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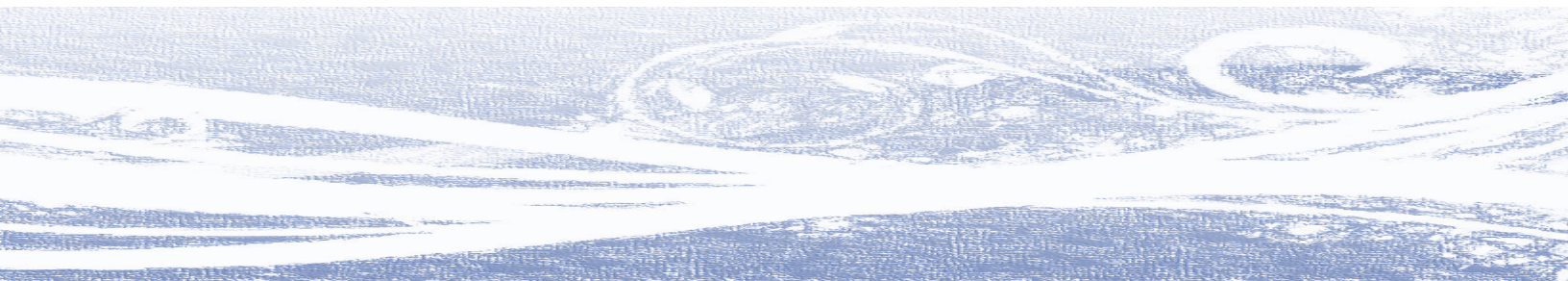
# QRBD

## QUARTERLY REVIEW OF BUSINESS DISCIPLINES

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# QRBD - QUARTERLY REVIEW OF BUSINESS DISCIPLINES

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A JOURNAL OF INTERNATIONAL ACADEMY OF BUSINESS DISCIPLINES

## FROM THE EDITORS

This issue of *Quarterly Review of Business Disciplines*, begins with the research of Chuck Lubbers and Deborah Mika, University of South Dakota. One of the interesting aspects of their research is the variance between box-office revenues and box-office revenues per theater and the time in theater.

The research conducted by Susana Velez-Castrillon, Samantha White, and Ethan Brown, University of West Georgia, delves into sustainability as a multidimensional construct encompassing various goals for profit, plant, and people. The paper integrates the concepts of sustainability and human resources. The research of Lizhu Davis, California State University, and Tun-Min (Catherine) Jai, Texas Tech University, introduces a new construct, faith driven consumption to investigate the effect of religion on consumer behavior in the marketplace.

Robert Smith Jr., Robert Page Jr., and Kauther Badr, Southern Connecticut State University, explore the failures of Hurricane Katrina: favored decision premises, political agendas, and personal opportunism, and the impact that these same arational decision cycles have on decision-making today. The research of Hamid Khan, Our Lady of the Lake University, tests the applicability of psychological capital and ownership as indicators of teaching effectiveness in promoting excellence in research, instruction, practice, and service.

Margaret A. Goralski, *Quinnipiac University*, Editor-in Chief

Charles A. Lubbers, *University of South Dakota*, Associate Editor

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## **USER-GENERATED REVIEWS, GENRE, MPAA RATING AND TIME IN THEATER AS CORRELATES OF MOVIE BOX-OFFICE REVENUES**

Charles A. Lubbers, University of South Dakota

Deborah Mika, University of South Dakota

### **ABSTRACT**

This research looks at user-generated reviews (digital word-of-mouth), genre, time in theater, and MPAA rating in relation to movie box office and movie box office per theater for movies by the five major studios in the United States. Currently, the largest major motion picture studios hold over three-fourths of the market share. The data for this secondary analysis was collected from online sources. IMDb and Rotten Tomatoes provided user-generated reviews (rating mean score and quantity) and Box Office Mojo provided box-office figures as well as the number of theaters in which movies played. The data were analyzed using correlations or crosstabulation with chi square test. The correlation results showed a positive relationship between the dependent measures of box office and box office per theater with the independent measures of IMDb user ratings, Rotten Tomatoes user ratings, as well as the quantity of reviews on both IMDb and Rotten Tomatoes. In fact, the correlation was actually stronger for the quantity/number of reviews than it was for the overall/mean rating given in the reviews. Additionally, and not surprisingly, correlation analysis found positive relationships between box-office revenues and box-office revenues per theater and the time in theater. However, the correlation for box-office revenues was fairly weak, while the correlation for box-office revenues per theater were moderately strong. The crosstabulation with chi square test provided interesting insight into the differences between the genre and the box-office revenue and box-office per theater revenue, as well as between MPAA rating and box-office revenue and box-office per theater revenue.

*Keywords:* Movie ratings; User generated content; Word-of-mouth; Box-office revenue

### **INTRODUCTION**

The motion picture industry has a strong impact on culture as well as on the economy. In the U.S., the motion picture and television industries contribute approximately \$40 billion per year and \$47 billion in wages (Fried, 2015). The industry boosts not only the national economy but also state and local economies. For example, the filming of “Captain America: Winter’s Solider” boosted Ohio’s economy by \$31 million (Fried, 2015). In addition to spending money for hotel rooms and at small business during on location shootings, they bring film-induced tourism and they employ local workers. Twentieth Century Fox’s “Gone Girl” hired more than 8,750 people, while Sony’s “Breaking Bad” turned parts of Albuquerque into popular tourist attractions (Fried, 2015). The industry has an average annual salary of \$92,000, which is 79% higher than the average salary nationwide (Jenks, 2016). Additionally, as reported by the Economist (2016), the average cost of movie production today is about \$60 million. The cost of marketing averages approximately \$40 million, making the total average cost of producing and marketing a major motion picture roughly \$100 million. However, the impact movies have on the economy goes beyond the money spent on the production of the movie and its theatrical release. For example, Warner Bros. made \$500

million from selling *Batman* merchandise and \$251.1 million from the theatrical release (Lubbers & Adams, 2001). In 2016, the industry made \$262.9 billion from licensed merchandise and \$54.6 billion from corporate trademarks (Szalai, 2017).

As we can see, the motion picture industry has a big influence in the economic sector. Naturally, the major studios in the industry have a stronger impact than small, independent studios. In fact, according to the Box Office Mojo website, as of October 1, 2017 the top studios hold approximately 76% of the industry market share. That percentage is even higher (approximately 78%) if we look at studios' parent companies (Box Office Mojo). It has to be noted that the six major studios tend to release almost double the number of movies that are released by all the other studios combined (Numbers, 2017). Because the major studios have such an impact on the industry, the best way to understand the industry is to understand the major studios.

Because movies are so expensive, the revenue they make is important in deciding if more movies of the same type are made in the future (Berger & Raddick, 2017). One of the ways movie success is measured is through ticket sales at theaters. With the large number of major motion pictures released each year, 136 in 2016 (Numbers, 2017), multiple movies are released each weekend "and there's certainly not enough people to go around" (Einav, 2010). So how do people decide which movie they are going to see? According to Kim, Park and Park (2013) online word-of-mouth (user-generated reviews) and expert reviews are significant factors for the U.S. box office.

Godes and Mayzlin (2004) note that online conversations provide a unique opportunity to collect and measure word-of-mouth in an easy and cost-effective way. According to Baar (2016) 91% of consumers read online reviews. The number of people looking and reading online reviews before making a decision about a product or service is increasing (Baar, 2016). Of the people using online reviews, 88% say they trust the reviews as much as a personal recommendation (DeMers, 2015). This means that people are increasingly using online reviews to make their purchasing decisions and they have a great deal of trust in those reviews.

Analyzing the connection between digital word-of-mouth (reviews) and movies from five major studios will provide an insight into moviegoers' behavior as well as into the industry itself. Understanding how reviews are correlated with the movie box office may help predict future box-office return, which would influence the overall industry's economy.

## LITERATURE REVIEW

This section reviews existing literature on user generated reviews and ratings. More specifically, this section reviews the results of previous studies on reviews/ratings and their correlation with movie box-office revenue. These reviews or ratings can be written or given by either professionals or by consumers. Reviews written by consumers are considered user generated content (UGC) in much of the literature discussed.

### Reviews

Previous research on reviews has focused on reviews of movie critics and the role those critical reviews have on movie revenues and awards (Adams & Lubbers, 2000; Berger & Raddick, 2017; Lubbers & Adams, 2000). However, more recent research is more likely to focus on the online reviews and ratings of those attending the movie and how they may also influence the success of

a movie. User generated content (UGC) is created by the general public rather than by paid professionals/critics. UGC is most often found on the Internet in the form of blogs (including microblogs) or online ratings/reviews.

Previous research has concluded that blogs (Gopinath, Chintagunta, & Venkataraman, 2013) and microblogging word of mouth (MWOM) can impact movie sales. For example, Rui, Liu and Whinston's (2013) investigation of the role of Twitter chatter on movie sales found that MWOM through Twitter did influence sales and that the influence was escalated for those posting who had a higher number of followers. Additionally, Hennig-Thurau, Wiertz, and Feldhaus (2015) demonstrated that MWOM does influence the product adoption (movie viewing) by immediately disseminating the viewer's evaluation. Thus, organizations may benefit from identifying the influencers in the twittersphere. However, microblogging activity is relatively transient compared to the UGC aggregated at online review sites. Also, these sites can be accessed by millions, even billions of people, as opposed to the limited number of followers of someone on Twitter or similar microblogging medium. Thus, the current investigation attempts to add to the current body of knowledge related to online WOM, by focusing on UGC found in major online ratings and review websites.

It can be said that UGC is the modern version of word-of-mouth. Because of the association between UGC and word-of-mouth, the scale and scope of word-of-mouth has increased dramatically. Online reviews have become a major source of information and can be seen as a motivating factor in consumer purchasing decisions (Bansal & Voyer, 2000; Park, Lee, & Han, 2007). Fergie, Hunt and Hilton (2013) found that young people tend to appreciate UGC and find it useful. Creamer (2007) states that people generally prefer user-generated reviews to expert reviews by a margin of 6 to 1. Consumer reviews are also viewed as more credible and trustworthy (Archark, Ghose, & Ipeirotis, 2011). Moreover, Piller (1999) reported in the Los Angeles Times about a survey conducted by BizRate. Among 5,500 web consumers surveyed, 59% of the respondents considered user-generated reviews more valuable than expert reviews.

Chevalier and Mayzlin (2006) found that an increase in average star rating of a book resulted in higher relative sales of that book over time. Forman, Ghose and Wiesenfeld (2008) also concluded that the larger the number of positive reviews of a product the bigger the positive effect it had on sales.

**Quantity.** When looking at reviews and their relationship with box-office revenue, past research has focused on both quantity and quality. Reviews were found to have significant explanatory power. More importantly, this power comes from the volume of reviews and not necessarily their quality rating (Liu, 2006). Movie rating research has shown similar results. The explanatory power is not in the numerical value but rather in the quantity (Dellarocas, Zhang & Awad, 2007; Duan, Gu & Whinston, 2008).

It might seem contradictory that even though a movie has a low rating that the number of reviews it has could have a positive correlation with the box-office revenue. According to Duan et al. (2008), this is due to the awareness effect, which will increase product (movie) awareness through dispersion. Similarly, Berger, Sorensen and Rasmussen (2010) argue that even bad publicity can increase the likelihood of purchase, because of the increase of product awareness. For instance, if we consider a person browsing a movie website and coming across a bad review, it could be that it is the first time the person hears about the movie. Now that the person knows about the movie,

he/she might decide to go see it, despite the bad review through which he/she came in contact with the movie. Therefore, the negative publicity could lead to a positive effect on the box office.

**Quality.** As opposed to the research in the previous section, other researchers have found that the value or quality of the review has a stronger impact than the number of reviews. According to Chevalier and Mayzlin (2006) users are more likely to read the review text than rely only on summary statistics. They also indicate that a one-star review has a greater impact than the five-star review (Chevalier & Mayzlin, 2006). Forman et al. (2008) state that users not only base their decision on the positive or negative reviews, but that often the information in the reviews is used by the consumer to replace the product information. Hyeon-Cheol and Jae-Yeob (2016) reported the importance of the information source. Their research notes that while celebrity-endorsed marketing is good for posters, when it comes to online word-of-mouth, non-celebrity endorsement messages were more effective (Hyeon-Cheol & Jae-Yeob, 2016). Additionally, Archak, Ghose and Ipeirotis (2011) state that information in a review cannot be captured with a simple scaling system.

The existing literature provides somewhat conflicting results when it comes to quality versus quantity of reviews and their impact on the bottom line. Positive ratings have a significant positive relation to sales (Chevalier & Mayzlin, 2006; Forman et al., 2008). Other research indicates that UGC rating value did not have significant effect on box-office revenue (Dellarocas et al. 2007, Duan et al. 2008). However, Dellacorcas et al. (2007) attempted to predict box-office revenues. The proposed research does not try to predict the box-office revenue but looks at the correlation of reviews and the box-office revenues. This means that we look at the movie when they are no longer in the theaters and how much of that revenue was correlated with the UGC reviews. When looking at the results found in Chevalier and Mayzlin (2006) on ratings on Amazon, we find that the retail site and movie review sites used in our study have similar characteristics. All use the representation of ratings in the format of a scale by stars and show the number of reviews given for the product, and have a basic description of the product next to the rating.

Nevertheless, there are also some key differences in the way these ratings are calculated and presented to the user. Amazon has a very simple and straightforward calculation and representation of the product rating. Amazon uses all the reviews/ratings to generate the average overall score that is then displayed. Rotten Tomatoes uses the same process but it separates the general public reviews/ratings from the experts. Unlike with Amazon and Rotten Tomatoes, Internet Movie Database (IMDb) does not require its users to write a review to give a rating. Because of this, IMDb has a much larger number of ratings than Rotten Tomatoes. IMDb does offer user and critic reviews, but those do not “pop up” as much as the overall rating. According to Liu (2006) the volume of reviews/ratings has significant effect on box-office revenue. The large number of users rating a movie could have a positive impact on the box-office revenue (Dellarocas et al., 2007; Duan et al., 2008; Berger et al. 2010).

## Genre

It is common for people to select movies based on genre, cast of actors/actresses, theme, directors, producers, etc. According to Redfern (2012) there is a relationship between genre and U.S. box office. He indicates that Fantasy/Science Fiction movies tend to have the highest box office. In fact, of the top 20 grossing movies between 1991 and 2010, eight were Fantasy/Science Fiction (Redfern). On the other hand, as Redfern (2012) notes, the highest grossing genre is Family with

a total gross of \$23.6 billion. According to the website *Numbers* (2017), between 1995 and 2017 the highest grossing genre was Adventure with average total earnings of \$46.4 billion. A newer trend shows superhero movies taking the lead on the top-earning list. In 2014, five of the top 11 in box-office earnings were movies featuring superheroes (Moltenbrey, 2014). According to Redfern (2012), all top grossing movies have elements of the Fantasy/Science Fiction genre. This claim is how Redfern (2012) explains the variation of yearly changes in top grossing movies and genres while supporting the idea of the trend that Fantasy/Sci-Fi movies are more likely to be successful at the box office.

Unlike the apparent connection between the genre and box office, there is limited research on the connection between the movie genre and the user-generated reviews. The results of research by Ramos, Calvão and Anteneodo (2015) indicates that movie genre does not have an impact on the number of reviews users generate.

### **U.S. Box-Office**

The term box office is used to refer to the commercial success of a movie in terms of revenue made from movie theater ticket sales. The box office, and more specifically the prediction of a movie's box office, have been a popular topic for researchers ever since motion pictures became an industry. Researchers used different angles and approaches to determine what has an impact on the box office and what most accurately predicts the success of a movie. As noted above, some researchers believe that the movie genre is more likely to predict the box-office success of a movie. For instance, Redfern (2012) uses the genre lens to analyze the movie's box-office success, showing that certain genres are more likely to have a higher box office than others. Other researchers, including Lindner, Lindquist and Arnold (2015), use female presence in a movie as a lens for box-office success. They concluded that movies with female character centered stories generally earn less at the box office. Another lens to analyze the box office is promotion, anything from advertising to word-of-mouth recommendations. For example, Dellarocas et al. (2007) showed the power of online ratings in predicting box office by associating the reviews with word-of-mouth.

### **MPAA Ratings**

The Motion Picture Association of America's (MPAA) film-rating system categorizes movie content as suitable for certain audiences (G=general, PG=parental guidance suggested, R=restricted, etc.). According to Ravid (1999) MPAA ratings have an influence on the box office with G and PG having a higher return. This is consistent with the *Numbers* (2017) statistics, which show PG-13 movies having the highest total gross \$97.9 billion between 1995 and 2107. This gives them 47.27% of the market share (*Numbers*, 2017). Austin, Nicolich and Simonet (1981) found that the MPAA ratings affect the box office in two ways: positively by PG and G ratings and negatively by R and X (current NC-17). The study showed a success ratio of categories based on box office with PG having the highest success ratio (26.7%) (Austin, et al., 1981).

### **Time in Theaters**

Major motion pictures stay in theaters for an average of four weeks and play in 2,000 theaters (Fahey, 2015). Not surprisingly, Fahey (2015) notes that there is a correlation between the time a movie is in theaters and box office. Fahey (2015) also notes that contract terms between studios

and theaters are different for each theater, nevertheless, a general rule is a minimum running time of two weeks. In the last few years there is talk among studios about shrinking the theatrical release window, the time movies are released only in theaters, from a few months to as little as a few weeks. Studios plan movie releases based on the most profitable times for DVD sales, and work within the time frame from theatrical release to the potential profitable sale month (Macnab, Niola, Blaney, Cabeza, & Goodfellow, 2017). Huddleston (2017) states that major movie studios are having discussions with digital distributors on how to offer new films earlier online. The earliest online releases would be 17 days after a film is released in theaters (Huddleston, 2017).

## RESEARCH QUESTIONS AND HYPOTHESES

The review of literature has identified five research questions and several hypotheses that will be the focus of the research. The research and hypotheses cover some of the contradicting ideas, such as reviews relationship to box-office success.

**RQ1:** How does the quality of digital word-of-mouth (e.g. user-generated reviews) correlate with box-office revenue for the five major motion picture studios?

H1: The user-generated review ratings score of movies released by the five major studios will be significantly correlated with the associated gross box-office revenue.

