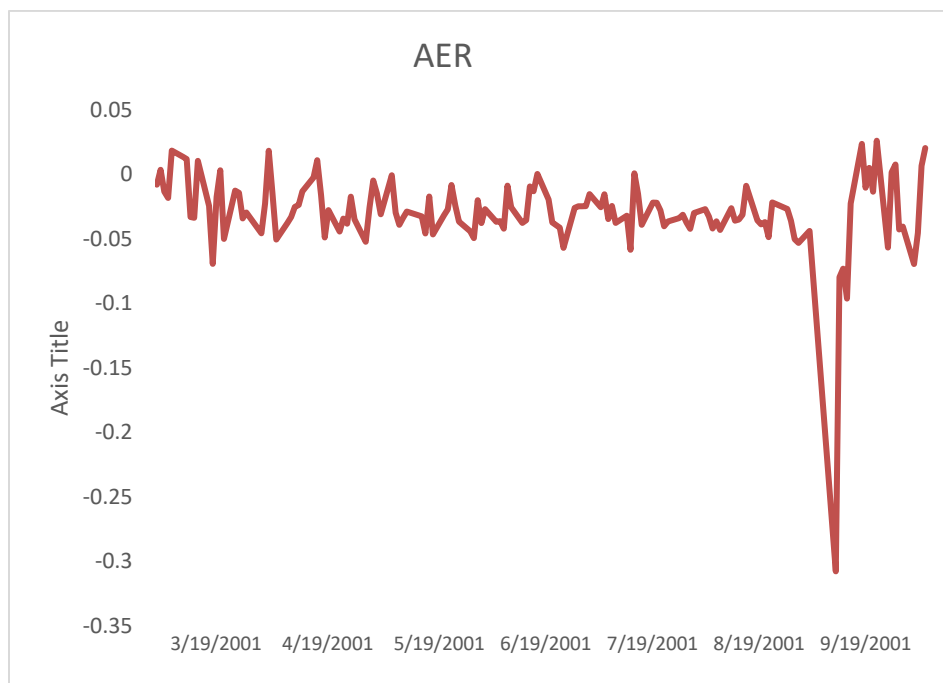
Company	Ticker	Alpha	Beta
Marriott Int.	MAR	5.65E-05	.31059
MGM Resorts Int.	MGM	-.00033	.22053
Southwest Airlines	LUV	-.00017	.250311
LATAM Airlines	LTMAY	1.27E-05	.106424
Walt Disney Co.	DIS	.000377	.324587
Booking Holdings Inc.	BKNG	-.00085	.074781
Carnival Corp.	CCL	-.00014	.220898
Royal Caribbean Cruises	RCL	.000461	.167354
Alaska Air Group	ALK	-.00014	.224722
Skywest Inc	SKYW	-.00071	.14757

One thing of note is the beta values across the board being much lower than that of the S&P, which is 1, meaning these companies generally have very low risk compared to the market average. One major use for these values is the calculation of the Average Excess Returns and the Cumulative Average Excess Returns.

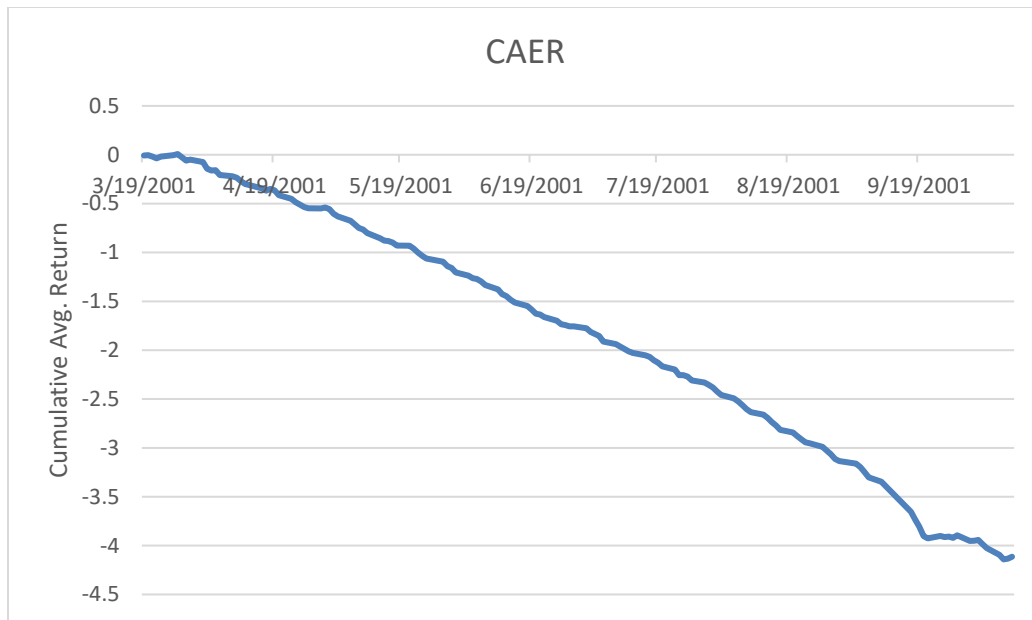
Using the formula mentioned in the methodology section, the Average Excess Returns or each day in the examination period can be calculated. The AER graph below shows these returns. During the pre-event period it is seen that the AER averages at just below 0, with it being very consistently at this range. A huge spike is observed during the September, after a very consistent spread prior, which indicates a sharp decline in AER during the event period. Just as quickly as the Average Excess Return spiked, it shot back up to even higher than it was before the drop.

Once the Average Excess Returns are calculated, they are able to be used to calculate the Cumulative Average Excess Returns. This is done by adding the AER of each day with the AER of all days prior in the examination period. With a consistently slightly negative AER, the CAER

is expected to be steadily declining for the pre-event period with a more severe decline following the event.



Below is a graph of the Cumulative Average Excess Returns for the time period being studied. We can see from the graph above that there is a stronger decline following the event date, with it quickly stabilizing back to how it was prior to the event. This is important because the decline is following the event, and not prior to it, showing that there was no insider knowledge of the event and that the market acted efficiently. Also, by looking at the AER graph, it could be assumed that the CAER graph will have a dip following the event period and then quickly get back to normal, which is shown to be true in the graph below.



CONCLUSION

How does all of this matter in regard to market efficiency? An efficient market is one that accurately reflects all information, and that change is seen in response to the event, and not prior to it. The excess returns during the period show that the only major change around the event happens in response to it, and is mostly corrected within a month. This event was major, and economic repercussions would be expected, but due to analyzing the Cumulative Average Excess Returns of companies in the Travel industry during the pre-event and event periods we are able to conclude that the market was efficient in regard to the terrorist attacks on September 11, 2001.

REFERENCES

- Davis, M. (2022, August 24). *The impact of 9/11 on business*. Investopedia. Retrieved December 4, 2022, from <https://www.investopedia.com/financial-edge/0911/the-impact-of-september-11-on-business.aspx>
- Madura, J. (2003). *Financial Markets and Institutions* (J. W. Clahoun & A. McGuire, Eds., 6th ed.). United States: Thomson South-Western

ADVANCEMENTS IN MALWARE (CRYPTOCURRENCY & CLOUD)

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ABSTRACT

As the field of cybersecurity continues to evolve, so does the threat landscape. Organizations are beginning to expand and leverage cloud technology for architecture and virtualization, amongst other reasons. Naturally, attackers are beginning to develop new forms of cloud malware, which in turn has heightened the priority to identify ways to protect the cloud environments of organizations against new malware and detect these malware prior to incidents at organizations (Gan, et al., 2020).

In addition to cloud advancements, cryptocurrency continues to evolve. Today, athletes all over the world and organizations are choosing to receive their pay, or provide pay to their employees with cryptocurrency as incentive deals. People worldwide continue to leverage multiple machines and cloud infrastructure to mine cryptocurrency. This has also increased the efforts of attackers to create crypto malware (Videotex, 2018) to attack the infrastructure. The ability to create malware that can allow attackers to take hold of machines and leverage them to farm for cryptocurrency or steal crypto currency would be market altering.

The purpose of this research will be to identify the current state of cryptocurrency and cloud securities, the state of malware in traditional environments in comparison to the cloud environments, remediations, and detection strategies for cryptocurrency and cloud malware. As cloud and cryptocurrency are fairly new concepts, it is now necessary to investigate the type of malwares that are unique to these platforms. Using various research databases and online sources, we will investigate any previous and current research work in the space.

CRYPTOCURRENCY AND CLOUD

Cryptocurrency is a digital currency in which transactions are verified and records maintained by a decentralized system using cryptography, rather than by a centralized authority. Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user (Cloud Computing). Cloud computing is heavily leveraged in cryptocurrency.

There has been significant adoption of cryptocurrency as of recent years. Athletes have begun to request partial contract compensation based on cryptocurrency as well as start-up organizations compensating their employees via cryptocurrency. This has heightened the need to better secure cryptocurrency and cloud environments, as attackers continue to target organizations in hopes of leveraging their cloud environments to mine cryptocurrency or obtain a payout via cryptocurrency.

There are many ways that cryptocurrency leveraged cloud computing, such as when users store their cryptocurrency in encrypted wallets in the cloud or when attackers infiltrate enterprise

networks and leverage cloud environments for mining cryptocurrency, or through blockchain. The primary effort of attackers in traditional malware is to attack large organizations as they tend to have the largest processing power both on prem and on cloud. However, in addition to targeting organizations, attackers have infected over 100,000 users via cryptocurrency malware campaigns. These campaigns consist of attackers setting traps for victims on websites containing free software such as YouTube Music and Microsoft Translate. These executable files contain a delayed Malware exploitation which allows the host computer to connect to the command and control C2C server to download crypto mining software (Cryptonews, 2022).