H2: The user-generated review ratings score of movies released by the five major studios will be significantly correlated with the associated box-office revenue per theatre.

**RQ2:** How does the quantity of user-generated reviews correlate with box-office revenue for the five major motion picture studios?

H3: The number of user-generated reviews for movies released by the five major studios will be significantly correlated with the associated gross box-office revenue.

H4: The number of user-generated reviews for movies released by the five major studios will be significantly correlated with the associated box-office revenue per theatre.

**RQ3:** How does the number of weeks a movie is in the theater correlate with box-office revenue for the five major motion picture studios?

H5: The number of weeks a movie is in the theater for movies released by the five major studios will be significantly correlated with the associated gross box-office revenue.

H6: The number of weeks a movie is in the theater for movies released by the five major studios will be significantly correlated with the associated box-office revenue per theatre.

**RQ4:** Are there significant differences between movie genres and the associated box-office revenue for the five major motion picture studios?

H7: There will be no statistically significant difference between the movie genre of movies released by the five major studios and the associated gross box-office revenue.

H8: There will be no statistically significant difference between the movie genre of movies released by the five major studios and the associated box-office revenue per theatre.

**RQ5:** Are there significant differences between movie MPAA rating and the associated box-office revenue for the five major motion picture studios?

H9: There will be a statistically significant difference between the movie MPAA rating of movies released by the five major studios and the associated gross box-office revenue.

H10: There will be a statistically significant difference between the movie MPAA rating of movies released by the five major studios and the associated box-office revenue per theatre.

## **METHODS**

This section describes the variables and analysis that will be used to determine the correlation between online user-generated reviews and box-office revenue. The section will also address the type of data used as well as where the data were collected. Moreover, the reasoning for the sample used in the study is explained.

### **Independent Variables**

The independent variables were the online user-generated reviews, the movie genre, the movie time in theater, and the MPAA rating. This data was collected online directly from review sites. This type of data collection provided a good sample size that not only incorporated positive and negative comments but also captured the diversity of the population. Since the two largest movie review sites were used for data collection, it is closely related to what people looking at online reviews across the world would see.

The sites used to collect the data are the two most popular and respected movie review sites, Rotten Tomatoes ([www.rottentomatoes.com](http://www.rottentomatoes.com)) and IMDb ([www.imdb.com](http://www.imdb.com)). These are free, user-generated review sites that do not require any login to view the comments. Both sites have a 10-point base rating system, which allows for the reviews to be combined into a single data set with equal weight being given to the review score for each site. IMDb is one of the largest and most popular movie databases on the web, with an audience of “more than 250 million unique monthly visitors” (IMDb). “IMDb is an important resource for improving our understanding of spectator response” (Canet, Valero & Codina 2016). Canet et al. (2016) note the importance of this dataset by addressing the amount of research conducted that uses IMDb.

Rotten Tomatoes is a “leading aggregator” of movie and television show reviews. It offers a comprehensive guide to what is fresh and is used by millions every day “to help with their entertainment viewing decisions” (Rotten Tomatoes).

Another independent variable will be the total number of reviews. The number of reviews left by users will give us the quantitative measure we need to correlate the quantity of reviews and the box-office revenue. The data will be collected from IMDb and Rotten Tomatoes, the same sites used to gather the review data. This provided consistency among the variables.

An additional independent variable is movie genre. A movie genre is a category for films characterized by similarities in narrative elements or emotional response to the film (Tudor, 2003). The variable used basic movie genres such as comedy, drama, horror etc. opposed to hybrids such as action-adventure, romantic-comedy, etc. The data was collected from the IMDb site only, because Rotten Tomatoes does not provide genre information.

The fourth independent variable used was MPAA rating. A committee assigns this rating to the movie based on the film’s content suitability for certain audiences (MPAA). The data was collected from the IMDb and Rotten Tomatoes.

The final independent variable used was time in theater. This variable refers to the number of weeks a movie was available for viewing in theaters across the country. The data was collected from Box Office Mojo only, because IMDb and Rotten Tomatoes do not provide information about the time a movie was in theaters.

### **Dependent Variable**

The dependent variable will be the box-office revenue of the first run theatrical release in the United States of five major studios: Disney Pictures, Sony Pictures, Universal, 21<sup>st</sup> Century Fox, and Warner Bros. The data collected will be divided into two dependent variables. The first will be the gross domestic revenue from theaters. To make a more standardized comparison the second will be the domestic revenue per theater. The five studios were chosen because they had the largest domestic box office in 2016 (Numbers, 2017). These studios together released 67.9% of all the movies released since 1995 (Numbers, 2017). The individual movie revenues will be collected from Box Office Mojo ([www.boxofficemojo.com](http://www.boxofficemojo.com)), a website that tracks box-office revenue in a systematic, algorithmic way (Box Office Mojo). The study will cover the movies released by one of the five studios that closed their first run theatrical release in the years 2011 through 2016. The six-year timeframe was selected because it provides a large number of cases as well as the most recent full data available.

### **Analysis**

The data will be analyzed through correlation using the Pearson's correlation coefficient. The correlation analysis will be run using the statistical analysis program SPSS. The test will be run on all dependent variables for all movies. This means that each dependent variable will be compared with its corresponding independent variable. Additionally, the results will be compared between the two review sites. The results will also be divided by movie genre and compared to box-office revenues. For the categorical test of genre and MPAA ratings a Chi Square was used.

## **RESULTS**

This section reports and explains the research findings. The section discusses findings answering the research questions and hypothesis as well as descriptive findings. The descriptive findings help understand the results and the data by providing some general information. All the data was analyzed using SPSS 25, software designed to perform statistical analysis.

### **Description of the Variables**

**Movie studios.** The five major studios released 457 movies in theaters from 2011 through 2016. As can be seen in Table 1, Warner Bros. released the highest number of movies. Disney, on the other hand, released the fewest movies.



Table 1. *Studio's Movie Release Totals*

|                          | Frequency | Percent |
|--------------------------|-----------|---------|
| Disney                   | 54        | 11.8    |
| Sony                     | 79        | 17.3    |
| Universal                | 104       | 22.8    |
| WB                       | 126       | 27.6    |
| 21 <sup>st</sup> Century | 94        | 20.6    |
| Total                    | 457       | 100.0   |

**User ratings – IMDb.** On the IMDb site, the average movie rating had a mean of 6.47 stars. The range was 5.3 with the minimum 3.3 and the maximum 8.6, and standard deviation was 0.86.

**User ratings – Rotten Tomatoes.** On the Rotten Tomatoes site, the average movie rating had a mean of 5.95 stars. The range was 7.4 with the minimum 1.8 and the maximum 9.2, and standard deviation was 1.73. The standard deviation for Rotten Tomatoes is twice that of IMDb indicating that the individual scores were more dispersed than those found on IMDb.

**Number of reviews - IMDb.** On the IMDb site, the number of movie reviews had a mean of 54,174.22. The scores range was 1,258,135 with the minimum 235 and the maximum 1,258,370, and standard deviation was 168,651.88.

**Number of reviews - Rotten Tomatoes.** On the Rotten Tomatoes site, the number of movie reviews had a mean of 96,991.33. The scores maximum was 1,208,945 and the minimum 78 with the range 1,208,867, and standard deviation was 119,206.96.

**MPAA rating.** As can be seen in Table 2, of the 457 movies released by major studios four did not have MPAA ratings. The majority of the movies in the data set were rated PG-13 (186) closely followed by R rated movies (156). Because there are so few G-rated movies, for later analysis the G-rated movies will be coded with the PG movies.

Table 2. *MPAA Rating*

|                | Frequency | Percent |
|----------------|-----------|---------|
| G              | 15        | 3.3     |
| PG             | 96        | 21.0    |
| PG-13          | 186       | 40.7    |
| R              | 156       | 34.1    |
| Total          | 453       | 99.1    |
| No MPAA Rating | 4         | .9      |
| Total          | 457       | 100.0   |

**Genre.** The movies were sorted into 12 primary (first) genres. Table 3 shows the frequency of movies that were assigned a particular genre. Because some genres have so few movies that it would invalidate statistical tests, for later analysis the five genres with less than 20 movies will not be included.

Table 3. *Genre Totals*

| Genre Title              | Number<br>of Movies |
|--------------------------|---------------------|
| Action                   | 141                 |
| Comedy                   | 94                  |
| Animation                | 54                  |
| Drama                    | 53                  |
| Biography                | 26                  |
| Horror                   | 22                  |
| Crime <sup>a</sup>       | 14                  |
| Documentary <sup>a</sup> | 9                   |
| Fantasy <sup>a</sup>     | 2                   |
| History <sup>a</sup>     | 1                   |
| Romance <sup>a</sup>     | 1                   |
| Total                    | 457                 |

<sup>a</sup> Indicates that the genre was excluded from later analysis because of the low frequency count.

**Box office.** The mean for Box-Office revenue was \$86,755,536.45. The scores range was \$652,267,810 with the minimum \$2,815 and the maximum \$652,270,625, and standard deviation was 90,090,384.47.

**Box office per theatre.** The mean for box-office revenue per theater was \$26,055.74. The scores range was \$279,055 with the minimum \$117 and the maximum \$279,172, and standard deviation was 25,042.78.

**Time in theater.** The median for the time a movie was in theaters was 13 weeks. The scores range was 265 weeks with the minimum stay being 1 week and the maximum 266 weeks. The standard deviation was 15.53.

## Results for Research Questions and Hypotheses

This section reports the results for each research question and the associated hypotheses. Thus, the results answer the question and provide support for or reject the hypotheses associated with the research question.

**RQ1:** How does the quality of digital word-of-mouth (i.e. user-generated reviews) correlate with box-office revenue for the five major motion picture studios?

H1: The user-generated review ratings score of movies released by the five major studios will be significantly correlated with the associated gross box-office revenue.

H2: The user-generated review ratings score of movies released by the five major studios will be significantly correlated with the associated box-office revenue per theatre.

A 2-tailed Pearson product-moment correlation test was conducted to assess the relationship between review ratings and box office as well as between review ratings and box office per theater. In both cases there was a positive, statistically significant correlation between the variables. The correlation between both IMDb is ( $r_{(455)} = 0.417$ ,  $p = 0.000$ ) and Rotten Tomatoes is ( $r_{(454)} = 0.473$ ,  $p = 0.000$ ) review ratings and box office was moderate in strength. The correlation between the Rotten Tomatoes review ratings and box office per theater was moderate,  $r_{(454)} = 0.434$ ,  $p = 0.000$ , while the correlation between IMDb review ratings and box office per theater was weak to moderate,  $r_{(455)} = 0.380$ ,  $p = 0.000$ . This means that both H1 and H2 were supported by the results. Additionally, the positive correlation values indicate that as the rating score increased, so did the box-office return and the box-office return per theater.

**RQ2:** How does the quantity of user-generated reviews correlate with box-office revenue for the five major motion picture studios?

H3: The number of user-generated reviews for movies released by the five major studios will be significantly correlated with the associated gross box-office revenue.

H4: The number of user-generated reviews for movies released by the five major studios will be significantly correlated with the associated box-office revenue per theatre.

A 2-tailed Pearson product-moment correlation test was also conducted to evaluate the relationship between the number of user-generated reviews and box office as well as between the number of user-generated reviews and box office per theater. In both cases there was a positive, statistically significant correlation between the variables. The correlation between both IMDb's ( $r_{(455)} = 0.674$ ,  $p = 0.000$ ) and Rotten Tomatoes' ( $r_{(454)} = 0.650$ ,  $p = 0.000$ ) number of reviews and box office was strong. The correlation between the IMDb number of reviews and box office per theater was moderate to strong,  $r_{(455)} = 0.560$ ,  $p = 0.000$ , while the correlation between the Rotten Tomatoes number of reviews and box office per theater moderate,  $r_{(454)} = 0.522$ ,  $p = 0.000$ . This means that both H3 and H4 were also supported by the results of the correlation analysis. Additionally the positive correlation coefficients indicate that as the number of user-generated reviews increased, so did the box-office return and the box-office return per theater.

**RQ3:** How does the number of weeks a movie is in the theater correlate with box-office revenue for the five major motion picture studios?

H5: The number of weeks a movie is in the theater for movies released by the five major studios will be significantly correlated with the associated gross box-office revenue.

H6: The number of weeks a movie is in the theater for movies released by the five major studios will be significantly correlated with the associated box-office revenue per theatre.

A 2-tailed Pearson product-moment correlation test was also conducted to evaluate the relationship between the movie's time in theater and box office as well as between the movie's time in theater and box office per theater. In both cases there was a positive, statistically significant correlation between the variables. The correlation between the movie's time in theater and box office was weak,  $r_{(454)} = 0.203$ ,  $p = 0.000$ . The correlation between the movie's time in theater and box office per theater was moderate to strong,  $r_{(454)} = 0.586$ ,  $p = 0.000$ . Therefore, both H5 and H6 were confirmed. Additionally, the positive correlation coefficients indicate that the longer a movie stays in theaters, the box-office revenue increases, especially for box office per theater.

**RQ4:** Are there significant differences between movie genres and the associated box-office revenue for the five major motion picture studios?

H7: There will be no statistically significant difference between the movie genre of movies released by the five major studios and the associated gross box-office revenue.

H8: There will be no statistically significant difference between the movie genre of movies released by the five major studios and the associated box-office revenue per theatre.

A crosstab table (see table 4) with chi-square calculation was used to evaluate the relationship between movie genre and box office as well as between movie genre and box office per theater. Because the box office and box office per theater data was continuous it was necessary to divide the data into categories to compare it to the categorical genre data. Five categories were created by sorting the movies low to high box office and dividing the movies into 20% categories of the total number of movies. The same process was used for the box office per theater categories.

Table 4. *Crosstabulation Genre and Box Office*

| Genre     | Box Office <sup>a</sup> |               |               |                |          | Total |
|-----------|-------------------------|---------------|---------------|----------------|----------|-------|
|           | <\$26.9                 | \$26.9-\$54.0 | \$54.0-\$90.4 | \$90.4-\$201.1 | \$201.1+ |       |
| Action    | 17                      | 28            | 27            | 34             | 35       | 141   |
| Adventure | 6                       | 8             | 8             | 8              | 10       | 40    |
| Animation | 3                       | 3             | 7             | 15             | 26       | 54    |
| Biography | 9                       | 5             | 5             | 5              | 2        | 26    |
| Comedy    | 16                      | 25            | 25            | 20             | 8        | 94    |
| Drama     | 18                      | 14            | 8             | 7              | 6        | 53    |
| Horror    | 9                       | 3             | 7             | 1              | 2        | 22    |
| Total     | 91                      | 92            | 92            | 91             | 91       | 457   |

<sup>a</sup> per \$100,000

The chi-square test showed that there is a statistically significant difference between the movie genre and its box-office success,  $X^2_{(20)} = 67.28$ ,  $p = 0.000$ . The results for the relationship between genre and box office per theater were very similar to the one for the genre and box office,  $X^2_{(20)} = 50.13$ ,  $p = 0.000$ . The crosstabulation analysis for genre and box office (table 4) indicated that Action, Animation and Biography had lower count in the lower box-office category than expected and a higher count in the higher box-office category than expected. On the other hand, Drama had double the number than expected in the lower box-office category and about half the expected count in the higher box-office category. This means that movies in the Action, Animation and Biography genres are more likely to have a higher box-office return.

The crosstabulation analysis for genre and box office per theater (table 5) indicated that Animation had a significantly lower count than expected in the lower box office per theater category and a significantly higher count than expected in the higher box office per theater category. Drama, again, and Comedy had a higher than expected count in the lower box office per theater category, and a lower than expected count in the higher box office per theater category. Also, Action and Adventure genres had an expected count in the lower box office per theater category but had higher than expected counts in the higher box-office per theater category. This means that movies in the Animation genre are more likely to have a higher box-office per theater return. Based on these the null hypotheses H7 and H8 were rejected because there were statistically significant differences.

Table 5. *Crosstabulation Genre and Box-Office per Theater*

| Genre     | Box-Office per Theater |              |               |               |         | Total |
|-----------|------------------------|--------------|---------------|---------------|---------|-------|
|           | <\$9.7                 | \$9.7-\$15.5 | \$15.5-\$23.4 | \$23.4-\$37.5 | \$37.5+ |       |
| Action    | 24                     | 26           | 26            | 30            | 35      | 141   |
| Adventure | 6                      | 7            | 9             | 6             | 12      | 40    |
| Animation | 3                      | 5            | 9             | 15            | 22      | 54    |
| Biography | 7                      | 4            | 7             | 6             | 2       | 26    |
| Comedy    | 13                     | 29           | 23            | 20            | 9       | 94    |
| Drama     | 17                     | 12           | 8             | 10            | 6       | 53    |
| Total     | 70                     | 83           | 82            | 87            | 86      | 408   |

**RQ5:** Are there significant differences between movie MPAA rating and the associated box-office revenue for the five major motion picture studios?

H9: There will be a statistically significant difference between the movie MPAA rating of movies released by the five major studios and the associated gross box-office revenue.

H10: There will be a statistically significant difference between the movie MPAA rating of movies released by the five major studios and the associated box-office revenue per theatre.

A 2-tailed Pearson product-moment correlation test was conducted to evaluate the relationship between the movie MPAA rating and box office as well as between the movie's MPAA rating and box office per theater. There is a very weak negative correlation between the movie MPAA rating and box office as well as MPAA rating and box office per theater,  $r_{(451)} = -0.179$ ,  $p = 0.000$  and  $r_{(451)} = -0.191$ ,  $p = 0.000$  respectively. Although the correlation is significant to the 0.01 level, it is not meaningful because of the very weak correlation coefficients. However, because the MPAA rating is not a continuous variable an additional non-parametric measure was used.

A crosstab table with a chi-square calculation was also used to evaluate the relationship between movie MPAA rating and box office as well as movie MPAA rating and box office per theater (see table 6 and 7). There is a statistically significant differences in the expected relation between the MPAA rating and the movie box office,  $X^2_{(8)} = 30.41$ ,  $p = 0.000$ , as well as between the MPAA rating and the box office per theater,  $X^2_{(8)} = 22.01$ ,  $p = 0.005$ . This means that H9 and H10 were supported by the results. The crosstabulation analysis for MPAA rating and box office (table 6) indicated that G/PG had an expected count in the lower box-office category and a higher than expected count in the higher box-office category; while, PG-13 had a lower than expected count in the lower box-office category and a higher than expected count in the higher box-office category. In contrast, the R rating category had a higher than expected count in the lower box-office category and a lower than expected count in the higher box-office category. The crosstabulation analysis for MPAA rating and box office per theater had similar results (table 7). The only difference is that G/PG had a slightly lower count than expected for the lower box-office per theater category.