Malware in Traditional Environments vs. Cloud Environments

As technology continues to evolve, so do attackers in their quest to infiltrate new environments and go undetected. Over the years, we have seen keyloggers, worms, trojans, ransomware, logic bombs, adware, spyware, and rootkits impact enterprise environments and day to day users. A virus is a type of computer program that replicates itself when executed. Keyloggers are malwares that capture a user's actions or logs on a computer. Worms are similar in nature to viruses but do not require a program to be executed or a host file. Trojan horses are programs containing malicious code but disguised as legitimate programs. Ransomware is malware designed to encrypt a user's data and information locking them out of their program and leveraged for a ransom payout. Logic bombs are programs intended to make a hard drive unreadable and cause a denial of service attack. Adware is a malware with the intention to display multiple advertisements while spyware is intended to collect user information, habits, and browsing history. Rootkits tend to be embedded in trojan horse attacks with the intent of allowing the attacker to maintain control of a host (Firch, 2022). Attackers tend to leverage these types of malware to take control of on premise environments, causing financial or defamation to organizations, as well as personal financial gain.

In addition to malware types impacting traditional environments listed above, there have been significant cloud malware detections consisting of denial of service attacks (DDoS), hypervisor DoS, hypercall attacks, exploiting live migrations, hyperjacking and cryptomalware. DDoS attacks aim to disrupt public cloud environments by flooding the network with malicious traffic, rendering the cloud environments unusable and or with the hopes of obfuscating traffic to penetrate the environments. A hypervisor DoS attack is targeted to an enterprise cloud hypervisor, which has the ability to impact all virtual machines (VMs) in the environment. hypercall attacks leverage intrusion-based tactics to implement a software linked from a domain to a hypervisor. Live migrations exploits are extremely common as the exploit difficulty is relatively simple, attackers will leverage malware found in the on premise environments until a cloud migration takes place and leverage the new migrated environment in the cloud in order to redirect all cloud resources to an infected network. Lastly, hyperjacking is malware intended to take control of a cloud environment's hypervisor and leverage its capability to deploy VMs (Executech, 2022).

Cloud environments provide organizations and users alike with endless processing power (subject to how much they are willing to pay). Due to that processing power, attackers are switching their efforts from traditional environment hacks to cloud environments. Once attackers are able to infiltrate cloud environments, they aim to leverage the newly found resources to mine for cryptocurrency.

Cloud Malware Detection Strategies

In this section, we review various ideas that have been put forth to detect Malware in the Cloud environment. Traditional malware detection mechanisms are very limited to stand alone systems within traditional network environments. Usually, organizations would deploy Anti-Virus systems running on singular systems and expect the tool to defend the specific system. This approach depends heavily on AV signatures database which requires periodic updates to catch malware. This approach has proven inefficient with the most contemporary malware for which a definition may not be available or those malwares capable of modifying behavior in order to avoid detection. For this reason, heuristic based AVs which tend to identify malware based on behavioral patterns rather than dependence on signatures are preferred. This signature based AV approach is especially very limiting within the cloud paradigm. Malware in the cloud can be extremely more impactful than in a traditional environment due to the ease of provisioning systems and the similarity between systems in a herd. For instance, when one considers auto scaling to meet demand, “the attack that compromised one of the VMs is highly likely to compromise many of the other VMs” (Abdelsalam et al., 2018). For this and many other challenges created by malware in the cloud, research is currently ongoing to develop novel products that can help in combating the threats posed by malware attacks in the fairly new but pervasive frontier. Most of the current ongoing detection strategies are looking into the use of machine learning, ML and Deep Learning, DL in combating malware. In the rest of this section, we will review some of the models that are being proposed.

There is a general shift in the way cloud architecture detects malware in comparison to the traditional environment. A major shift is making detection align with the “as a service” model of the cloud- such as “Software as a Service”, “Infrastructure as a Service”, etc. The approach is to have “malware detection as a Service”. In this approach, a subsidiary of the detection engine runs on a client system which on the suspicion of a file as being malicious, submits the file to a Server system, well equipped with better analytical capability that then performs an in-depth analysis of the suspected file and can then confirm if it is a malware or a benign application to the client (Yadav, 2018) proposed a two-part system of a “consolidated Weighted Fuzzy K-means clustering algorithm with Auto Associative Neural Network” classification system. The Auto-Associative Neural Networks which is based on the Recurrent Neural Network model trains the dataset and forecasts outputs with new inputs as they are supplied. The proposed system uses Precision, Recall and F-measures metrics to arrive at its predictions. The system successfully identified all the malware included in the set (McDole et al., 2020) proposed an approach to malware using multiple Convolutional Neural Networks, CNNs. The systems used various cloud systems’ performance metrics include CPU usage, memory & disk usages.