Table 6. *Crosstabulation MPAA Rating and Box Office*

| MPAA  | Box-Office <sup>a</sup> |               |               |                |          | Total |
|-------|-------------------------|---------------|---------------|----------------|----------|-------|
|       | <\$26.9                 | \$26.9-\$54.0 | \$54.0-\$90.4 | \$90.4-\$201.1 | \$201.1+ |       |
| G/PG  | 21                      | 13            | 24            | 24             | 29       | 111   |
| PG-13 | 21                      | 40            | 42            | 41             | 42       | 186   |
| R     | 46                      | 39            | 25            | 26             | 20       | 156   |
| Total | 88                      | 92            | 91            | 91             | 91       | 453   |

<sup>a</sup> per \$100,000

Table 7. *Crosstabulation MPAA Rating and Box Office per Theater*

| MPAA  | Box-Office per Theater |              |               |               |         | Total |
|-------|------------------------|--------------|---------------|---------------|---------|-------|
|       | <\$9.7                 | \$9.7-\$15.5 | \$15.5-\$23.4 | \$23.4-\$37.5 | \$37.5+ |       |
| G/PG  | 18                     | 15           | 27            | 23            | 28      | 111   |
| PG-13 | 27                     | 37           | 42            | 40            | 40      | 186   |
| R     | 44                     | 39           | 22            | 28            | 23      | 156   |
| Total | 89                     | 91           | 91            | 91            | 91      | 453   |

## CONCLUSION/DISCUSSION

This study analyzed the relationship between user-generated reviews and the movie box office. The results showed that there is significant, positive correlation between the quality and quantity of user-generated reviews with the movie's success at the box office. The study also looked at other possible elements that could have a relation with the movie box-office revenues, such as genre, MPAA ratings and time in theater.

The findings have provided sufficient significant results to draw some conclusions. The results for RQ1 on user-generated online ratings show that there is a strong, positive correlation between the user-generated rating of the reviews and the movie box office as well as between user-generated rating quality and box office per theater. These results support previous findings by Chevalier and Mayzlin (2006) as well as by Forman et al. (2008) that the positive and negative reviews (user-generated ratings) have a significant impact on decision-making.

The results for RQ2 and its hypotheses on the number of user-generated reviews show that there is a strong connection between the number of user-generated reviews and the movie box-office revenue, as well as between the number of user-generated reviews and box-office revenue per theater. These results are similar to Liu's (2006) findings. A possible explanation is the awareness effect, as discussed by Duan et al. (2008) and Berger et al. (2010). This is the idea that even negative reviews can have a positive effect on the box office by bringing awareness of the movie to more people.

Based on the results for the first two research questions, the conclusion is that both ratings and number of reviews are connected to box-office revenue and box-office revenue per theater. These

results indicate that movie studies need to carefully consider the quantity and quality of user-generated reviews that their movies receive. Studios may wish to develop strategies leading to more, and higher, user-generated reviews as a way of encouraging greater box-office revenues.

Previous research has concluded that microblogging word of mouth (MWOM) can impact movie sales (Hennig-Thurau, Wiertz & Feldhaus, 2015; Rui, Liu & Whinston, 2013) and that the influence was escalated for those posting who had a higher number of followers. However, microblogging activity is relatively transient compared to the UGC archived at online review sites. These sites can be accessed by millions, even billions, of people as opposed to the limited number of followers of someone on Twitter or other microblogging medium. Thus, the current investigation has added to the current body of knowledge related to online WOM, by focusing on UGC found in major online ratings and review websites.

The results for RQ3 showed that even though time in theater does not have a strong relationship to the movie's overall box-office success, results that some may consider counterintuitive, time in theater definitely has a stronger connection to the box office a movie makes per theater. The strong correlation between the time in theater and the box office per theater indicates that there still is a strong relationship between the studios and the theaters. These results further support Huddleston's (2017) claim that even though major studios are discussing reducing the time of the theatrical window, they do not want to eliminate it.

Based on the RQ3 results, a possible explanation for the difference is that the number of theaters a movie plays in is a more accurate measure than the time it is available in theaters, since a movie could be playing in a small number of theaters or thousands. The difference in the result between box office and box office per theater, in regards to the movie's time in theater, could be related to the different release strategy used for a movie. Sometimes a movie is released to the largest number of theaters during the first two weeks, and then in subsequent weeks the number of theaters in which the movie is available slowly decreases. The opposite strategy is to first release the movie only in a small number of theaters, and then, over a number of weeks, slowly increase the number of theaters the movie is available at reaching the peak later on in the theatrical run. The latter strategy is employed when studios believe that word-of-mouth, including user-generated reviews, will be positive and that word-of-mouth from the early limited release helps to drive later increases.

The results for RQ4 show significant difference between a movie genre and its box-office success as well as between the movie genre and box office per theater. These results support previous research stating that there is a difference between genres and their box-office success (Redfern, 2012 & Numbers, 2017). As for the leading genre, the results do not support the previous finding of Fantasy/Science Fiction (Redfern, 2012) and Adventure (Numbers, 2017) being the highest grossing genre. The difference can be explained by the categorization of movies into genres. Often movies are assigned to more than one genre or a genre-hybrid (two genres combined into one, such as RomCom). Depending on which categorization is used it may change the results.

The results of the crosstabulation analysis indicate that Action, Adventure and Animation are more likely to have a higher box office and box office per theater revenue, while Comedy and Drama are more likely to have a lower box office and box-office per theater revenue. A possible explanation for such difference could be in the production cost, as Action, Adventure and Animation tend to have bigger production budgets than a Biography or Drama. It is important to keep in mind that bigger revenue does not always mean bigger profit, which is where the movie

production cost plays a vital role. Thus, a Biography may have smaller box-office revenue than an Animation movie, but the Biography also has smaller production cost, which can lead to a higher overall profit.

The chi-square results for RQ5 showed a statistically significant difference between the movie's MPAA rating and its box-office success. Although slightly smaller, there is also a statistically significant difference between movie MPAA rating and the box office per theater. Additionally the crosstabulation analysis indicates that PG-13 movies are more likely to have a higher box-office revenue and box-office per theater revenue. On the other hand, R rated movies are more likely to have low box-office revenue and box-office per theater revenue. These results are similar to Ravid's (1999) findings regarding the influence MPAA rating has on the box-office success. Additionally the results support findings from Austin et al. (1981) and Numbers (2017) that the PG-13 rating has the highest average box-office. A possible explanation for this is that the MPAA can limit the audience that goes to the movies, and the PG-13 rating is a "happy medium" where kids and adults can enjoy the entertainment. The PG-13 category is the one that the majority of audiences feel comfortable attending, thus including the widest age range. This is significant because it gives insight to what type of movies are most likely to be successful at the box office and it explains why studios may release more movies in certain categories or modify movie content to change the rating. The other categories appeal to a smaller portion of the age spectrum, therefore, limiting the number of people that are willing and/or are able to attend the movie.

The research was based on two assumptions. The first assumption is that the diversity of theater sizes cancel each other out, thus not impacting the results. The second assumption is that the inflation rate over the years in which data were collected was fairly insignificant, thus the overall effect on box-office revenues would also be insignificant. In addition, the research does not account for production cost. While an analysis controlling for production cost might lead to better results, no consistent source reporting production costs was available at the time the research was conducted. Another weakness of the study is that the data were collected at a single point in time, which allowed different time spans for users to rate and review movies on the websites.

There is still a lot to learn about the importance of online word-of-mouth and its impact on the entertainment industry. Future research should be designed to avoid the limitations identified in the previous paragraph. Another development of the research would be to collect the data at a specific time after each movie is released (e.g. six months after the theatrical debut), to eliminate the different time periods in which the reviews/ratings were provided by users. Finally, future investigations may wish to employ computer algorithms of online reviews (Shikalgar & Dixit, 2014) as a way of doing online mining of the rich data available in reviews.

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## **HUMAN RESOURCES DEVELOPMENT: A PROPOSAL FOR ENGAGEMENT IN SUSTAINABILITY**

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### **ABSTRACT**

Sustainability is most commonly associated with the natural environment, but in reality it is a multidimensional construct encompassing goals for Profit, Planet, and People. In any organization, the Human Resources Management (HRM) function should focus on achieving the sustainability goals related to People, a component that tends to be neglected in discussions of sustainability. Sustainable Human Resources Management --the collection of HR policies, practices, and policies focused on facilitating financial, social, and ecological goals through the management of people - - is the difference between organizational success and organizational excellence. Only by engaging in Sustainable HRM can an organization reach its highest potential by maximizing the ability of its “people component” to achieve its business’s goals and strategy, for today and tomorrow. Sustainable Human Resource Management enables an organization to reach its objectives, while simultaneously empowering its employees to maximize their own potential and reach their goals in life. We present a review of the literature on sustainability and HR, and then seek to integrate these two concepts by focusing on the opportunities for implementing sustainability in HR development. We use the areas of employee training and performance appraisal as examples of the creative thinking and innovation that need to be brought into HRM in order to truly further the people component of the Triple Bottom Line.

*Keywords:* Sustainable Development; Human Resource Development; Human Sustainability; Employee Sustainability; Sustainable Human Resource Management.

### **INTRODUCTION**

Human Resources Management (HRM) might not be automatically linked to sustainability, but there is a strong and vibrant interconnection between the two topics. Many of the most widely published and acclaimed perspectives on sustainability such as “The Triple Bottom Line”, “Stakeholder Theory”, and “Shared Value”, highlight the importance of people and employees as a key requirement for creating a sustainable organization.

Discussions about harassment, fair salaries, paid leave, and wage equality among others, are directly related to the Human Resources (HR) function and to sustainable people practices across the globe (Bruntland et al, 1987; Gescher, 2016). Although multinational companies face different expectations about their HRM in the countries they operate, the political climate around the world is bringing a much needed focus on the people component of the Triple Bottom Line -- People, Planet, and Profits.

In less regulated workplaces, the main concerns of workers and society are related to the provision of basic employment protections, minimum wages, and benefits (Crane, Matten & Spence, 2014). In contrast, the regulated workplaces that provide most of the jobs in developed countries present an opportunity to discuss the best practices at the intersection of Human Resource Management (HRM) and Corporate Social Responsibility (CSR). In these regulated workplaces, legislation largely takes care of most employee protections, and human resources professionals might be able “to focus on ensuring that the firm lives up to the spirit as well as the letter of the law, and goes beyond legislation by attending to issues of diversity, work-life balance, training and employability, pension provision, anti-harassment, etc.” (Crane, Matten & Spence, 2014, p. 255).

Focusing on these contexts where the HR function can consider better ways to further sustainability, this paper seeks to define Sustainable HRM, theorize about its goals, and examine the activities and objectives of human resource development as an opportunity to engage sustainable business practices. Although, the term Sustainable HRM is not new, there is not a well-established definition in the literature. In her overview of the research in Sustainable HRM, Kramar (2014) identifies several different approaches to sustainable human resources management, including approaches that seek the survival of the organization by ensuring a sustainable supply of employees; HR activities that support environmental performance (also called Green HRM); and HR practices that consider social and environmental outcomes in and of themselves, and not simply as a cause or a mediator of financial performance. While acknowledging the differences in these research streams, Kramar (2014) offers this definition of Sustainable HRM,

Sustainable HRM could be defined as the pattern of planned or emerging HR strategies and practices intended to enable the achievement of financial, social and ecological goals while simultaneously reproducing the HR base over a long term. (p. 1084)

The goal of Sustainable HRM should be treating people as people, not as means to the end of a financial goal. Only by doing this can an organization maximize the potential of its “people component” to achieve its business’s goals and strategy -- for today and tomorrow. Sustainable Human Resource Management enables an organization to reach its goals, while at the same time empowering its employees to maximize their own professional and personal potential and reach their goals in life. Sustainable development in HRM can be the difference in organizations fulfilling their mission statement and organizations thriving to attain their vision of the future.

We first present a review of the literature on sustainability and HR, and then seek to integrate these two concepts by focusing on the opportunities for implementing sustainability in HR development. We use the areas of employee training and performance appraisal as examples of the creative thinking and innovation that need to be brought into HRM in order to truly further the people component of the Triple Bottom Line.

## **LITERATURE REVIEW**

There is surprisingly little research on the intersection between human resources and sustainability. This lack of research was pointed out by Jeffrey Pfeffer in 2010 by performing searches on Google Scholar where he found “53,000 [entries] for ‘environmental sustainability’, but just 12,900 for ‘social sustainability’ and a paltry 569 for ‘human sustainability’” (Pfeffer, 2010, p. 35). Eight

years later, running the same search on Google Scholar results in 525,000 entries for "environmental sustainability" (almost 10 times more); 93,700 "social sustainability" (over 7 times more than in 2010), but still a relatively meager 3,160 results for "human sustainability" (only about 5.5 times more). The results are even fewer for more targeted searches such as "Sustainable Human Resource Management" with 834 results, or even "employee sustainability" with only 361 results. A general reading of current literature shows a focus on the HR department supporting the company's environmental sustainability initiatives through orientation and training, rather than a specific concern about the people or social component in and of itself, and about ways to use HRM to further employees' sustainable development.

We argue that political and societal changes call for attention to the meaning of sustainability in Human Resources, and how it might be implemented. Although it might seem that by referring to people as resources we are equating humans with inputs, it is important to remember the different nature of "Personnel Management" and "Human Resource Management", as Torrington, Taylor, Hall, and Atkinson (2011, p. 6) rightly explained it: "Human resource management signifies more than an updating of the label; it also suggests a distinctive philosophy towards carrying out people-oriented organizational activities: one which is held to serve the modern business more effectively than 'traditional' personnel management"

## **Sustainability**

According to Rainforest Alliance (2014) "consumers' associations with sustainability tend to be literal – words that come to mind are recycling, natural and preservation." But there is more to sustainability than the traditional "reduce, reuse, recycle" mantra that is so prevalent with U.S. consumers. One of the most cited definitions of sustainable development is from the United Nation's Brundtland Commission report in 1987 – *Our Common Future, From One Earth to One World*, "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

This broad definition of sustainability must be reduced in scope in order to apply it to the understanding of the issue of sustainability in different areas. Adam Werbach, the CEO of Saatchi & Saatchi and former president of the Sierra Club, does a very good job of applying the concept into a language that is practical and easily understood to business professionals:

For my purposes, a sustainable business means a business that can thrive in the long term. Sustainability is bigger than a PR stunt or a green product line, bigger even than a heartfelt but occasional nod to ongoing efforts to save the planet. Imagined and implemented fully, sustainability drives a bottom-line strategy to save costs, a top-line strategy to reach a new consumer base, and a talent strategy to get, keep, and develop creative employees. (Werbach, 2009, p. 9)

Werbach's view of sustainable business is essentially an application of John Elkington's (1994) Triple Bottom Line accounting framework, which encourages companies to focus on social, environmental and financial results --often referred to as the 3Ps: Profits, People and Planet. This model challenges the traditional focus of companies on profit --the "bottom line" or the last entry in the Profit & Loss account-- and argues that firms need to develop metrics to measure the effects of their decisions on people and the environment. One of the most important arguments of this framework is that all three "bottom lines" are equally important and that the most sustainable practices occur at the interaction of people, planet, and profit. An industry leader in sustainability,

and environmental performance and reporting, Andrew Savitz, explains how the Triple Bottom Line “captures the essence of sustainability by measuring the impact of an organization's activities on the world...including both its profitability and shareholder values and its social, human and environmental capital” (Savitz, 2006, p. xiii).

Another one of the most utilized perspectives for studying sustainability in business is R. Edward Freeman's Stakeholder Theory (1984), which looks at how business operations and decisions affect the people or organizations which have an interest in the success or failure of the business. Customers, employees, shareholders, business partners - including suppliers and distributors- , the local community and government/regulatory agencies are some of the most important stakeholders identified by Freeman. Oftentimes, these stakeholders have conflicting interests or ‘claims’ on the organization, so organizations must find a way to prioritize these claims. These ranking of importance reflects the organization's values and affects the decision-making process.

### **The Role of Human Resources**

One of the most important roles of HRM is to maximize the potential of the “people component” of an organization to achieve the business's goals and strategy. This maximization of a company's “people component” through HRM can be broken down into different policies, practices, and strategies. Though there is no industry standard that exactly sums up all the responsibilities of HR, Hollenbeck., Gerhart, Wright, and Noe (2012) explain that,

Human resource management practices include analyzing and designing work, determining human resource needs (selection), teaching employees how to perform their jobs and preparing them for the future (training and development), rewarding employees (compensation), evaluating their performance (performance management), and creating a positive work environment (employee relations). (p. 2).

In the 1980s, the field of HR started to embrace the concept of Strategic Human Resource Management, which views employees as a source of competitive advantage, and not as interchangeable commodities (Lengnick-Hall et al., 2009). As business' needs grow, new ideas are being adopted as industry standards, and new laws are issued, areas such as employee safety, wellness, and culture are increasingly being included under the Human Resources umbrella.

However, conflict arises between two different views of the role of Human Resources Management: on one side HR is a secondary function of the firm's value chain, tasked with supporting the other functions by providing personnel in ways that maximize efficiency, productivity, and overall returns for the company (Pfeffer, 1995) – an emphasis on the “management” aspect that has become the main area of academic research in human resources (Greenwood & Simmons, 2004; Guest, 1997); while in the stakeholder view of employees, HR is seen as a tool to give voice to the employee's interests and priorities – an emphasis on the “human” aspect of HRM (Greenwood & Simmons, 2004).

In the more instrumental, value-chain view, the Human Resources serves the organization in two ways: firstly, through external and internal recruiting the HR department seeks a sustainable supply of employees, in which meeting organizational needs for a stable source of workers is equated with the firm's, or even the geographical region's, long-term viability (Hall & Lansbury, 2006;



Pfeffer, 1995); secondly, the people component of the organization can be its source of competitive advantage. For example, Pfeffer (1995) presents a list of successful companies and explains how they have created competitive advantage through their HRM programs. What these streams of research have in common is that they look for ways in which employees can serve the company. In the stakeholder view of employees, the focus shifts to how the organization can serve the needs of employees to grow and find meaning at work (Chalofsky & Krishna, 2009).