Three CNNs models used in the experiments include- LeNet-5, ResNets and DenseNet networks. All systems used the evaluation metrics- Accuracy, Precision, Recall and F1- Score. All the CNNs performed extremely well in predicting malware with DenseNet having the highest performance of almost 100% for precision (Li et al., n.d, 2018) proposed a kernel malware detection tool that predicts infection by analyzing code pages from the VM and normalizing them and then creating fingerprint or hashes of the pages. Using neural networks and deep learning, Fluorescence can then accurately create a cluster of infected VMs from benign ones. Fluorescence can analyze a 50-host herd in less than ten minutes, and 200 hosts in ~60–80 minutes (Hatem et al., 2014) proposed a model of “anti-virus as a service” in the cloud using multiple detection

engines. The approach includes using static signature scanning with dynamic analytic detection in which a lightweight detection agent runs on the host and a server provides an analytic detection service. The researchers proposed that "instead of running complex analysis software on every end host", "...each end host runs a lightweight process to detect new files, send them to a network service for analysis, and then permit access or quarantine them based on a report returned by the network service". Additionally, "the identification of malicious and unwanted software should be determined by multiple, different detection engines...to more effectively determine malicious and unwanted files" (Hatem, 2014). This approach increased detection rates up to 98% with an increase in the speed of detection (Hatem, 2014).

Finally, (Aslan et al., 2021) reviewed all the proposed cloud malware in the last 10 years, providing strengths and weaknesses of each proposal and came up with a framework for cloud malware detection that is based on using 4 malware detection agents that combines all the different methodologies with the intention of harnessing all the various advantages of different models. The framework combines all detection approaches including signature-based, behavioral-based, deep learning and heuristic-based detection approaches which build on top of each other.

Cloud Malware Remediation Strategies

In this section we will review the current measures Cloud Vendors are using to detect and remediate malware in the cloud. Below are the strategies being used by 2 of the top Cloud Service Providers, CSPs AWS and GCP to address malware in the cloud. GCP detects "Crypto mining Malware & Malware by examining VPC Flow Logs and Cloud DNS logs for connections to known command and control domains and IP addresses" using the strategies below (Google, 2022):

- Investigate the potentially compromised instance and remove any discovered malware. To assist with detection and removal, use an endpoint detection and response solution.
- To track activity and vulnerabilities that allowed the insertion of malware, check audit logs and syslogs associated with the compromised instance.
- Investigate the potentially compromised instance and remove any discovered malware. To assist with detection and removal, use an endpoint detection and response solution.
- If necessary, stop the compromised instance (/compute/docs/instances/stop-start-instance) and replace it with a new instance.
- Block the malicious IP addresses by updating firewall rules (/vpc/docs/using-firewalls) or by using Google Cloud Armor (Google, 2022).

AWS follows a similar approach when detecting and addressing malware within their environment. The steps include the following:

- Make sure the quarantined file is on the allow list, removing it from the quarantine and releasing it back to the file system.
- Delete the quarantined file, removing it from the instance.
- Suspend the instance and replace it. The suspended instance is then available to you to mount for forensic research.

- When the anti-malware system discovers malware on an instance, AMS automatically quarantines the malware. This triggers an event and a follow-up investigation.
- AMS notifies you of the event through a service notification and starts following the default mitigation action that you selected.
- If you haven't chosen a default action, AMS asks you which action to take. After receiving your instructions, AMS runs the selected action and notifies you. AMS notifies you again after the action is complete, including details needed for forensic analysis, if applicable (AMS Advanced User Guide, 2022).

CONCLUSION

Cryptocurrency and cloud have taken over the IT industry over the last few years. Due to the importance of both organizations and personal financial gain, attackers have begun to craft malware to target the cloud and mine for cryptocurrency. This paper analyzes the state of cryptocurrency and cloud, and discusses the differences of malware in traditional environments against cloud environments. In addition, we analyze newly identified methods of detecting cloud malware as well as new remediation strategies for cloud malware. Due to the conciseness of this paper, there are research limitations surrounding the impact of cloud malware in organizations today, as well as the increase of cloud and crypto malware in the wild. This paper has areas of future research that consist of analyzing new and existing cloud malware in the wild.

REFERENCES

Available upon request

VAT ME TO MY NEXT DESTINATION: EXPLORING CONSUMER DECISION MAKING RELATED TO PURCHASING LUXURY BRANDS ABROAD BY LEVERAGING VALUE ADDED TAX STRATEGIES

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ABSTRACT

With everyone looking for a way to save it has become paramount for individuals and corporations to strategize towards cost benefit initiatives that will impact their finances. A large part of finances involve taxation and for many corporations, it is part of doing business. However, individuals often view taxation differently, more like a burden. To add, in the United States taxation on an individual is more complex as there is federal tax, state tax and locality tax to consider for their personal finances and variable sales tax when purchasing goods and services. Thereby, reliability of accuracy and knowledge related to taxation are often left to the finance professional like Accountants. However, for individuals well-traveled many are surprised by the learned knowledge of VAT (Value Added Tax) when shopping in a foreign country that offers VAT refunds. For many individuals the once preconceived tax burden perspective shifts to a purchasing incentive when considering purchasing luxury items abroad. This shift is primarily attributed to foreign corporations that employ VAT Tax sales strategies to attract tourists and increase sales volumes. This paper analyzes both, the individuals and corporations perspective on VAT taxation of luxury items and the cost -benefit attributed to traveling to destinations to acquire those luxury items while exploring the methodologies in the Theory of Reasoned Action.