### **SUSTAINABILITY IN HUMAN RESOURCES: AN INTEGRATION**

By returning to the concept of the Triple Bottom Line we can see that the most sustainable initiatives occur at the intersection of people, profits, and planet. For example, if an energy company decides to upgrade an old and less efficient coal power plant it would improve the company's profits due to its constant need for low cost electricity, it would most likely benefit the planet by reducing emissions, and it would benefit the people in the surrounding community by improving the air and water quality. These areas of synergy between the three areas social, environmental and financial are the epitome of sustainable development but intersections between two of the three bottom lines are still sustainable.

In many ways, "sustainability is a people issue. It affects a company's culture and behavior. It affects the messaging that companies use in recruiting, how companies engage and retain employees, [and] how they train employees" (Society for Human Resource Management, Business for Social Responsibility & Aurosoorya, 2011, p. 32). Traditionally, sustainability efforts in the area of HRM reside at the juncture of people and profit in the Triple Bottom Line framework. For example, by instituting a telecommuting policy, organizations can reduce the investment in office space, improve employee satisfaction and productivity, and reduce carbon emissions by having few employees traveling to work by car. This one change, in which human resources would play a vital role, clearly exhibits the concept of the Triple Bottom Line.

The sustainable HRM resides squarely in the People component of the Triple Bottom Line. The association between HR and sustainability might not be self-evident because it represents a new way of looking at issues in HR that can raise contradictions and paradoxes within the organization, since neither managers nor employees are not used to take this perspective. As Kramar (2014) aptly put it:

...responsibility to a variety of different stakeholders is undertaken for its own sake, not because it furthers the economic interests of one stakeholder, that is the owners of the organisation. According to this approach performance of the organisation would be measured in terms of a variety of metrics including employee well-being, community well-being and quality of life. (p. 1072)

### **Sustainability in the Workplace and Human Resources:**

In a recent survey, respondents were asked about the interaction between the human resource management function and sustainability. Organizations show that the investment in sustainability leads to positive outcomes, including "1) improved employee morale, 2) more efficient business processes, 3) stronger public image, 4) increased employee loyalty, and 5) increased brand recognition" (SHRM, BSR & Aurosoorya, 2011, p. 61). These findings are supported by the Global Reporting Initiative's indicators relevant to the field of human resources. Traditionally, by

calculating the return on investment (ROI) and other specific HR metrics for sustainability initiatives, organizations can make the business case for incorporating sustainability practices into an organization's philosophy and practice. The challenge of Sustainable HRM is that social and environmental outcomes, and not just financial performance, should be supported by HR.

By incorporating sustainability into an organization's culture and strategy, organizational stakeholders are more likely to accept and adopt the initiatives. Additionally, these organizations see an increase in job satisfaction levels, improved morale, and the development of employees to be future organizational leaders (SHRM et al., 2011). For the suggested sustainability measures to be successful, organizations need the support of top-management to lead the change in how employees are viewed and treated. As data emerges about the economic value of sustainability both from an environmental and employee perspective, it should become more appealing to top managers to invest in sustainability. The involvement of the HR department in an organization is key to incorporating these philosophies throughout the firm.

### **Employees' Needs and Sustainability**

One of the theories that companies can use to engage sustainable development in human resource management is the full implementation of Maslow's (1943) Hierarchy of Needs, one of the first formal theories regarding human motivation. Maslow identified five functional needs in all humans: physiological needs, safety and security, love and belonging, self-esteem, and self-actualization. This theory has been depicted as a pyramid with the five key psychological human needs in an order of hierarchical progression, in which lower-level needs must be satisfied for the person to recognize the needs of a higher level. An important thing to note is that once one moves up the hierarchy, one can move back down after a major negative life event such as a natural disaster, divorce, loss of job, etc.

Many factors enter into the evaluation of what salaries should be offered but, in Maslow's Hierarchy, a company needs to pay an individual enough so that they are not constantly worried about making ends meet. Informal studies show that pay is not a major factor towards job satisfaction but one of the primary reasons for job dissatisfaction results from companies underpaying workers. In fact Glassdoor.com, one of the leading online job search engines, released a study reporting the main impact factors beyond salary on Employee Satisfaction are culture and values, career opportunities, senior leadership, work-life balance, compensation and benefits, and business outlook (Nunez, 2015). These findings support the theory behind Maslow's Hierarchy. For example, career opportunities are linked to self-esteem; the environment created by senior leadership, and work-life balance can be a source of love and belonging; compensation and benefits provide safety and security as well as self-esteem; and business outlook also helps to establish a sense of safety and security (Pfeffer, 1995).

By paying employees a competitive or fair wage/salary and offering some sort of benefits such as healthcare, life insurance, retirement, etc. companies can, at a minimum, enable an employee to fulfill some of their basic needs so that they can contribute to the company, but this worker will most likely be a disengaged worker. By only fulfilling the employees' most basic needs, a company is more likely to have workers who are just "clocking in" and "clocking out," and literally coming to work only to collect a paycheck. Going back to Maslow's Hierarchy one can see that employees have a deep desire, indeed a need, to develop a sense of belonging or connection with their company and the people they work with. As companies enable employees to fulfill each higher

level of Maslow's Hierarchy of Needs, employees become more and more engaged in an organization (Chalofsky & Krishna, 2009). If a company can create a culture that fosters communication, friendliness, and cooperation between employees and not one where there is constant competition or employees are living in fear, the company can move the employees into the need of developing self-esteem.

We argue that part of the role of the HR manager is to promote the prioritization of employees' interests when stakeholders are in conflict. While this contradicts the agency-theory view that the corporation should be managed to maximize shareholder wealth, it meshes well with the growing body of literature in management and business law that advocates for an entity theory focused on the company's health (Bower & Paine, 2017). Although this seems to speak about an idyllic or even utopian company, this is the current practice in countries like Switzerland as explained by Zaugg, Blum, and Thom and reported by Kramar (2014). It might be less common in other countries, but there are exemplars like Sir Richard Branson, founder of Virgin Group Ltd. who has gone as far as saying that employees are first, customers are second, and shareholders are next (Branson, 2014).

Sustainable HRM's changes the focus from maximizing the profit you can generate using your employees, to maximizing the potential of the people component of an organization; from a short-term to a long-term orientation to performance. The need for this balance is explained by Immanuel Kant's (1785) second formulation of the Categorical Imperative, which he believed to be a requirement that must be obeyed in all circumstances and by all people: "Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end."

It is here that the Human Resources Development (HRD) function can help individuals and organizations to thrive. Tellingly, in 1983 the United Nation's Brundtland Commission identified that "Human resource development is a crucial requirement not only to build up technical knowledge and capabilities, but also to create new values to help individuals and nations cope with rapidly changing social, environmental, and development realities" (Brundtland et al., 1987).

Significantly, the commission is identifying HRD as a crucial field for ensuring sustainable development in different dimensions. Thus, we think that it is appropriate to focus on the development function of HR, as a key area to further sustainability in HRM. The area of HRD "includes such opportunities as employee training, employee career development, performance management and development, coaching, mentoring, succession planning, key employee identification, tuition assistance, and organization development" (Heathfield, 2016).

Focusing on HRD serves to initiate the dialogue about the intersection of sustainability and HR. Where recruitment or compensation policies can be changed by executive fiat, integrating sustainability into HRD is a long term goal because it requires changes in the organization's culture and in the minds of the people that are being developed in the organization (Pfeffer, 1995). Although there are many aspects of the HRD where managers can improve the sustainability of the people component of their organizations, we will focus on training, career planning, and performance management.

### **Sustainability in HRM through Training and Development**

One of the best areas to further the stakeholder view of HR is investing in the training and personal development of employees. Organizations most often find themselves training to prepare new hires, refresh employees on changing industry knowledge or strategic business practices, enhance the skills or abilities of employees for professional/personal development, or when employees are promoted and need preparation towards the responsibilities of the higher level job.

Human capital development is one of the areas where the human resource function can help make the sustainability transition (SHRM, et al. 2011). Although studies have proven the benefits of investing in employees through training in job knowledge and personal and professional development (Rouiller & Goldstein, 1993; Saks, 1995), surveys of employees indicate that offering career development opportunities is an area where companies need to work more, especially because these same employees rank career development as the second most important aspect of attractive jobs (De Vos & Meganck, 2008). Moreover, a recent survey by the American Psychological Association (APA) showed that although most workers think they have the right skills to perform well in their current job, nearly half of US workers surveyed are concerned about the changing nature of their trades. Among these people, those who perceive that there's a lack of supervisor support for their career development plan to leave the company within a year (APA Center for Organizational Excellence, 2017).

Companies might be wary of making this investment, particularly since workers stay an average of 4.6. years at any one given job (U.S. Bureau of Labor Statistics, 2014), and according to the report “Multiple Generations @ Work”, 91% of Millennials expect to stay in a job for less than three years (Future Workplace, 2012). Across all age groups, a 2015 survey found that 93% of employees move up in their careers by switching companies, rather than moving up the traditional organizational ladder, which creates problems with turnover costs, team dynamics, and holes in the pipeline to top managerial positions (Rigoni & Nelson, 2015).

A manager with a fixed annual budget for training and development might be concerned about allocating their training dollars by accurately identifying the employees who are going to stay with the organization. This traditional training investment focuses on financial outcomes; therefore, attempting to improve the ROI by predicting which employees will stay. Training employees so that they stay is again based on the notion of managing people just as any other resource is managed, a job that has to do more with the procurement of a material than with social or ethical concerns.

Here is what a model of this might look like after managers identify the employees they believe are going to leave or stay with the organization:

Table 1. Traditional Value-Chain Employee Training Investment Model

| Development Opportunities | Employee's Decision |                |
|---------------------------|---------------------|----------------|
|                           | Stay                | Leave          |
| Train                     | Good Investment     | Bad Investment |
|                           | Good Returns        | No returns     |
| Do Not Train              | No Investment       | No investment  |
|                           | No returns          | No returns     |

This investment training model apparently easily guides a manager to choose who to train with their department's' budget: the people more likely to stay, since investing in employees who might leave is seen as a bad decision. Sadly, this model fails to consider non-monetary effects of training, and it treats people as investment dollars. For example, Guest (1997) suggested that organizational performance should not be the only concern of the HR professional, as there are many other potentially valuable employee-related outcomes, such as satisfaction, community involvement, organizational climate, etc.

Under the goal of Sustainable HRM, a manager must keep in mind two principles: first, seek to treat people as people; and second, enable employees to maximize their own personal potential. These two principles are not less right if the employee leaves in the near future. The Sustainable Model of Employee Training does not attempt to speculate which employees will stay and leave, because it recognizes the value of the long-term social outcomes derived from this training *even if the employees leave*. This approach is congruent with Guest's (1997) view that "HRM practices should be designed to lead to HRM outcomes of high employee commitment, high quality staff, and highly flexible staff" (p. 269).

Importantly, companies should avoid the common mistake of not providing opportunities to apply the new skills that employees have acquired after training. Additionally, the benefits of this type of training can be further maximized (the Train-Stay cell in Table 2) if the company follows a policy of promoting from within, which has several advantages: it engenders more employee commitment and organizational citizenship behaviors (Suttapong, Srimai & Pitchayadol, 2014), creates social networks and soft sources of power within the company, builds a sense of fairness, and ensures that those managing the company are knowledgeable about the business (Pfeffer, 1995).

Table 2. Sustainable Model of Employee Training

| Development Opportunities        | Employee's Decision                                                                                  |                                                                                                    |
|----------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                                  | Stay                                                                                                 | Leave                                                                                              |
| <b>Train (Invest)</b>            | Successful planning for the future of the firm.<br><br>Increases the likelihood of employees staying | Increased industry reputation as people developer.<br><br>Recruiting top talent                    |
| <b>Do Not Train (Not invest)</b> | Undeveloped Talent that will stagnate the firm<br><br>Ineffective employees                          | Could lose people with potential of talent due to lack of development<br><br>Difficulty recruiting |

Examples of the approach depicted in Table 2 are many US-based companies committed to prioritizing employee training and education – even sponsoring degrees that are apparently not related to the firm's business. Starbucks offers full tuition reimbursement for 4-year online degrees in any field at Arizona State University for 25,000 workers, and the benefit is available to any employee that works 20 hours or more. Walmart has announced a partnership with three universities to offer a \$1-dollar-a-day tuition for some online certificates, and that employees

taking advantage of this benefit will get assistance from a coach in identifying their education and career goals (Yglesias, 2018). More educated workers would have more opportunities in the job market and yet, research from the US Bureau of Labor Statistics shows that these employees are more likely to stay because they like the training benefit – that is after training these employees want further training (Cappelli, 2004), probably because employees with a long-term orientation self-select into these programs (Manchester, 2012).

### **Sustainability through Performance Appraisal**

As we approach the idea of sustainability in HR, one of the concepts that must be addressed is that of performance appraisal. According to the UN Global Compact, the world's largest global corporate sustainability initiative, with over 8,000 companies and 4,000 non-business participants based in over 160 countries, "the inclusion of sustainability-related performance management and compensation criteria is often thought to signal a true integration of organizational sustainability" (United Nations Global Compact, n.d.).

For many managers and employees, performance appraisals are one of the most negatively viewed segments of the human resources process. Traditional performance appraisals focus on comparing standards to performance for a particular employee. By moving from a traditional annual or semi-annual performance review to ongoing performance management, managers are able to focus more on activities that "align every initiative with your company's 'true north'" (Meher, 2017). By aligning goals, managers and human resources professionals are able to focus on developing the employee through coaching and mentoring, as well as giving the employee the opportunity to understand how they contribute to the overall success of the organization.

Utilizing the techniques of goal alignment and performance management, human resource departments can invest in the success and growth of employees, not only as an asset to the organization but as individuals. By aligning employee goals with that of the organization, employees are able to see a real link to between their performance and that of the company. This perceived link allows the employee develop a sense of task significance, which can lead of a feeling of meaningfulness in regards to their work. As organizations continually look for more ways to keep their employees engaged, providing "work that matters" represents a potential non-financial perk that resonates especially with a generation of socially and environmentally-conscious young talents (Safian, 2014).

Another way to managing performance is through the use of competencies. Professionals in the business world are familiar with the concept of core competencies from an organizational or business perspective; however this concept can be applied to the field of human resource management. According to the Society for Human Resource Management (SHRM), "competencies are specific employee behaviors that are correlated with job performance, can be measured and can be strategically leveraged throughout multiple human resource related systems within a company to improve the organization's overall performance" (Society for Human Resource Management, 2013). The competency approach has changed the way many companies approach their HR process, particularly selection and performance appraisal.

The competency approach to performance management focuses on the development and appraisal of various competencies. By using this method, a company can focus not simply on the job at hand, but on the competencies needed for success at various levels of the organization. This requires

managers to focus on employee behaviors and skills, which could lead managers to engage with the employees as people, not as simply another type of asset. Such an approach would be rewarding for managers who like to see themselves as people developers, but also can be a source of sustainable competitive advantage (Lado & Wilson, 1994).

### **LIMITATIONS AND FUTURE RESEARCH**

Although the intersection of Human Resources and Sustainability is a promising area, it is not without limitations, some of which are becoming more salient to HR academics and practitioners.

The first limitation is the applicability of our recommendations, particularly in the area of training, to temporary and contract workers, or what some have called the gig economy or Workforce 2.0 – an area where the number of jobs is growing faster than in traditional work arrangements (Hathaway & Muro, 2016). This contingent workforce has non-existent or limited job security and, since a lot of companies in the gig economy claim these workers as contractors rather than employees, investments in training might be difficult to justify. Some of these contingent employees engage in work that require high-levels of training; for example, software coding. In those cases, the gigs can be seen as a form of work experience that can prepare these people for future jobs (Ferenstein, 2018). However, in the rides and rooms industry, performance appraisals might prove to be a more fruitful area for Sustainable HRM than employee training, since the company employing these workers and the workers are both invested in performing well, so that the organization can get more customers, and the employee can keep building a string of gigs.

We also need to acknowledge the cultural differences in approaches to training. In her study of British and French firms, Tregaskis (1997) explains how national differences in legislations related to workforce training, the education system, and the degree of ‘professionalization of management’, leads to different views about the role of private companies in providing training and career preparation. Thus, our proposal for investments in training might be more relevant in countries in which training workers is less shaped by the government and by societal expectations, giving companies more leeway in creating their own employee development programs. Future research could explore how cultural differences shape the perception of organizational sustainability, and how these perceptions promote or deter investments in Sustainable HRM.

The generalizability of our recommendations to employees with unsatisfied lower-order needs is another limitation. Workers in more precarious economic situations, or those in developing economies, might be less concerned with training as a source of personal growth and self-actualization. However, this does not mean that they are not interested in having opportunities that could help to increase their income and fulfil their job potential. Thus, our suggestions, although not directly applicable, could be tailored to these workers.

Finally, it is important to acknowledge the difficulty that HR practitioners might find in obtaining company support for the Sustainable Model of Human Resources Management. This model departs from more mainstream views of the human resources function, which might be more easily to defend in purely financial terms. We suggest that most experienced and recognized practitioners might be the ones able to use their professional standing and reputation to back the relevance of our model and its potential to provide results in the long-term – just as any other sustainability initiative. Additionally, support from high levels of the organization, particularly from CEOs, can be an important way to signal the importance of these changes to the organization.

For future research, we believe that conducting a survey of employees and human resource managers about employee sustainability would provide quantitative data for analysis of our model. Such research would be helpful in clarifying what Sustainable HRM means to different audiences and could also help to elucidate other areas beyond training in which the human resources function can help companies to achieve social outcomes. Since there is some evidence that different countries take different approaches to the issue of employee training and development, global comparative studies might be particularly useful.

Another area of future research from a pedagogical perspective involves developing methodology to teach the connection between sustainability and an organization's employees. The education of upcoming managers and HR professionals is a key opportunity to deconstruct the value-chain interpretation of human resources, explain the emergent perspective of Sustainable HRM, and equip future business leaders with the tools and understanding required to challenge the traditional view.