Keywords: Value Added Tax, Theory of Reasoned Action, Tax Burden

REVENUE RECOGNITION PRACTICES IN REAL ESTATE: EVIDENCE FROM AKSHAHANTREY³ REALTY

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ABSTRACT:

The Ministry of Corporate Affairs, in February 2015, introduced the Indian Accounting Standards to converge with the IFRS issued by the International Accounting standards board. Indian Accounting standards were introduced to enhance comparability and transparency and align with global standards. IndAS 115, introduced as a part of the Indian Accounting Standards, brought about important implications and changes in Revenue Recognition. Akshahantrey Realty, the newest arm of the Akshahantrey Group, faced some challenges in transitioning from Accounting Standards to Indian Accounting Standards. The main challenge was implementing IndAS 115, which focuses on revenue recognition. As a real estate company, various decisions about Revenue Recognition had to be taken. The main dilemma as a part of revenue recognition practices when the IndAS was introduced was whether to keep following the Percentage of Completion Method or change to Completed Contract Method. Having projects in different parts of the country, the customer's rights to cancel the contract also vary according to state laws. The case study also discusses the reference taken by auditors of other companies in the same industry and the Guidance Note issued by ICAI.

INTRODUCTION:

Financial reporting helps in the allocation of resources. Therefore, revenue recognition is a very crucial part of financial reporting. It was on the 16th of February 2015, the Ministry of Corporate Affairs introduced the Indian Accounting Standards (IndAS). IndAS 115⁴ was introduced as a part of the Indian Accounting Standards, which was meant to replace the guidance note and the existing accounting standard for real estate and revenue recognition. However, revenue recognition was always disputed under the International Financial Reporting Standards (IFRS)⁵. Without consistency in the method of applying reporting standards, there is a lack of transparency and comparability. Hence, the need for better quality accounting standards arose to match the global scenario.

³ The name of the organization is disguised for the reason of confidentiality. However, the authors can provide details.

⁴ Ind AS 115: Indian Accounting Standard 115 deals with revenue to be recognized.

⁵ IFRS: International Financial Reporting Standards, or IFRS, are accounting guidelines released by the International Accounting Standards Board and the IFRS Foundation.

MEDICAL DEVICE CYBERSECURITY AND MALWARE THREATS

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ABSTRACT

Medical devices are everywhere. Engineers design implantable medical devices to be small enough that people cannot see them inside a person's body. Engineers can inconspicuously design wearable medical devices to look like fashion items—purses, handbags, and even backpacks. An average person may not realize that the individual they walked past has a medical device. These devices can track an individual's medical history by collecting information such as respiration, heartbeat, oxygen, and blood pressure. Medical devices can also deliver medical drugs when the patient needs them. For example, medical devices can inject patients with insulin if the machine detects they need it. Pacemakers can deliver electric shocks to stimulate the heart. Hospitals and more extensive medical offices can use larger medical devices to provide patient care for several individuals. These devices include magnetic resonance imaging (MRI), computerized tomography (CT) scans, positron emission tomography (PET) scans, and ultrasound imaging equipment. However, these devices can be expensive and provide specialized services. Unfortunately, medical devices function in a hostile environment. This study examines what users, engineers, and medical professionals can do to secure medical devices against malicious threats.

Keywords—Malware, medical devices, secure system engineering, cybersecurity training, development practices

INTRODUCTION

The Black Hat Cyber conference in Las Vegas, Nevada, is well-known for featuring the latest innovations, methodologies, vulnerability research, and generating cybersecurity discussion. In addition, Black Hat speakers are considered professionals in their field. As a result, these speakers often present cybersecurity topics that have raised excitement and interest among attendees for many years.

As noted in the 2011 Black Hat briefing notes, Jerome Radcliffe is a person with diabetes that requires the use of two medical devices—“an insulin pump and a continuous glucose monitor” (Black Hat 2011, 2011). During the presentation, Jerome Radcliffe explained how he obtained schematics and tables of commands by asking the manufacturer for them. Using this information, Jerome Radcliffe successfully hacked his insulin pump. Regarding the presentation, Dr. David Klonoff noted that “Jay Radcliffe hacked an insulin pump 150 feet away to either disable the device or cause delivery of an overdose of insulin” (Klonoff, 2015, p. 1144). The techniques that Jerome Radcliffe used to compromise his insulin pump could be weaponized with trojans, viruses, and

other malware to compromise medical device confidentiality, integrity, and availability. The results could be catastrophic for users if malware compromised the insulin pump to deliver too much or too little insulin.