## CONCLUSION

In our view, a framework for Sustainability in Human Resources, needs to be guided by one basic principle: treat people as people – not as an input or a mean to an end, but as an end in and of themselves. This might be problematic for an area that talks of people as “assets” and that, as a matter of fact, talks of humans as resources. Although we do not delve on the implications of these labels, we do call attention to the potential problems of this view in terms of employee disengagement, dissatisfaction, and turnover.

The area of sustainability needs to move beyond the low-hanging fruit of finding energy and waste inefficiencies in order to improve environmental performance. Although it is important to maintain progress in ecological sustainability, it is also vital to start a dialogue about the people component of the Triple Bottom Line, and in particular about ways to treat employees in more sustainable ways. We can see the calls for this in protest movements in the Europe and the US seeking better wages, better worker protections, and better work-life balance. The Human Resources function has an important role to play in fostering long-term sustainability and consideration of employees as some of the most important stakeholders.

We argue that Human Resources Development is the key area where HR professionals can better implement a stakeholder view of employees that places workers as the central concern. Although these expenses might be difficult to reconcile with a more instrumental view of HR, investments in training should be seen as a prerequisite to becoming an employer of choice.

In the area of employee performance, continuous appraisal, the alignment of employee and the organization's goals, and a competency-based approach to feedback, are some of the ways in which companies can respond to the United Nation's Global Compact for a true incorporation of the people component to the company's Triple Bottom Line.

We hope that the integration of sustainability in Human Resources Management offers an opportunity for companies to realize improved employee and organizational outcomes, and to focus on people – an area that has received less attention than the environmental component in Corporate Social Responsibility programs, but which deserves increasing commitments to realize the promises of organizational sustainability.



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## **MEDIATING EFFECTS OF FAITH DRIVEN CONSUMPTION (FDC) ON RELIGIOSITY AND APPAREL SHOPPING ORIENTATION**

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### **ABSTRACT**

This study introduces a new construct, faith driven consumption (FDC), and then examines the relationships among religiosity, FDC, and apparel shopping orientation. A sample of 333 US Christian consumers was used, and the survey data were analysed with structural equation modelling. The results show that higher levels of religiosity increase the level of FDC. Moreover, FDC increases the level of brand consciousness, brand loyalty, quality consciousness, and decreases consumers' price consciousness. More importantly, FDC plays a role in counterbalancing the impact of religiosity on brand consciousness, brand loyalty, and price consciousness. Specifically, FDC reverses the negative effect of religiosity on brand consciousness and brand loyalty. Thus, FDC is a more effective construct than religiosity when investigating the effects of religions on consumers' behavior in the marketplace.

*Keywords:* religiosity, faith driven consumption, apparel shopping orientation, mediator, Christian

### **INTRODUCTION**

As an important component of culture, religion provides frameworks for values, beliefs, and practices for its members (Worthington et al., 2003). It affects consumers' behavior and influences their likes and dislikes (Rehman & Shabbir, 2010). It also impacts consumers' purchasing decisions (Essoo & Dibb, 2004) because they may consume or reject certain products and/or brands to demonstrate their religious identity (Lindridge, 2005; Schroeder, 2000). However, limited studies have focused on this topic because of the sensitivity of the topic, validity of measurement scales, methodology issues, and lack of theory (Swimberghe, Flurry, & Parker, 2011).

Investigating how religion influences consumer behavior, including brand choices and patronage behavior, is important. One of the main focuses in consumer behavior research on religion is religious commitment, which is religiosity. Commonly, religiosity is "the degree to which a person adheres to his or her religious values, beliefs, and practices, and uses them in daily life" (Worthington et al., 2003, p. 85). Marketing and consumer behavior researchers started to investigate the role of religion and religiosity in the marketplace in the early 1980s. Marketing academics and industry practitioners recognized religiosity as a market segmentation variable and direction for product positioning and communications (La Barbera & Gürhan, 1997). Consumers with higher levels of religiosity may behave differently in the marketplace from those with lower levels of religiosity because of the influence of religious teachings and values. However, most marketing literature primarily studies religiosity either as a categorical demographic variable or as a direct effect on a dependent variable (Davis & Jai, 2014; Hopkins, Shanahan & Raymond, 2014;

Mokhlis, 2009). In addition, the majority of studies were conducted in non-Christian countries such as India, Malaysia and Jordan (e.g. Choudhury, 2014; Mokhlis, 2009; Muhamad & Mizerski, 2010). Few studies were done in the United States in the recent decade.

According to Gallup.com (2014), the United States is predominantly a Christian nation. More than 75% of American adults identify with some sort of Christian religion, including Protestantism, Roman Catholic, and Mormonism (Gallup.com, 2014). Among Americans who have a religious identity, 94% are Christians, with the rest spread across a wide range of other religious categories (Newport, 2012). In recent years, a market segment of devoted Christian consumers has emerged. This segment of the market makes up 17% of the U.S population (41 million Americans) with a spending power of \$2 trillion annually (Faith driven consumer, 2017). While it is similar in size as the Hispanic market, it has 75% more annual spending power than the Hispanic market (Stone, 2014). These consumers choose to express their religious values and beliefs in all areas of their lives, including the marketplace. Thus, faith driven consumption (FDC) is defined as consumption behaviors and patterns that align with one's religious values and beliefs.

Faith driven Christian consumers support businesses that respect or exercise Christian values through business practices. For example, Chick-fil-A's business practices, from the commitment to "be kind to employees and provide heartfelt hospitality to customers" to "closing their stores on Sundays" have contributed to its rank as the second-largest quick-service chain in the country. Chick-fil-A currently has more business in 6 days than McDonald's does in seven, and with an employee turnover rate a third of the industry average (Sas.com, 2017). One highly publicized event in 2013 was A&E network's suspension of Phil Robertson, the star of the network's then #1 hit show, *Duck Dynasty*, as a result of expressing his Christian beliefs on homosexuality in January 2014's *GQ* magazine. After a nation-wide backlash against A&E with more than 200,000 petition signatures on IStandWithPhil.com, 116,600 signatures for another petition on Change.org, and more than 1.7 million likes on a Facebook page called 'Boycott A&E Until Phil Robertson Is Put Back on *Duck Dynasty*', A&E reinstated Phil Robertson back on the show (dailymail.co.uk, 2013).

While faith driven Christian consumers have demonstrated a strong influence in the marketplace, Christian consumerism is still an understudied area. Although 75% of the US population self-report "Christianity" as their religion, only 23% of these Christians (17% of the population) use their religious values and beliefs to guide their purchasing decisions. Religiosity can be a key factor in explaining this discrepancy. However, with deep-rooted consumerism in the western societies, simply applying religiosity itself might not be enough to investigate the influence of religion in the marketplace. This may be especially true for the consumption behavior of product categories such as apparel. Apparel is instrumental for appearance management. It is also a key non-verbal communication tool. Many studies investigated the psychological meaning of dress among different consumer groups. However, studies on how religiosity affects consumers' consumption of apparel are largely unknown. Mokhlis (2006) found that at a cognitive level, people with high levels of religiosity are not fashion conscious, but at a behavioral level, they are more fashion conscious. There seems to be a disconnection in cognition and action. This is also seen with the rise of fashion brands in the U.S. such as Altar'd State and even Forever 21 that publicly identify themselves as being inspired by Christianity.

Muhamad and Mizerski (2010) argue that religiosity itself may not be the most effective and efficient measurement for studies on religion and consumer behavior. Yet, there have been very limited efforts on the conceptualization of religious influence in the marketplace (Muhamad &

Mizerski, 2010). Concepts that directly reflect the effect of religion and religiosity on consumer attitudes and/or behaviors in the marketplace can offer better understanding on how religion impacts consumer behavior. So, this study intended to introduce and explore a new construct, faith driven consumption (FDC) to the marketing research on religiosity and consumer behavior; and demonstrate the potential value of this construct by investigating the relationship among religiosity, FDC, and apparel shopping orientation.

Religiosity is a significant factor that affects consumers' shopping orientation (Davis & Jai, 2014; Essoo & Dibb, 2004; Mokhlis, 2006; Sood & Nasu, 1995). For example, religiosity can influence how a consumer makes a decision in regards to brands, price and quality or how loyal a consumer is to a brand (Mokhlis, 2006; Davis & Jai, 2014). The authors suspected FDC is a mediating factor between religiosity and shopping orientation; and FDC is a more effective construct when investigating the effects of religions on consumer purchase and shopping behavior. Specifically, this study aimed to address the following research questions: (1) what is the relationship between religiosity and FDC; (2) how does FDC influence shopping orientations in the context of apparel shopping; and (3) whether FDC mediates the effect of religiosity on consumers' apparel shopping orientation.

## **HYPOTHESES DEVELOPMENT**

### **Religiosity and Faith Driven Consumption (FDC)**

The term faith driven consumption (FDC) was first introduced by Chris Stone, the founder of a U.S. based advertising agency, Stone Agency, in 2013 (Fottrell, 2014). The agency described faith driven consumers as devout Christian consumers whose consumption and shopping behavior in the marketplace is strongly influenced by Christian values and beliefs. Generally, they come from different ethnicities, genders, and age groups, across different geographic locations, with different political views. What unites them is their strong commitment to the Christian values and beliefs that drive their purchase and consumption decisions in the marketplace (Faithnomics.com, 2012b). The authors propose that FDC can be attributed specifically to their levels of religiosity, that is, how committed they are to their religion (Essoo & Dibb, 2004; King & Crowther, 2004).

Religion consists of cognitive elements that form knowledge systems that account for and dictate attitudes and behavior (Foxall & Goldsmith, 1994; Lau, 2010; McDaniel & Burnett, 1990). Based on the theory of reasoned action (TRA), one's belief can influence his/her attitudes toward a certain behavior, hence, the attitudes may influence behavioral intention and actual behavior (Azjan & Fishbein, 1977). Thus, stronger commitment to religion (religiosity) would intensify one's cognition and behavior. In this light, religiosity has shown to influence consumers' shopping attitudes and behaviors (Davis & Jai, 2014; Essoo & Dibb, 2004; Mokhlis, 2006), and to even influence moral judgment and action towards companies (Swimberghe, Flurry, & Parker, 2011). Likewise, Christians with higher levels of religiosity may be more likely to commit themselves to aligning their values and beliefs with their purchasing decisions. Therefore, the authors hypothesize that religiosity and faith driven consumption have a positive relationship.

H1: There is a positive relationship between religiosity and FDC.

## Apparel Shopping Orientation

Shopping orientation is a well-established research topic in marketing literature. Stone (1954) introduced the concept of shopping orientation to capture consumers' shopping motivation, their desired shopping experiences, and anticipated shopping outcomes. Since then, shopping orientation has been defined in a number of ways. Moschis (1992) defined shopping orientation as “mental states that result in various general shopping patterns” (p. 394), and Brown, Pope and Voges (2003) defined it as related to general predisposition toward the acts of shopping. Li, Kuo and Russell (1999), on the other hand, conceptualised shopping orientation as a specific portion of lifestyle operationalized by a range of activities, interests and opinion statements that are relevant to the acts of shopping. Overall, shopping orientation is consumers' general beliefs, feelings, and actions toward shopping. It is the style in which consumers make their decisions in a shopping context.

Since Stone's (1954) seminal work, scholars have identified many different types of shopping orientation. Sprotles and Kendall (1986) identified eight consumer decision-making styles that include high-quality consciousness, brand consciousness, novelty-apparel consciousness, recreational shopping consciousness, value for money, impulsiveness, confusion from over choices, and brand loyalty. Shopping orientation varies by consumer characteristics and product category. In the apparel market, fashion consciousness, brand consciousness, and price consciousness are key apparel shopping orientations (Sprotles & Kendall, 1986; Visser & Du Preez, 2001). A few scholars (e.g. Davis & Jai, 2014; Mokhlis, 2006) adopted Sprotles and Kendall's (1986) consumer decision-making style when studying the impact of religiosity on consumers' apparel shopping orientation. So, for the purpose of this study, the authors focused the following types of shopping orientation: quality consciousness, brand consciousness, brand loyalty, price consciousness, quality consciousness, and fashion consciousness.

***FDC and brand consciousness.*** Brand consciousness refers to consumers' awareness of and tendencies to purchase well-known and national brands of fashion goods (Sprotles & Kendall, 1986). People who are motivated by ideals are grounded in knowledge and principles (Schiffman, O'Cass, Paladino, & Carlson, 2013). It can be expressed as an obedience to a personal or social code of conduct, such as religious, moral or ethical convictions (Strategic Business Insights, 2015). Since purchasing brands that respect their values is essential, faith driven consumers may not worry about, or pay special attention to regular well-known and popular brands. Shachar, Erdem, Cutright and Fitzsimons (2011) also found that when it comes to socially expressive goods such as apparel, more religious people are less likely to use branded merchandise. Therefore, the authors hypothesize that there is a negative relationship between FDC and brand consciousness.

H2: FDC has a negative relationship with brand consciousness.

***FDC and brand loyalty.*** Brand loyalty refers to consumers' commitment to their favorite brands (Sprotles & Kendall, 1986). As it is defined in this study, FDC is about consumers using their spending power to support companies and brands that are compatible to their religious beliefs. The Stone Agency' market study found that faith driven consumers are loyal to those brands and retailers, and are willing to pay more for them (Faithnomics.com, 2012a). Rindfleisch, Burroughs, and Wong, (2005) also found that religious consumers have



high levels of brand commitment. Therefore, the authors hypothesize that there is a positive relationship between FDC and brand loyalty.

H3: FDC has a positive relationship with brand loyalty.

**FDC and price consciousness.** Price consciousness refers to consumers' purchasing low priced goods and seeking deals and sales (Sprotles & Kendall, 1986). Faith driven consumers not only actively seek brands and retailers that are compatible to their Christian faith, but are also willing to go out of their way to switch to those brands (Faithnomics.com, 2012b). To do so, they may be willing to sacrifice prices. As a result, low price point may not be their priority. When shopping, they may be less likely to look for deals and sales because their focus is finding brands that support Christian values. In addition, some researchers (e.g. Mokhlis, 2006; Sood & Nasu, 1995) found that more religious consumers are less economically committed. Therefore, the authors hypothesize that there is a negative relationship between FDC and price consciousness.

H4: FDC has a negative relationship with price consciousness.

**FDC and quality consciousness.** Consumers' perceived quality is their overall evaluation of a product (Holbrook & Schindler, 1996; Zeithaml, 1988). It is an important asset sought by consumers in products and services across industries, and thus important to a brand (Golder, Mitra, & Moorman, 2012). Some consumers pursue high quality goods more than others. This pursuance of quality is referred to as quality consciousness (Sprotles & Kendall, 1986). Past research shows that religiosity significantly affects consumers' quality consciousness when they go shopping (Mokhlis, 2006). They put greater emphasis on product quality when selecting products and stores (McDaniel & Burnett, 1990). A possible explanation is that consumers with higher levels of religiosity desire to avoid post-purchase disappointment and/or at least minimize any possible negative consequences of their purchase decisions (McDaniel & Burnett, 1990; Mokhlis, 2006) due to a lower threshold for making an error (Delener, 1987; Smith, Kahle, & Frankenberger, 2005). Therefore, the authors hypothesize there is a positive relationship between FDC and quality consciousness.

H5: FDC has a positive relationship with quality consciousness.

**FDC and fashion consciousness.** Fashion consciousness refers to consumers' seeking the latest trends and exciting new fashions (Sprotles & Kendall, 1986). Mokhlis (2006) found that consumers with high levels of religiosity are more fashion conscious; that is, they are quicker to adopt new trends and fashions. Davis and Jai (2014) further supported the finding that the committed U.S. Christians are more fashion oriented than casual ones. Mokhlis (2006) and Shim and Gerht (1996) argue that those who are committed to their religious groups may be more susceptible to holding a strong social value and therefore, more receptive to normative influences. This social motivation for consumption may create a greater awareness in brand and fashion. With this, the authors hypothesize that there is a positive relationship between FDC and fashion consciousness.

H6: FDC has a positive relationship with fashion consciousness.

## Religiosity, Faith Driven Consumption (FDC) and Apparel Shopping Orientation

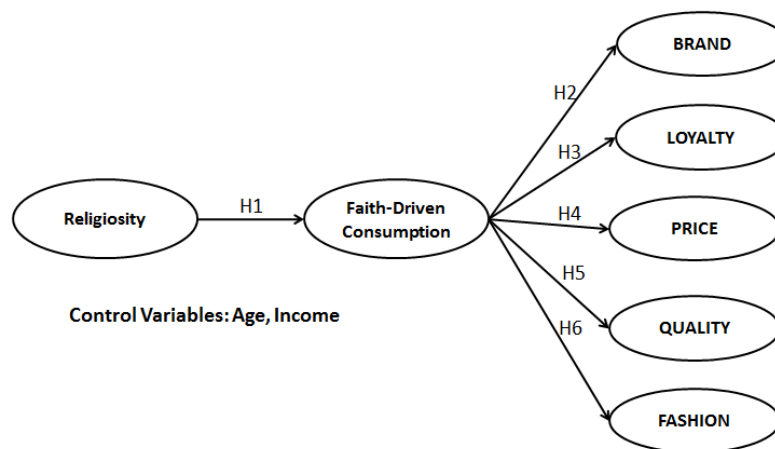
Religiosity has been examined as a factor affecting consumers' shopping orientation (Davis & Jai, 2014; Essoo & Dibb, 2004; Mokhlis, 2006; Sood & Nasu, 1995). However, findings are inconsistent. For example, Sood and Nasu (1995) found that highly religious Protestants were more economically oriented or price conscious. They were more likely to purchase on-sale products even if those products weren't needed, and preferred lower priced stores (Sood & Nasu, 1995). In contrast, Essoo and Dibb (2004) found that casual religious respondents were more deals and promotions driven, which implies that less religious consumers were more economically oriented. Mokhlis (2006) did find that the relationship between religiosity and price consciousness was quite complex. While the consumers with high intrapersonal religiosity tended to worry less about price, those with high interpersonal religiosity were more likely to shop for deals (Mokhlis, 2006). So, what factors contribute to inconsistent findings?

Patterns of past research have demonstrated that the effects of religiosity on external human behaviors or characteristics are frequently mediated by other variables. For example, Lawler-Row (2010) found that forgiveness mediates the relationship between religiosity and self-reported health conditions. In the context of business, commitment to moral self-improvement has been found to be not only a mediator in the relationship between religiosity and ethical behavioral intentions, but also a better predictor of perceived importance of ethics, ethical problem recognition, and ethical behavioral intentions (Kurpis, Beqiri, & Helgeson, 2008). Additionally, in a study of business executives, corporate social responsibility (CSR) attitude was found to mediate the effect of religiosity on the executives' CSR behaviors (Mazereeuw-van der Duijn Schouten, Graafland, & Kaptein, 2013). Thus, the authors hypothesize that FDC mediates the relationship between religiosity and apparel shopping orientations.

H7: FDC mediates the relationship between religiosity and shopping orientations (a. brand consciousness; b. brand loyalty; c. price consciousness; d. quality consciousness; e. fashion consciousness).

Please see the Figure 1 below, which demonstrates the proposed research model.

Figure 1. Proposed Research Model



## METHODOLOGY

### Research Instruments

An online survey was developed to measure consumers' religiosity, FDC, apparel shopping orientation, and demographic characteristics including age, gender, annual household income, and religious affiliation. Since there are no existing scales from the literature measuring FDC, the authors first sought to develop measurement items for the FDC construct. Following Churchill's (1979) approach for developing measures of multiple-item marketing constructs, three steps were taken: (1) initial items developed based on the definition of FDC, (2) item revision after a research panel discussion, and (3) pilot test the measurement construct of FDC. A group of 60 undergraduate students from a large university in the southwestern United States was given a list of 13 FDC questions asking them to reflect on their behavior while they choose retail outlets using a five-point Likert scale (1=*strongly disagree*; 5=*strongly agree*). Using the results of the coefficient alpha and the item-to-total scale correlations, 3 items were excluded because of the low item-to-total scale correlation ( $< .50$ ). To avoid possible overlap of items, the authors conducted a principal components analysis with Varimax rotation and excluded 3 cross-loaded items (cross-loading  $> .60$ ). Thus, 7 items were retained. A further exploratory principal components analysis on this reduced item set revealed a clear one-factor pattern with high internal reliability (Cronbach's  $\alpha = .95$ ) for measuring FDC. So, those 7 items were used for the next step.

To measure religiosity, the Religious Commitment Inventory, RCI-10 (Worthington et al., 2003) was adopted. This scale was designed to assess the degree to which a person commits to his or her religious values, beliefs, and practices, and uses of them in daily living (Shachar et al., 2011). The Religious Commitment Inventory has been widely used in the marketing research. The scale was not only reliable ( $\alpha = .95$ ), but also demonstrated strong validity with other religiosity measurements (Worthington et al., 2003). Apparel shopping orientation was measured using scales adopted from the Consumer Style Inventory (CSI) developed by Sprotles and Kendall (1986). A 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*) was used to measure responses to scale items assessing constructs of interest.

### Data Collection and Sample Characteristics

Undergraduate students from two Fashion Merchandising classes of a major state university in the southwestern United States were instructed to recruit potential participants using social media, such as Facebook, over a two month period. A total of 668 respondents participated in the online survey, resulting in the 333 usable responses from Christian respondents that were used for this study. Among the respondents, 82.2 % were female. Hispanics and Caucasians were two major ethnic groups, accounting for 37.2% and 33.8% of the respondents respectively. The majority of the respondents have completed some college or have acquired a college degree. Also, since 46.4% of the respondents' ages were 18-24 years, the sample characteristics reflected the college student population of the university community in the southwestern United States. More detailed demographic characteristic information is provided in Table 1.

Table 1. Characteristics of Respondents (N=333)

| Characteristics  |                           | Percentage |
|------------------|---------------------------|------------|
| Gender           | Male                      | 17.8       |
|                  | Female                    | 82.2       |
|                  | Missing                   | .3         |
| Age              | 18-24                     | 46.4       |
|                  | 25-34                     | 25.0       |
|                  | 35-44                     | 8.1        |
|                  | 45-54                     | 11.7       |
|                  | 55 and older              | 8.7        |
| Ethnic Group     | African American          | 7.9        |
|                  | Asian or Pacific Islander | 13.3       |
|                  | Caucasian                 | 33.8       |
|                  | Hispanic American         | 37.2       |
|                  | Native American           | .9         |
|                  | Others                    | 6.9        |
| Education        | High School Graduate      | 9.4        |
|                  | Some College              | 39.3       |
|                  | 2 Year College Degree     | 10.3       |
|                  | 4 Year College Degree     | 25.1       |
|                  | Graduate Degree           | 14.5       |
|                  | Others                    | 1.5        |
| Household Income | Less than \$25,000        | 35.6       |
|                  | \$25,000-\$50,000         | 22.2       |
|                  | \$50,001-\$75,000         | 11.2       |
|                  | \$75,001-\$100,000        | 14.3       |
|                  | More than \$100,000       | 16.7       |

## ANALYSIS AND RESULTS

SPSS (version 21) was used for data coding, preliminary data analysis, descriptive analysis, and factor analysis. Mplus software was used to analyze variance-covariance matrices and test the proposed model. Before data analysis, all assumptions for multivariate analysis, including multivariate normality and homocedasticity were examined to ensure data normality. Kline (2005) suggests that there is a problem of multivariate normality when a Kurtosis value is greater than 10. The Kurtosis values of this sample ranged from 1.95 to 2.55, indicating the data of the study did not have serious problems regarding data normality. The skewness values (using a cut-off range from +1 to -1) of the sample also confirmed the normality of the data. Outliers of major variables were excluded for the data analysis (Field, 2005).

A factor analysis was then conducted using principal component analysis in order to identify underlying factors of religiosity, FDC, and respondents' shopping orientations. Following Field's recommendation (2005), factor loadings greater than .50 were considered to be significant with a sample size of 300. Thus, items with a factor loading of .50 or higher were considered for interpreting the factors. The principle axis factoring analysis with a Promax rotation and Kaiser Normalization revealed only one underlying factor for religiosity.

The principle component analysis using a Promax rotation with Kaiser normalization revealed seven factors with an eigenvalue of one or greater for the research construct (Table 2). These factors accounted for 72.94 percent of the total variance. A large value of the Kaiser–Mayer–Olkin (K-M-O) measure in this study (0.89) indicates that a factor analysis should yield distinct and reliable factors (Field, 2005). The Barlett's test of sphericity is significant (less than .001), suggesting all variables are unrelated and thus the factor analysis is feasible (Hutcheson & Sofroniou, 1999). After eliminating items that showed poor psychometric properties ( $< .50$  communality,  $< .50$  factor loading), three items with the highest loadings were selected to proceed the following hypotheses testing (Ullman, 2006). The Cronbach's alphas of the measurements were also examined to ensure acceptable reliability. See Table 3 for the summary of items and factor loadings for Promax Rotation of research constructs. Specific scale items are provided in Table 4.

### Measurement Model

The authors used the two-step structural equation modelling (SEM) to investigate the relationships between religiosity, FDC, and shopping orientation as specified in Figure 1. Mplus version 6 was used for the SEM analysis. The measurement model consisted of seven latent constructs. Each latent construct was estimated by 3 indicators. A Confirmative Factor Analysis (CFA) was conducted and provided a good model fit,  $\chi^2 (df=168) = 251.77, p < .01$ , CFI = .98, TLI = .97, SRMR = .05, RMSEA = .04, with the 90% confidence interval .03 ~ .05. Standardized parameter estimates, shown in Table 4, suggested the latent variables have been effectively measured by their respective indicators. All factor loadings in the confirmatory factor analysis for the measurement model were significant (with  $t$  value at  $p < .001$  level), demonstrating convergent validity (Anderson & Gerbing, 1988). The estimated correlations between latent factors ranged from .01 to .54, which indicates that the factors are distinct, thus the measurement construct has good discriminant validity (Brown, 2012).

Table 2. Total Variance Explained

| Component | Initial Eigenvalues |               |              | Extraction Sums of Squared Loadings |               |              | Rotation Sums of Squared Loadings <sup>a</sup> |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|------------------------------------------------|
|           | Total               | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % | Total                                          |
| 1         | 8.767               | 26.565        | 26.565       | 8.767                               | 26.565        | 26.565       | 7.008                                          |
| 2         | 5.839               | 17.695        | 44.260       | 5.839                               | 17.695        | 44.260       | 5.948                                          |
| 3         | 2.862               | 8.672         | 52.932       | 2.862                               | 8.672         | 52.932       | 5.934                                          |
| 4         | 2.142               | 6.491         | 59.424       | 2.142                               | 6.491         | 59.424       | 5.658                                          |
| 5         | 1.920               | 5.817         | 65.240       | 1.920                               | 5.817         | 65.240       | 4.167                                          |
| 6         | 1.360               | 4.122         | 69.363       | 1.360                               | 4.122         | 69.363       | 2.247                                          |
| 7         | 1.180               | 3.577         | 72.940       | 1.180                               | 3.577         | 72.940       | 2.646                                          |

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

## Structural Model

Following the CFA, the variance-covariance matrices were used to estimate the hypothesized path model with Maximum Likelihood estimation. The means, standard deviations and correlation matrix of the endogenous constructs are summarized in Table 5. Controlling participants' age, income, gender and education, the results of the SEM model suggested a good model fit for hypotheses testing (Hu & Bentler, 1999),  $\chi^2 (df= 224) = 347.16, p < .001$ , CFI = .96, TLI = .95, SRMR = .05, RMSEA = .04, with the 90% confidence interval .03 ~ .05. Thus, no modification indices were used to re-specify the model. Standardized parameter estimates ( $\beta$ ) are shown in Figure 2. For the effects of controlling variables, age was found to have negative effects on LY and FS ( $t = -2.34, p < .05$ ;  $t = -3.50, p < .001$ , respectively); income was found to have positive effects on FC and FS ( $t = 2.32, p < .05$ ;  $t = 2.06, p < .05$ , respectively); gender (female) was only found to have a positive effect on FS ( $t = 2.63, p < .01$ ); education was found to have a negative effect on BD ( $t = -2.08, p < .05$ ); and a positive effect on LY ( $t = 2.59, p < .01$ ).

Table 3. Pattern Matrix

| Constructs                     | Item          | Component   |             |             |             |             |             |             | Communalities |
|--------------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
|                                |               | 1           | 2           | 3           | 4           | 5           | 6           | 7           |               |
| Faith Driven Consumption (FDC) | <b>Faith4</b> | <b>.911</b> |             |             |             |             |             |             | .82           |
|                                | <b>Faith5</b> | <b>.896</b> |             |             |             |             |             |             | .73           |
|                                | <b>Faith6</b> | <b>.894</b> |             |             |             |             |             |             | .77           |
|                                | Faith3        | .881        |             |             |             |             |             |             | .83           |
|                                | Faith2        | .870        |             |             |             |             |             |             | .82           |
|                                | Faith7        | .860        |             |             |             |             |             |             | .77           |
|                                | Faith1        | .790        |             |             |             |             |             |             | .75           |
| Religiosity                    | <b>RE2</b>    |             | <b>.943</b> |             |             |             |             |             | .87           |
|                                | <b>RE4</b>    |             | <b>.907</b> |             |             |             |             |             | .87           |
|                                | <b>RE5</b>    |             | <b>.905</b> |             |             |             |             |             | .84           |
|                                | RE3           |             | .902        |             |             |             |             |             | .84           |
|                                | RE1           |             | .890        |             |             |             |             |             | .79           |
| Brand Conscious                | <b>SO10</b>   |             |             | <b>.907</b> |             |             |             |             | .73           |
|                                | <b>SO8</b>    |             |             | <b>.857</b> |             |             |             |             | .60           |
|                                | <b>SO9</b>    |             |             | <b>.779</b> |             |             |             |             | .67           |
|                                | SO6           |             |             | .752        |             |             |             |             | .70           |
|                                | SO7           |             |             | .734        |             |             |             |             | .77           |
|                                | SO11          |             |             | .540        |             |             |             |             | .66           |
| Quality Conscious              | <b>SO3</b>    |             |             |             | <b>.918</b> |             |             |             | .78           |
|                                | <b>SO4</b>    |             |             |             | <b>.878</b> |             |             |             | .79           |
|                                | <b>SO1</b>    |             |             |             | <b>.850</b> |             |             |             | .76           |
|                                | SO2           |             |             |             | .820        |             |             |             | .73           |
|                                | SO5           |             |             |             | .724        |             |             |             | .72           |
| Fashion Conscious              | <b>SO13</b>   |             |             |             |             | <b>.828</b> |             |             | .72           |
|                                | <b>SO14</b>   |             |             |             |             | <b>.814</b> |             |             | .62           |
|                                | <b>SO15</b>   |             |             |             |             | <b>.759</b> |             |             | .57           |
|                                | SO12          |             |             |             |             | .655        |             |             | .68           |
| Price Conscious                | <b>SO17</b>   |             |             |             |             |             | <b>.816</b> |             | .66           |
|                                | <b>SO18</b>   |             |             |             |             |             | <b>.755</b> |             | .68           |
|                                | <b>SO16</b>   |             |             |             |             |             | <b>.748</b> |             | .60           |
| Loyal Oriented                 | <b>SO20</b>   |             |             |             |             |             |             | <b>.876</b> | .78           |
|                                | <b>SO19</b>   |             |             |             |             |             |             | <b>.766</b> | .68           |
|                                | <b>SO21</b>   |             |             |             |             |             |             | <b>.696</b> | .50           |

*Extraction method: Principal component analysis. Rotation method: Promax with Kaiser normalization. Rotation converged in 7 iterations. The bolded items were selected for the structural equation modelling.*

Table 4. Confirmative Factor Analysis Results

| Latent Construct                  | Items                                                                                                           | Beta | B    | S.E. | T-Value | Cronbach's Alpha |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------|------|------|------|---------|------------------|
| Religiosity<br>(RE)               | RE2- I spend time trying to grow in understanding my faith.                                                     | .89  | 1.00 | .00  | -       | .94              |
|                                   | RE4- Religious beliefs influence all my dealings in life.                                                       | .93  | 1.06 | .04  | 25.54   |                  |
|                                   | RE5- Religion is especially important to me because it answers many questions about the meaning of life.        | .91  | 1.02 | .04  | 24.62   |                  |
| Faith Driven Consumption<br>(FDC) | R4- I would shop at stores that value and respect my faith even if I have to pay higher prices for merchandise. | .89  | 1.00 | .00  | -       | .89              |
|                                   | R5- I try not to shop at retail stores that failed to acknowledge my religious values.                          | .79  | .77  | .05  | 17.07   |                  |
|                                   | R6- I am willing to pay a premium with retailers that respect me and my religious values and beliefs.           | .89  | .92  | .05  | 19.91   |                  |
| Brand Conscious (BD)              | SO8-The higher the price of a product, the better its quality.                                                  | .67  | 1.00 | .00  | -       | .81              |
|                                   | SO9-Nice department and specialty stores offer me the best products.                                            | .86  | 1.08 | .09  | 12.03   |                  |
|                                   | SO10-I prefer buying the best-selling brands.                                                                   | .78  | 1.00 | .09  | 11.77   |                  |
| Loyal Oriented<br>(LY)            | SO19-I have favorite brands I buy over and over.                                                                | .75  | 1.00 | .00  | -       | .70              |
|                                   | SO20-Once I find a product or brand I like, I stick with it.                                                    | .80  | 1.12 | .13  | 8.72    |                  |
|                                   | SO21-I go to the same stores each time I shop.                                                                  | .44  | .56  | .08  | 7.08    |                  |
| Price Conscious<br>(PR)           | SO16-I buy as much as possible at sale prices.                                                                  | .65  | 1.00 | .00  | -       | .69              |
|                                   | SO17-The lower price products are usually my choice.                                                            | .52  | .83  | .11  | 7.32    |                  |
|                                   | SO18-I look carefully to find the best value for the money.                                                     | .79  | 1.06 | .15  | 7.21    |                  |
| Quality Conscious<br>(QL)         | SO1-Getting very good quality is very important to me.                                                          | .80  | 1.00 | .00  | -       | .89              |
|                                   | SO3-In general, I usually try to buy the best overall quality.                                                  | .88  | 1.15 | .06  | 17.77   |                  |
|                                   | SO4-I make special effort to choose the best quality products.                                                  | .87  | 1.21 | .07  | 17.49   |                  |
| Fashion Conscious<br>(FS)         | SO13-Fashionable, attractive styling is very important to me.                                                   | .73  | 1.00 | .00  | -       | .74              |
|                                   | SO14-To get variety, I shop different stores and choose different brands.                                       | .72  | .93  | .10  | 9.60    |                  |
|                                   | SO15-It's fun to buy something new and exciting.                                                                | .66  | .77  | .08  | 9.12    |                  |

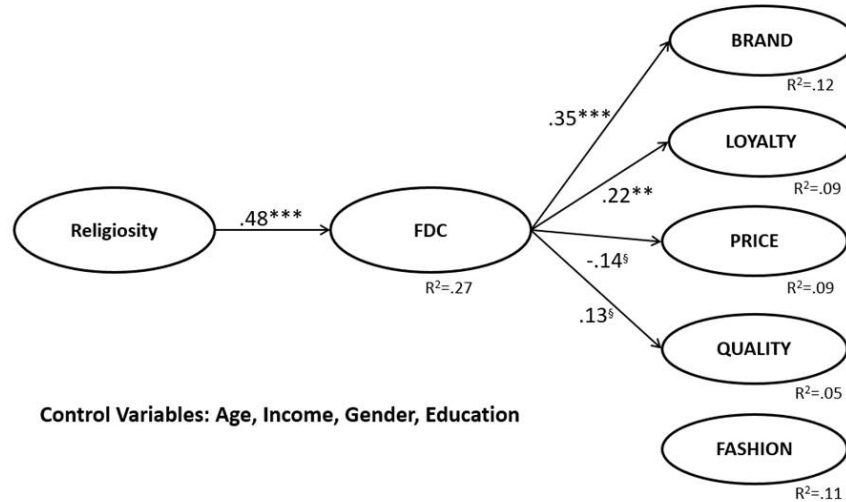


Table 5 Means, Standard Deviations and Correlation Matrix

|     | Mean | S.D. | RE   | FDC  | BD   | QL  | LY  | FS  | PR |
|-----|------|------|------|------|------|-----|-----|-----|----|
| RE  | 3.27 | 1.27 | -    |      |      |     |     |     |    |
| FDC | 1.94 | 1.04 | .45  | -    |      |     |     |     |    |
| BD  | 2.78 | .94  | .04  | .26  | -    |     |     |     |    |
| QL  | 3.87 | .91  | .15  | .16  | .44  | -   |     |     |    |
| LY  | 3.64 | .85  | -.01 | .12  | .18  | .27 | -   |     |    |
| FS  | 3.75 | .87  | .14  | .11  | .30  | .28 | .22 | -   |    |
| PR  | 3.82 | .83  | .15  | -.01 | -.03 | .01 | .25 | .17 | -  |

RE: religiosity; FDC: religion-driven consumption; QL: quality conscious; BD: brand conscious; LY: loyal oriented; FS: fashion conscious; PR: price conscious.