Unfortunately, people have not fully learned the lessons from Jerome Radcliffe's presentation. Cybersecurity attacks against medical devices have not ceased. For example, ransomware attacks increased by 94% from 2021 to 2022 (Sophos, 2022, p. 3). This increase has caused delays in treatments (Cohen, 2021), patients being rerouted to a different hospital (Sisson, 2021), and even led to the death of a newborn baby because a hospital's medical devices were inaccessible (Vaas, 2021). Governments are taking notice and releasing alerts about malware targeting medical devices (Health and Human Services, 2022).

MEDICAL DEVICE CHARACTERISTICS

Medical devices have several characteristics that make them a rich target for malicious hackers. First, medical devices provide health benefits for users. Users and medical professionals are motivated to get their devices operational again. If medical devices are unavailable, they are not providing the health benefits that the patient needs—causing their health to worsen. Medical professionals also are concerned that patients may sue them if their health declines. Therefore, patients and medical professionals want medical devices to be operational.

Second, medical devices typically are built focusing on operational features. Security features are often an afterthought. Engineers usually do not include security in their development lifecycle. Engineers build medical devices running on legacy operating systems and hardware that they cannot update to the latest security engineering standards (Tervoort et al., 2020, p. 84353). Outdated hardware and software can cause problems in getting a good security scan. Performing a security scan on the legacy software and hardware may cause the device to crash or become unavailable. If a patient relies on the continued availability of the device, the patient's health may suffer. Finally, engineers usually design medical devices with users' health benefits in mind. Engineers build the medical device to be as small as possible for implantable medical devices so it can be inconspicuous or so doctors can easily implant it inside an individual. Engineering the device to be updateable would require a more powerful CPU and additional memory. However, a more powerful CPU and additional memory would require a larger battery supply. This requirement would make the device more prominent. Further, doctors may have issues implanting them into their patients (Williams & Woodward, 2015, p. 310). If the device does not have spare CPU cycles, it is impossible to run antivirus tools on them without impacting the device's operation.

Third, hardware and software updates for medical devices require extensive testing and review to ensure the machine has no issues. For example, suppose a manufacturer delays the release date of a product for security feature enhancements. In that case, the delay may trickle down to a delay in life-saving medical procedures—thus endangering a patient's life. In addition, if the medical device were updateable remotely, a malicious outsider could potentially update the device with malware.

Fourth, medical devices have ethical issues. Manufacturers have the incentive to bring medical devices quickly to market. Delays mean that customers will have to wait for life-saving medical devices. A manufacturer that delays getting their products to market risks having competitors entering the market with their comparable products before they do. Products that manufacturers quickly deliver to the market also provide additional revenue for companies to research and develop new medical products—ensuring that the company remains competitive. Unfortunately, adding engineered security requirements and solutions is perceived as an impediment in getting the product into the market, a regulatory requirement, or a sunk cost that does not provide a material advantage to the manufacturer.

CYBERSECURITY PRACTICES AND MEDICAL DEVICES

Traditional information assurance and cybersecurity approaches suggest that to address these problems, cybersecurity professionals need to evaluate and strengthen the system's confidentiality, integrity, availability, authentication, and non-repudiation. In addition, the professionals must protect the information stored, transmitted, and processed in the system using technologies, policy & practice, and people (Maconachy et al., 2001, p. 307). However, this process needs to be revised when securing medical devices. For example, a traditional incident response approach to handling malware on a computer might involve containing the malware before it overwhelms resources or increases damage. Incident handlers might then contain the malware by shutting down the system, disconnecting it from a network, or disabling computer functions. After the incident, they can eradicate the malware. Eradication may involve wiping the workstation, disabling or modifying accounts, or evaluating and remediating vulnerabilities that enabled the malware to become installed on the computer. Once they have eradicated the malware, the recovery process begins. This process involves reimaging the workstation, restoring data from known good backups, installing patches, changing passwords, and modifying security defenses. Finally, the incident may finish with a lessons learned activity for the incident response team. This activity discusses what handlers learned from the malware incident, what the incident team could have done to prevent the malware infection, whether handlers followed all processes, and what indicators staff should look for to prevent the malware from successfully being installed in the future.

Incident response activities on medical devices are beyond the scope of this paper. However, it should be evident that this approach needs to scale better with medical devices. For example, suppose that a patient uses a pacemaker. In this case, an incident handler seeking to contain the malware cannot simply power down the pacemaker, remove it from the network, or disable the device's functions. These activities would endanger the patient's life.

APPROACHES FOR SECURING MEDICAL DEVICES

Requirements-Based Engineering

Suppose the device is merely a blood glucose meter that checks the glucose level in a person's blood. The device only checks one person's glucose and does not require an internet connection. In this case, the device does not need cybersecurity protection other than training the user to safeguard his personal information. However, suppose the device is a magnetic resonance imaging machine in a large hospital. Various patients use this device several times a day. It must be connected to the hospital's intranet to send results to doctors and other specialists. If malware were successfully installed on this machine or affected the transmission of medical records, several patients' health would be adversely affected. In this case, the Health Insurance Portability and Accountability Act (HIPAA) privacy rule (US Department of Health and Human Services, 2022) may apply. Therefore, the hospital should provide several layers of cybersecurity to ensure patient care and safety.