Figure 2. Path Model Results



\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ ; § $p < .10$ ; BD: brand conscious; LY: brand loyalty; PR: price conscious; QL: quality conscious; FS: fashion conscious.

Hypothesis 1 examines the relationship between religiosity and FDC. The results show that religiosity has a significant effect on FDC ( $\beta = .48, p < .001$ ). Thus, H1 was supported. Hypothesis 2 to Hypothesis 6 examine the nature of the relationships between FDC and five dimensions of apparel shopping orientation. For brand consciousness (H2), contrary to our hypothesis, FDC was found to have a positive relationship with brand consciousness ( $\beta = .35, p < .001$ ). Thus, H2 was rejected. For brand loyalty (H3), FDC was found to have a positive relationship with brand loyalty ( $\beta = .22, p < .01$ ). Thus, H3 was supported. For price consciousness (H4) and quality consciousness (H5), FDC was found to have a marginally negative relationship with price consciousness ( $\beta = -.14, p < .10$ ) and a marginally positive relationship with quality consciousness ( $\beta = .13, p < .10$ ). Thus, H4 and H5 were supported. However, there was no significant relationship observed from FDC towards fashion consciousness. Thus, Hypotheses 6 was not supported.

This study presumes that FDC mediates the effects of religiosity on different dimensions of shopping orientations. To examine the mediation effect of FDC, the authors must test the total direct and indirect effect between religiosity and apparel shopping orientations (Hypotheses 7a-e). If there is a significant indirect effect found without a significant direct effect, that means FDC fully mediate the relationship between religiosity and shopping orientations. Furthermore, Hayes (2009) suggested there are two kinds of mediation effects: consistent and inconsistent mediation. An inconsistent effect would exist when the direct and indirect (mediated) effect of an independent variable on a dependent variable have opposite signs (MacKinnon, Krull, & Lockwood, 2000; Tzelgov & Henik, 1991), as compared with a consistent mediation model in which the direct and mediated (indirect) effects have the same sign. Initially, most of the testing methods about mediation effect assume a consistent mediation model and do not allow for suppression (inconsistent) mediation (Baron & Kenny, 1986; Judd & Kenny, 1981). However, it has been noted that when one of the path coefficients among variable X, variable M (mediator) and variable Y is negative, there can be significant mediated effects even when X and Y are not significantly correlated (Hayes, 2009). In other words, the negative path coefficient may counterbalance the positive coefficient to leave no significant relationship between variable X and Y. The results showed FDC plays a rather complicated mediation role between religiosity and shopping orientation.

The SEM results show that the mediating effects of FDC are different among the shopping orientations. First, FDC fully mediates the effects of religiosity on brand consciousness ( $t = 3.96$ ,  $p < .001$ ) and brand loyalty ( $t = 2.53$ ,  $p < .05$ ). Thus, H7a and H7b were supported. Moreover, religiosity has a positive direct effect ( $t = 3.41$ ,  $p < .001$ ) on price consciousness and a marginally significant negative indirect effect ( $t = -1.68$ ,  $p = .093$ ) through FDC. Thus, H7c was partially supported. Interestingly, all three indirect paths aforementioned were in the opposite sign (+ versus -) compared to those of direct effects. These indicate that FDC has an inconsistent mediation effect in the relationship between religiosity and brand consciousness, brand loyalty and price consciousness (MacKinnon, et al., 2000). As a result, although the indirect effects of religiosity on brand consciousness and loyalty consciousness are significant, the total effects from religiosity to brand consciousness and brand loyalty are not (Table 6). For quality consciousness, a marginally significant indirect effect was found ( $t = 1.71$ ,  $p = .087$ ). Thus, H7d was partially supported. Finally, FDC doesn't mediate the effect of religiosity to fashion consciousness ( $t = .91$ , *n. s.*). Instead, religiosity had a marginally significant direct effect on fashion consciousness ( $t = 1.79$ ,  $p = .073$ ). Thus, H7e was not supported. The results of standardized coefficients, unstandardized coefficients of direct effects, indirect effect, and total effects are shown in Table 6.

Table 6 The Total, Direct and Indirect Effects from Religiosity to Shopping Orientations

|                             | Mediation Type | Beta        | B          | S.E.       | t-value     | p-value     | Sig. |
|-----------------------------|----------------|-------------|------------|------------|-------------|-------------|------|
| Total Effects from RE to BD | Inconsistent   | <b>.05</b>  | <b>.04</b> | <b>.04</b> | <b>.84</b>  | <b>.401</b> |      |
| Direct (RE→BD)              | (supressing)   | -.12        | -.08       | .05        | -1.56       | .118        |      |
| Indirect (RE->FDC-> BD)     |                | .17         | .12        | .03        | 3.96        | <.001       | ***  |
| Total Effects from RE to LY | Inconsistent   | <b>-.01</b> | <b>.00</b> | <b>.03</b> | <b>-.17</b> | <b>.895</b> |      |
| Direct (RE→LY)              | (supressing)   | -.11        | -.04       | .03        | -1.47       | .143        |      |
| Indirect (RE->FDC->LY)      |                | .11         | .04        | .02        | 2.53        | .012        | *    |
| Total Effects from RE to PR | Inconsistent   | <b>.24</b>  | <b>.14</b> | <b>.04</b> | <b>3.41</b> | <b>.001</b> | **   |
| Direct (RE→PR)              | (supressing)   | .31         | .18        | .05        | 3.74        | <.001       | ***  |
| Indirect (RE->FDC->PR)      |                | -.07        | -.04       | .02        | -1.68       | .093        | §    |
| Total Effects from RE to QL | Consistent     | <b>.14</b>  | <b>.09</b> | <b>.04</b> | <b>2.32</b> | <b>.020</b> | *    |
| Direct (RE→QL)              |                | .08         | .05        | .05        | 1.14        | .253        |      |
| Indirect (RE->FDC->QL)      |                | .06         | .04        | .02        | 1.71        | .087        | §    |
| Total Effects from RE to FS | No mediation   | <b>.17</b>  | <b>.12</b> | <b>.05</b> | <b>2.61</b> | <b>.009</b> | **   |
| Direct (RE→FS)              |                | .14         | .10        | .05        | 1.79        | .073        | §    |
| Indirect (RE->FDC->FS)      |                | .04         | .02        | .03        | .91         | .364        |      |

\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ ; § $p < .10$  (two-tailed); BD: brand conscious; LY: brand loyalty; PR: price conscious; QL: quality conscious; FS: fashion conscious

## DISCUSSIONS AND CONCLUSIONS

To understand the role of religiosity in the marketplace better, this study explored a new construct, faith driven consumption (FDC) and proposed to include it as a mediator between religiosity and apparel shopping orientations. The authors suspected that FDC might be a more effective construct than religiosity when investigating the effects of religions on consumers' behavior in the marketplace. The results revealed that FDC significantly affects U.S. Christian consumers' shopping orientations. Specifically, faith driven Christian consumers are more brand conscious, brand loyal and quality conscious, but they are less price conscious when shopping for apparel. Therefore, in the apparel market, they are more likely to purchase well-known and national brands; be loyal to, and pay more for brands they like; and focus on products that have good quality. More importantly, the results support that FDC is a mediator between religiosity and consumers' apparel shopping orientations, except fashion consciousness.

As a mediator, FDC plays a role in counterbalancing the impact of religiosity on brand consciousness, brand loyalty, and price consciousness. This finding reveals that the level of religiosity dose not directly affect either brand consciousness or brand loyalty, unless through the FDC construct. This is a critical finding. It suggests that devoted believers who consciously make purchase decisions based on their religious values and beliefs become more actively involved with brands. Committed consumers tend to engage with brands and communities that believe what they believe (Sonic Boom.com, 2013). Highly religious consumers not only morally judge companies that support controversial causes that are contrary to their religious values, but also express their

dissatisfaction through protest and boycott (Swimberghe, Flurry, & Park, 2011). This type of consumption behavior helps them to express their religiosity in the marketplace. When it comes to price consciousness, more religious consumers tend to be more economically conscious (Davis & Jai, 2014; Sood & Nasu, 1995); yet, faith driven consumers are less price conscious. To support brands and companies based on their religious beliefs, faith driven consumers are willing to pay more. This finding further demonstrated the explanation power of FDC construct.

Furthermore, FDC has a marginally significant mediation (consistent) effect on the relationship between religiosity and quality consciousness. However, FDC does not mediate the effect of religiosity on fashion consciousness. Instead, religiosity had a marginally significant direct effect on fashion consciousness. These are equally important findings. One viable explanation for these results is that although quality and trendiness are both important apparel product characteristics of a brand, they do not necessarily reflect the brand as a whole. Thus, FDC is not enough to explain how religion affects consumers' consciousness on the quality or fashionability of the products; religiosity can also help to explain the relationship. Since people with higher levels religiosity tend to be more traditional and conservative (Barton & Vanghan, 1976; Wilkes, et al., 1986), they are more quality conscious and emphasize the quality value. Consistent with Davis and Jai's (2014) findings, more devoted Christians are more fashion oriented. This implies that they might be actively seeking fashionable products that are compatible with their beliefs and values.

To conclude, the findings of this study indicate that belief-based consumption is a very important concept for marketers to pay attention to. For marketers and fashion retailers, targeting faith driven consumers can be a profitable business model and strategy since those consumers care more about brand names, but are less price conscious as revealed in this study. They are strong supporters of the brands that respect their religious views and practices. Second, as this study revealed, some dimensions of apparel shopping orientations are better explained by FDC and others are better explained by religiosity. Therefore, the FDC construct is a very important concept for scholars and marketers to have a better understanding of how religion affects consumers shopping and purchasing decisions. FDC can be a more effective construct than religiosity when investigating the effects of religion on consumers' behavior in the marketplace.

## **FUTURE STUDIES**

Since FDC is a relatively new concept and construct, more effort is needed in the future to refine the scale and investigate its effectiveness in different product categories and shopping contexts. The sample of this study has a high percentage of female and Hispanic consumers. A random sample with a better national representation of demographics is needed for further scale development. In addition, a follow up study may uncover why FDC explained some types of apparel shopping orientations better, while religiosity explained others better. To accomplish this, a qualitative research with personal interviews may shed light on how FDC and religiosity interact in the marketplace. Lastly, although this study focused on the Christian consumers in the United States, this construct can be adopted for studying consumers from different religions. With globalization and spreading of consumerism in different parts of the world, it will be interesting to conduct cross-culture researches on how faith and religion affect consumers' shopping and consumption behavior.

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## APPENDIX

### Religious Commitment Inventory, RCI-10

1. My religious beliefs lie behind my whole approach to life.
2. I spend time trying to grow in understanding my faith.
3. It is important to me to spend periods of time in private religious thought and reflection.
4. Religious beliefs influence all my dealings in life.
5. Religion is especially important to me because it answers many questions about the meaning of life.
6. I often read books and magazines about my faith.
7. I enjoy working in the activities of my religious organization.
8. I enjoy spending time with others of my religious affiliation.
9. I keep well informed about my local religious group and have some influences in its decisions.
10. I make financial contributions to my religious organization.

### Faith-Driven Consumption, FDC

1. I like to seek goods with religious symbols.
2. I prefer to shop at retailers that understand and value my faith.
3. I tend to shop at stores that express their faith consciousness through their business practices.
4. I would shop at stores that value and respect my faith even if I have to pay higher prices for merchandise.
5. I try not to shop at retail stores that failed to acknowledge my religious values.
6. I am willing to pay a premium with retailers that respect me and my religious values and beliefs.
7. I actively seek brands that are compatible with my faith based values.

### Shopping Orientation, SO

1. Getting very good quality is very important to me.
2. When it comes to purchasing apparel, I try to get the very best or perfect choice.
3. In general, I usually try to buy the best overall quality.
4. I make special effort to choose the best quality products.
5. My standards and expectations for apparel I buy are very high.
6. The well
7. The more expensive brands are usually my choice.
8. The higher the price of a product, the better its quality.
9. Nice department and specialty stores offer me the best products.
10. I prefer buying the best
11. I usually have one or more outfits of the very newest style.
12. I keep my wardrobe up
13. Fashionable, attractive styling is very important to me.
14. To get variety, I shop different stores and choose different brands.
15. It's fun to buy something new and exciting.
16. I buys as much as possible at sale prices.

17. The lower price products are usually my choice.
18. I look carefully to find the best value for the money.
19. I have favorite brands I buy over and over.
20. Once I find a product or brand I like, I stick with it.
21. I go to the same stores each time I shop.
22. I frequently change brands.

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## **MORE THAN A DECADE LATER: ARATIONAL DECISION CYCLES IN POST-HURRICANE KATRINA DISASTER MANAGEMENT**

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### **ABSTRACT**

Approximately thirteen years ago, considerable analysis focused on the breakdown of rational decision making in the emergency preparedness efforts of local, state, and federal officials that had contributed to the Hurricane Katrina disaster in New Orleans. At the time, the collapse of the decision-making process was shaped by independent moderating forces, such as the expertise of the decision makers, resource constraints, and imperfect information. Additionally, arational mediators, including favored decision premises, political agendas, and personal opportunism impacted the decision-making process. This paper explores the extent that the same failures persist today, post-Katrina, in disaster decision-making processes—exploring propositions based on the premise of “out of sight, out of mind.” Meaning, the longer the interval between disasters, the more disaster planning and decision making will revert to the same dysfunctional and corrupt patterns witnessed pre-Katrina. Today, information has improved, in large part due to the advances in technology and use of social media. Leadership has also improved, as most recent administrations have appointed more competent directors to administrative agencies at the federal, state, and municipal levels. However, despite these improvements, arational mediators remain an issue in the crisis decision-making process. In response to the continued adverse consequences of arational mediators, we propose solutions that can potentially ameliorate their negative impact.

*Keywords:* Administrative Law, Corruption, Crisis Management, Decision Making, Disaster Recovery, Organizational Structure

### **INTRODUCTION TO DECISION-MAKING PARADIGMS**

Decision making is the science of choosing the best alternative (DeYoung, 2002; Gigerenzer, 2015). DeYoung postulated that managers who make consistent, value-maximizing choices are utilizing what is called the rational model. This model is predicated on seven assumptions: (1) the problem is clear and unambiguous, (2) a single well-defined goal is to be achieved, (3) all alternatives and consequences are known, (4) preferences are clear, (5) preferences are constant and stable, (6) no time or cost constraints exist, and (7) the final choice will maximize economic payoff (Beach & Lipshitz, 2017; Gigerenzer, 2015). Thus, a decision maker who was perfectly rational would be fully objective and logical (Gigerenzer, 2015; Harrison, 1999; Page, Tootoonchi, & Rahman, 2006).

The above assumptions are at the core of the problem with classical normative decision-making models (Beach & Lipshitz, 2017; Gigerenzer, 2015). These assumptions are routinely violated in the context of most organizational decision making, due to a series of intractable constraints—a lack of time and resources, ability, and imperfect information. Also, competing priorities and self-interest

tend to undermine the scope of the search for alternatives, their evaluation, and selection (Abelson & Levi, 1985; Bazerman, 2005; Gigerenzer, 2015). Classical decision theory presumptively describes the choices of an abstract, omnipotent decision maker and has little relevance to real-world situations. It is reactionary in that it attempts “to rationalize observed decisions...by being couched in terms that are...used to describe the behavior of human decision makers” (Beach & Lipshitz, 2017, p. 85). This results in decision makers neglecting optimal decisions in favor of expediency—quickly accepting a satisfactory choice that is merely “good enough” (Simon, 1957).

Organizational crises are events characterized by high consequence, low probability, ambiguity, and decision-making time pressure (Hunter, 2017; Pearson & Clair, 1998; Rosenthal, 1998). Times of crisis and recovery situations usually violate most or all of the assumptions of the classical model. These violations can be seen in natural disasters, and are categorized by insurance companies as unforeseeable “acts of God,” with examples including hurricanes, tornados, forest fires, and tsunamis.

Some natural disasters are unforeseeable, and some do not cause significant damage; others are foreseeable in ranges from days, to weeks, to years, and can cause death and mass destruction. These more foreseeable and destructive natural disasters include hurricanes; flooding from persistent, heavy rains; forest fires; blizzards; and volcanic eruptions. When the stakes are high enough, many of the constraints (a lack of time and resources, ability, and imperfect information) should dissolve. The government resources that can be directed towards these types of crises are typically immense. There is usually a considerable window of foreseeability and predictability for planning. And, decision makers tend to give such events top priority due to the potential career-ending consequences of failure (Hunter, 2017; McCarthy, 2003).

A pre-disaster cost-benefit analysis is an effective way to bridge the gap between experts and municipal authorities, and it can lead to more informed decision making. The costs associated with poor decisions made in the past can be used to justify the cost of implementing pre-disaster planning going forward. Looking at the probability and severity of future disasters can be combined with analyzing these past poor decisions, and can assist in the production of an effective pre-disaster plan (Komarowski, Hincks, Sparks, & Aspinall, 2015). A pre-disaster plan should be crafted by engaging the common steps in the decision-making process, which include: identifying the problem, identifying decision criteria, allocating weight to each criteria, developing alternatives, analyzing alternatives, selecting alternatives, implementing alternatives, and evaluating each decision’s effectiveness (Gigerenzer, 2015; Harrison, 1999).