How does the medical device connect with other systems? What does it require to exchange that information? For example, suppose the device is wirelessly sending medical information. In that case, are the wireless communications secured against eavesdropping? Are the keys secured to prevent tampering? Does the device authenticate itself to the receiving party each time? What database stores the data? How long does it stay on the device? Is the information on the database encrypted? How are those keys managed and distributed?

How well-known is the medical device manufacturer? How long have they been in the medical device manufacturing business? Do they provide end-user support? Do they provide training on best cybersecurity practices with the device? Do they provide tailored training to medical professionals and IT staff on what to look for on cybersecurity issues? Do they have a telephone number users can call to report malware or other cybersecurity issues? Do they provide patches, best security practices, and alerts and advisories about their machines?

Suppose the medical device is compromised. In this case, what indicators of compromise should the hospital's medical and IT staff look for in their network? What vulnerabilities have the manufacturer issued on the device? Have they patched all of the vulnerabilities? Once the device is compromised, what is the process to get the machine operational again? Can the device be reimaged, or must it be provided to the manufacturer? If the customer returns the machine to the manufacturer, how is the data scrubbed before sending it out to ensure compliance with privacy and HIPAA laws? Does the process change if the cybercriminals have physical or remote access to the device? What is the likelihood of harm to patients? What is the expected time the hospital staff can restore the medical device's services following a compromise? Can the manufacturer provide a playbook describing what the organization should do in case of a compromise?

Train Medical Professionals and Patients on Responding to Cybersecurity Threats

Suppose that a patient takes their medical device home. The device works well. The patient can sync their medical device to the home computer. The device works well for several weeks, improving the patient's health. However, the patient has recently noticed that the process is taking longer than usual. A few times, the patient has seen errors on the screen while syncing. The patient has also observed that her machine starts and stops randomly through the night. In this case, what will the patient do? The patient will likely talk to her doctor about the situation. What will her doctor do? The doctor may assume that she has a defective device. The doctor can recommend that she exchange her machine for a newer one. However, what happens after she exchanges her old unit for a new one? Malware on her home laptop may transfer to the new device as well. Are medical staff and doctors familiar enough with malware to know she has a computer virus? Do medical professionals know how to inform their management, IT professionals, the manufacturer, and government reporting agencies about a potential virus?

Life Cycle Approach for Medical Devices

Traditional engineering techniques do not work for securely engineering medical device equipment as there is no phase for cybersecurity. According to CISA (2006), "when security requirements are considered at all during the system life cycle, they tend to be general lists of security features...These are, in fact, not security requirements at all, but rather implementation mechanisms...As a result, security requirements...are often neglected." Medical devices are no different. They need a solid and secure life cycle approach.

Typical phases for engineering medical devices include initiation, requirements gathering, system design, coding & testing, implementation, operation & support, and disposal (Centers for Medicare & Medicaid Services (2005). Each phase needs regular testing and milestones for cybersecurity to minimize cybersecurity threats. Each stage also must be adaptive to cybersecurity needs to ensure that the organization can address new threats promptly.

Improve Cybersecurity Detection Systems for Medical Devices

Finally, researchers must develop new technologies for detecting and responding to cybersecurity threats specific to medical devices. As previously observed, the characteristics of medical devices limit cybersecurity tools' efficacy. For example, medical devices often have limited memory and CPU cycles to run traditional anti-malware tools to detect malicious behavior. Therefore, new tools must be analyzed and developed to detect malicious behavior in medical devices.

Clark et al. (2013) discussed an exciting and innovative approach called WattsUpDoc. In this approach, the authors monitored power consumption on a medical device. After installing malware on the device, they then analyzed the same system's power consumption. They then applied machine learning to the data. After studying multiple malware samples, their analysis concluded that it was possible to determine whether malware exists on the device with high assurance. However, the authors noted that they tested and trained their detection system with

common malware that affected multiple computers. “Targeted malicious code” was not tested because they thought it was rare, and the authors were unaware of targeted attacks in the wild. However, further work and testing on multiple medical devices are needed to determine whether WattsUpDoc can be expanded to other medical devices and detect different malware and cybersecurity threats.

CONCLUSION

Medical devices provide many benefits to users and help treat various ailments. In the near future, medical devices will provide better patient care. Unfortunately, cybersecurity issues may hamper their full utilization. Patients and medical professionals need to require better cybersecurity from manufacturers designing medical devices. As the first line of defense, medical professionals must receive training to recognize malware and other threats. Next, manufacturers must include cybersecurity in their engineering methodologies. Finally, further research is required to improve medical device malware and cybersecurity defenses. This approach will ensure that medical devices are safe and secure for medical professionals and their patients.

REFERENCES

- Black Hat 2011. (2011). *Black Hat USA 2011 Briefings*. <https://www.blackhat.com/html/bh-us-11/bh-us-11-archives.html#Radcliffe>
- Centers for Medicare & Medicaid Services (2005). Selecting a development approach. <https://web.archive.org/web/20170104144650/https://www.cms.gov/Research-Statistics-Data-and-Systems/CMS-Information-Technology/XLC/Downloads/SelectingDevelopmentApproach.pdf>
- CISA (2006). Security Requirements Engineering. <https://web.archive.org/web/20220125041251/https://www.cisa.gov/uscert/bsi/articles/best-practices/requirements-engineering/security-requirements-engineering>
- Clark, S. S., Ransford, B., Rahmati, A., Guineau, S., Sorber, J., Xu, W., & Fu, K. (2013). WattsUpDoc: Power Side Channels to Nonintrusively Discover Untargeted Malware on Embedded Medical Devices. In 2013 USENIX Workshop on Health Information Technologies (HealthTech 13), 1-11.
- Cohen, J. (2021). Cyberattacks can extend length of stay, delay procedures, survey says. Retrieved from <https://www.modernhealthcare.com/cybersecurity/cyberattacks-can-extend-length-stay-delay-procedures-survey-says>
- Craig, A., O’Meley, P., & Carter, P. (2019). The need for greater reporting of medical device incidents. *Innovations*, 3, 56-63.
- Health and Human Services. (2022). Hive ransomware. Retrieved from <https://www.hhs.gov/sites/default/files/hive-ransomware-analyst-note-1pwhite.pdf>
- Klonoff, D. C. (2015). Cybersecurity for connected diabetes devices. *Journal of Diabetes Science and Technology*, 9(5), 1143-1147.
- Maconachy, W. V., Schou, C. D., Ragsdale, D., & Welch, D. (2001). A model for information assurance: An integrated approach. Proceedings of the 2001 IEEE workshop on information assurance and security, *IEEE*, 310, 306-310.
- Sisson, P. (2021). State regulator watching Scripps Health ransomware attack closely. Retrieved from <https://www.sandiegouniontribune.com/news/health/story/2021-05-05/state-regulator-watching-scripps-ransomware-attack-closely>
- Sophos. (2022). The state of ransomware in healthcare 2022. <https://www.sophos.com/en-us/whitepaper/state-of-ransomware-in-healthcare>
- Tervoort, T., De Oliveira, M. T., Pieters, W., Van Gelder, P., Olabarriaga, S. D., & Marquering, H. (2020). Solutions for mitigating Cybersecurity risks caused by legacy software in medical devices: a scoping review. *IEEE Access*, 8, 84352-84361

- US Department of Health and Human Services. (2022). The HIPAA privacy rule, <https://www.hhs.gov/hipaa/for-professionals/privacy/index.html>
- US Department of Health and Human Services, Office for Civil Rights. (2023). Breach portal: Notice to the secretary of HHS breach of unsecured protected health information. https://ocrportal.hhs.gov/ocr/breach/breach_report.jsf
- Vaas, L. (2021). Baby's death alleged to be linked to ransomware. Retrieved from <https://threatpost.com/babys-death-linked-ransomware/175232/>
- Williams, P. A., & Woodward, A. J. (2015). Cybersecurity vulnerabilities in medical devices: a complex environment and multifaceted problem. *Medical Devices (Auckland, NZ)*, 8, 305.

THE PHD AS AN ACCOUNTING EDUCATOR QUALIFICATION: HISTORY AND TRENDS

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ABSTRACT

This paper examines the history of accounting education as it relates to the development of the Ph.D. as a primary qualification for accounting faculty. We also explore the evolution of accounting education within higher education, and attitudes towards accounting education over time. Accounting education was initially perceived as being similar to education for a trade, and did not become embedded in collegiate environments until the early 20th century. By the 1920s, the first academic journals devoted to accounting topics began to emerge. In 1959 the Ford Foundation released an influential report asserting that business schools were not producing sufficient academic research. Consequently, by the end of the 1960s the American Accounting Association and the Association to Advance Collegiate Schools of Business (AACSB) were promoting the Ph.D. and academic research as primary requirements for the promotion and tenure accounting faculty. More recently, after input from practitioner bodies such as the American Institute of CPAs (AICPA) and others, the Association to Advance Collegiate Schools of Business (AACSB) in the early 2000s declared that universities and colleges should have a mix of what was deemed “academically qualified” and “professionally qualified” faculty. The AACSB subsequently refined its standards and created additional categories for the faculty qualifications, which are now known as scholarly academics, practice academics, scholarly practitioners, and instructional practitioners. After reviewing these trends, we also recommend several directions for the further development of accounting higher education, including the possibility of a professional doctorate degree in accounting similar to those in the legal and medical professions.

Keywords: *accounting education, accounting doctorate*