Given the above environment and a solid pre-disaster plan in place, decision making in recovery efforts should produce a more effective response. Under such conditions, and freed from normal decision constraints, both decision-making theory and some empirical research suggest that the decision-making processes should be more rational than normal (Gigerenzer, 2015; McCarthy, 2003; Rahman, Monahan & Page, 2006). However, as an analysis of each decision stage shows, this was not the case with New Orleans before Katrina (Page, Tootoonchi & Rahman, 2006; Rahman, Monahan & Page, 2006).

### **The Paradigms as Applied to Crisis Decision Making**

Models of decision making under conditions of threat and uncertainty are primarily descriptive rather than normative—inductively constructing conceptual models from observations of decision

making in practice. While these models can be broken out into discrete steps, whether such steps and sequencing actually take place, or are more for cognitive convenience, remains controversial (Gigerenzer, 2015; Taylor, 1984). Table 1 synthesizes some of the major stage models that have been advanced:

Table 1: Models of Crisis Decision Making Stages

| <b>Federal Emergency Management Agency (2005)</b> | <b>Li (2008)</b>                               | <b>Page, Tootoonchi &amp; Rahman (2006)</b> |
|---------------------------------------------------|------------------------------------------------|---------------------------------------------|
| Identify the Problem                              | Identify the Problem                           | Conduct Needs Analysis                      |
|                                                   | Identify Criteria                              | Search for Alternatives                     |
| Explore Alternatives                              | Objectively Evaluate Alternatives              | Evaluate Alternatives                       |
| Select an Alternative                             | Choose Alternative Likely to Achieve Goal      | Authorize and Select                        |
| Implement the Solution                            | Implementation                                 | Communicate decision and Implement          |
|                                                   | Track Consequences                             | Explain and Justify                         |
| Evaluate the Situation                            | Repeat Process if Desired Results not Achieved | Retrospectively Evaluate                    |

These models attempt to identify and implement the best alternatives available to deal with the problems at hand during a crisis. They also all include an evaluation component.

### **Recovery Decision-Making Process**

Crisis recovery decision making immediately *post-crisis* tends to be more rational. McCarthy (2003) found that the experience of crisis gave rise to a more rational, planned approach to the recovery process. Preparation for the next crisis involves contingency planning followed by simulations, so as to work out any potential problems in the implementation of the plans (Quarantelli, 1988; Rogers & Pearce, 2016; Turner, 1978). Private and public-sector organizations can learn from a crisis experience by evaluating the effectiveness of the decisions made during the crisis. They can then refine the decisions that did not work, so that they will be more effective in the future.

Post-Katrina, there have been two notable reports that highlight the effectiveness of the government responses to Hurricane Katrina and offer recommendations for improvement. The first was by the Senate Committee on Homeland Security and Government Affairs (2006), and is entitled, “Hurricane Katrina: A Nation Still Unprepared.” The second report came from the Select Bipartisan Committee, meant to investigate the Preparation for and Response to Hurricane Katrina (2006), and is entitled, “A Failure of Initiative.” Beyond the obvious calls for better planning, communication, and collaboration, there were two particularly substantive proposals: (1) simplifying and streamlining decision-making processes for faster implementation and (2) turn over command of relief efforts to the Department of Defense in “extraordinary circumstances” (Marek, 2006a).

The testimony of expert witnesses provided more insightful evaluation. For example, below is a summary of the testimony given by Frank J. Cilluffo (2006), the Director of the Homeland Security Policy Institute at George Washington University:

- Managing systems of systems issues involving multiple goals and multiple constituencies gets bogged down, as a “jack of all trades and master of none.”
- DHS should be regionalized, and FEMA should be independent of DHS. Disaster relief can never be effectively managed from Washington.
- The national preparedness and response system must focus on state capabilities and outcomes to support state, local, and nongovernmental and private sector responders.
- Effective relief requires inter- and intra-agency coordination, instead of cooperation among all levels of government and the private sector. Therefore, form must follow function with a clear chain of command, unencumbered by bureaucratic obstacles and based upon timely and effective supply chains enabling the response effort.
- Effective state intervention reduces the need for federal intervention, except in extraordinary circumstances.
- Building a culture of preparedness starts with individuals and communities. Education and preparedness before disasters to prevent suffering is much more effective than relief efforts after the disasters to alleviate suffering.

Subsequently, a disaster management process was developed to address and remedy some of these problems. This paper explores whether such compelling recommendations were implemented, or if processes were diverted back to “business as usual.”

### **DISASTER DECISION-MAKING BREAKDOWNS**

Politics has a large impact on the decision-making process. Politics lie beyond the realm of reason, and they thrive on uncertainty and ambiguity. Descriptive theorists warn that complex problems, fast-moving markets, and unpredictability/uncertainty from social, political, and cognitive forces often significantly influence and constrain rational decision-making processes (Bazerman, 2005; Gigerenzer, 2015; Page, Tootoonchi, & Rahman, 2006). At some point the processes become unapplied, inapplicable, and irrelevant (Heracleous, 1994). When bureaucratic politics take over crisis response, central decision making is unlikely, and competing stakeholders will push their individual agendas, resulting in negligible to zero compromise (Boin, Stern, & Sundelius, 2016).

Organizational dynamics are another factor to consider. Decision makers are embedded in larger organizations, and they help frame decision premises. Effective response to a widespread disaster like Hurricane Katrina requires an inter-dependent, inter-organizational effort, since the scope of the disaster and the needs of its victims far exceed the coping capacity of any one organization or government agency (Cilluffo, 2006). The response to Hurricane Katrina lacked these qualities, in large part due to the organizational dynamics.

Interoperability and integrity between municipal stakeholders was never achieved during the Katrina crises, due to the lack of local, state, and federal collaboration (Bunker, Levine, & Woody, 2015). Management researchers have long documented the breakdown of collaboration—even when it is clearly in the best interests of everyone involved—when organizations have a well-established history of antagonistic interactions and predispositions towards adversarial relationships (Gigerenzer, 2015; Page, Tootoonchi, & Rahman, 2006; Quarantelli, 1988). Organizational collaboration toward a common goal will only be possible when multiple stakeholders negotiate their



interests effectively. The different levels of government and agencies involved in the Hurricane Katrina disaster failed to collaborate and negotiate their respective interests effectively.

Combining external constraints on crisis decision making with arational mediating factors yields the arational influencers, which contributed to the debacle of a response to Hurricane Katrina. This is summarized in Table 2:

Table 2: Decision Influencers  
(Adapted from Page, Tootoonchi & Rahman, 2006)

| <b><u>Arational Mediators</u></b> | <b><u>Rational Moderators</u></b>                  |
|-----------------------------------|----------------------------------------------------|
| Political patronage and agendas   | Resource constraints                               |
| Decision premises                 | Information accessibility                          |
| Information screens/filters       | Imperfect information (consistency, quality, etc.) |
| Resource allocation priorities    | Quality of contingency plans                       |
| Personal opportunism              | Quality of leadership expertise                    |
| Impression Management             | Scope of feasibility forecasting                   |

Examining how these factors have been addressed in the last decade, this paper will expand the “out of sight, out of mind” notion into our following suggested propositions:

**Proposition 1:** As the length of time between disasters increases, the tendency to allocate resources on the basis of political and economic ideological goals instead of science will also increase.

**Proposition 2:** As the length of time between disasters increases, the tendency to divert funds away from meaningful disaster preparation towards personal opportunism and political patronage will also increase.

**Proposition 3:** As the length of time between disasters increases, the tendency to filter information and prioritize impression management over accurate problem assessment and remediation will also increase

**Proposition 4:** As the length of time between disasters increases, the tendency to impose resource constraints on disaster preparedness will also increase.

**Proposition 5:** As the length of time between disasters increases, information accessibility, quality, and consistency will decrease.

**Proposition 6:** As the length of time between disasters increases, the quality of emergency planning will decrease.

**Proposition 7:** As the length of time between disasters increases, leadership expertise will decrease.

### **ARATIONAL MEDIATORS**

It would first be prudent to define arationality in order to distinguish it from irrationality. When something or someone is arational the act is “[n]ot based on or governed by local reasoning” (Arational, 2018). Contrast this with irrational, which is defined as the state of being “[n]ot logical or reasonable” or “[n]ot endowed with the power of reason” (Irrational, 2018). Irrationality describes a state of mind, while arationality describes a situation that cannot be explained using logic or reason.

## Political Ideologies and Decision Premises

The interests, ethics, and ideologies of decision makers help them sort through information to determine what is important and what can be safely marginalized or ignored (Simon, 1957). Political decision premises are often distorted by (a) previous commitments to past choices and tendencies to escalate that commitment, (b) avoidance of negative information and the defense of prior choices, (c) illusions of control over random and uncontrollable events, and (d) wishful thinking, where unpleasant contingencies are arbitrarily dismissed as improbable, while pleasant contingencies are embraced as being most likely, regardless of the empirical evidence to the contrary (Abelson & Levi, 1985; Bazerman, 2005; Conrado, Neville, Woodworth, & O’Riordan, 2016).

Political ideologies often constrain disaster forecasting and response. Senate and Congressional committees investigating the Hurricane Katrina disaster have concluded that this catastrophe was both predictable and predicted (Gelbspan, 2005; Marek, 2006a). However, informal social and political processes tend to focus on simplistic information and alternatives that are easy to understand, reflect what power holders and influence leaders want to hear, and are compatible with preferred political agendas (Bazerman, 2005; Conrado et al., 2016; Harrison, 1999).

For example, the fact that oil industry practices had an impact on drainage in the coastal wetlands that worsened flooding damage is well established. Accordingly, some legislators attempted to hold environmental tortfeasors (lawbreakers) liable; however, those attempts were unsuccessful due to political intervention. In July of 2013, the Southeast Louisiana Flood Protection Authority-East (SLFPA-E) filed a lawsuit against approximately 100 oil and gas companies (Pickell, 2013). The suit alleged that these companies failed to abide by federal and state coastal use permits, which required them to maintain, protect, and restore the coastal wetlands damaged by their exploitation of energy resources over the last several decades (Pickell, 2013).

If it had been heard on its merits, the lawsuit filed by the SLFPA-E would have revealed whether the years of pumping, dredging pipeline channels, digging, and extracting on the coastal wetlands had a negative effect. Had the plaintiffs proven such culpability on the part of the oil and gas companies, they could have compelled the companies to restore the wetlands back to the condition they were in originally (Pickell, 2013). The plaintiffs hoped that their lawsuit would have encouraged a statewide settlement that could have helped fund Louisiana’s Master Plan (Pickell, 2013).

Despite evidence from years of scientific research, then-governor Bobby Jindal and his administration viewed the lawsuit as non-meritorious. Jindal’s campaign, which was alleged to have received financial contributions from the oil and gas industry, attempted to end the lawsuit by threatening to intervene in it by alleging the SLFPA-E did not take the proper procedural steps to seek permission from his administration prior to filing the suit (Pickell, 2013; Schleifstein, 2015).

Bobby Jindal also removed several board members who supported the suit, in what appears to have been an attempt to have a more administration-friendly board, that would potentially decide to drop the suit altogether (O’Donoghue, 2014; Pickell, 2013). In June of 2014, a bill designed to put retroactive limitations on which government agencies can file a suit for damage done by oil and gas companies was summarily passed by the Louisiana state legislature (Adelson & Ballard, 2014). Despite concerns expressed by legal experts as to the bill’s effect on other environmental lawsuits, such as the claims against BP, Bobby Jindal signed a bill that had the potential to retroactively end the levee board’s lawsuit (O’Donoghue, 2014).

Viewing the legislation as a victory, Bobby Jindal stated, “[t]his bill will help stop frivolous lawsuits and create a more equitable and predictable legal environment, and I am proud to sign it into law” (O’Donoghue, 2014, para. 2). Sen. Robert Adley, R-Benton, who sponsored the legislation that Bobby Jindal signed, also stated, “[t]his bill keeps a rogue agency from misrepresenting this State and trying to raise money through illegal actions” (O’Donoghue, 2014, para. 5).

The facts outlined in this section indicate support for our first, second, and fourth propositions. Based on the above actions associated with Bobby Jindal’s administration, there is evidence that with the passage of time since Hurricane Katrina, some politicians appear to be allocating resources based on personal agendas and ideologies, rather than on science. Further, personal political opportunism and political patronage is evidenced from the political choices discussed above. These decisions resulted in disaster relief resources being constrained, supporting our fourth proposition.

### **Political Patronage and Personal Opportunism**

The political corruption surrounding Hurricane Katrina began well before the Hurricane and continues to the present day, sans any disaster. “Disasters, whether natural or human-made, and Katrina [was] both, are revelatory mirrors that expose a society’s subterranean fissures, ... existing socioeconomic inequalities and political pathologies” (Belkhir & Charlemaine, 2015, p. 4). Disasters do not commence only with the naturally-occurring event, since the conditions precipitating a disaster often begin well before the natural event itself. Corruption is an insidious contributor to the process that triggers what has been misleadingly labeled as a “natural disaster” (Lewis, 2011).

Political patronage involves awarding lucrative jobs and contracts based on political agendas rather than merit. The coordination between government agencies remains deeply flawed and the decision-making process continues to be influenced by corruption (Boyd, 2017).

One of the key players in the recovery efforts of Hurricane Katrina arguably distorted the decision-making processes with some of the factors stated above—including greed, commitment to previous decisions, and wishful thinking. After a long history of engaging in corruption, “New Orleans Mayor Ray Nagin was sentenced to 10 years in prison for his role in post-Katrina corruption” further underscoring that “[i]n the wake of a natural disaster, with an influx of funds and pressure to rebuild quickly, opportunities for bribery and embezzlement abound.” (Sorensen 2015, paras. 1-2). “In 2014, . . . [Nagin] was convicted on 20 charges—including fraud, bribery, money laundering, and conspiracy—related to contractors seeking city work before and after Hurricane Katrina” (Pao, 2015, para. 8).

Individuals prioritizing personal political agendas have caused disaster planning and relief decisions to be premised on those priorities and not on the grounds of science. This demonstrates support for our first proposition. Further, our second proposition appears to be supported, because as time continues to pass, money continues to be diverted—legally and illegally—from disaster relief toward personal opportunism. Lastly, one could make the argument that our fourth proposition is inherently supported here because as money is being misappropriated and siphoned from disaster relief, it logically follows that it is going to cause constraints on disaster preparedness. As such, the scope of feasibility forecasting will also decrease, because the funds will not be there to support the effort.

## **Impression Management and Information Filters**

When considering uncertainty, the act of decision making becomes, in and of itself, a risky activity (Abelson & Levi, 1985; Harrison, 1999). As detailed in the facts below, this natural risk aversion and desire to deflect responsibility, coupled with inexperience and incompetence, created an atmosphere of indecision that fueled confusion in the Katrina recovery efforts. It appears that, the political, arational option was to shift attention from managing the disaster to making decisions that primarily managed personal image and diverted blame.

When evaluation focuses on issues of personal exposure and culpability for mistakes, a conservative bias towards risk-taking sets in. DHS Secretary, Michael Chertoff, seemed primarily concerned with media exposure as a means for relief effort success. Then-governor Kathleen Blanco's slow decision making was likely resulting, in part, from a flurry of activity attempting to divert blame—for under-preparation and poor execution—away from the state and toward the federal and local levels (Brinkley, 2006; Singer, 2006). No one appeared to know who was in charge of what and who had authority to make decisions, allowing decision makers to make the dangerous, but convenient assumption that someone else was handling the problems at hand (Marek, 2006a). By buying into this assumption, these decision makers effectively avoided the risks associated with implementing a decision. Managing appearances in the media and in social networks seems to remain a priority to this day (Conrado et al., 2016).

The importance of public image and reputation at the city and state level remains of paramount importance in post-Katrina decision making. In 2009, FEMA released updated floodplain maps that had not been updated since the early 1980s (Dekom, 2016). The maps indicated that most of New Orleans was still highly vulnerable to flooding. Despite the relative accuracy of the floodplain maps, officials from New Orleans protested, and successfully won their appeals, asserting that FEMA did not take into account the post-Katrina levee system. In late September 2016, more than half of the city seemed to suddenly, move out of the high-risk flood zones (Dekom, 2016).

The change in zoning put businesses and individuals that were in areas ten to twelve feet underwater during Katrina in a new zone that no longer required them to purchase flood insurance. A possible reason for this rezoning is that high-risk areas equate to high insurance premiums and hampered development (Kailath, 2016). Lobbyist Jared Munster regarded the outcome as a “great victory” because of the perception that the federal government was “comfortable” with the level of protection around New Orleans (Kailath, 2016). Munster spent seven years lobbying for the new maps—ones that made New Orleans seem so dry that flood insurance was no longer required (Kailath, 2016). Ivan Maddox, an engineer at Intermap—a risk analysis firm—warned that “to suggest that New Orleans is anything except high...flood risk is...crazy” and Intermap found no difference between the FEMA map's high and low-risk zones (Kailath, 2016, para. 19). According to Ivan Maddox, FEMA's maps are a product of politics, redevelopment, and property values (Kailath, 2016). Risk management seems to be systematically replaced by risk maximization in pursuit of economic agendas.

For example, the Army Corps of Engineers has already rebuilt sections of the new levee system that sank six inches, and current projections place nearly three-quarters of the city of New Orleans below sea level by 2050 (Horowitz, 2016). With Katrina “safely” behind a rebuilt levee system and new floodplain maps, various political leaders saw an opportunity to exploit their constituents' natural tendencies to favor short-term goals and benefits (Horowitz, 2016).

Our third proposition seems to be supported in this section, since the information being portrayed—the arguably inaccurate flood maps and the new levee system that is, in actuality, failing—appears to foster impression management rather than working to accurately assess and remediate potential risks and hazards present in New Orleans today.

## **RATIONAL MODERATORS**

### **Quality of Contingency Plans, and Available Information**

The quality of contingency plans has improved, in large part due to the resources that are now available to the different levels of government. Moreover, continuous innovations in information-gathering technologies, from drones to social media, have made improvements in what information is available and how rapidly information can become available.

In 2009, FEMA published Comprehensive Preparedness Guide 101 (Federal Emergency Management, 2010). In 2012, FEMA published Comprehensive Preparedness Guide 201 (Federal Emergency Management, 2013). FEMA has also published a guide that is intended to help local and state governments craft effective pre-disaster plans (Federal Emergency Management, 2017). Further, in 2009, President Barak Obama signed Presidential Policy Directive 8: National Preparedness (“PPD-8”) (Brown, 2011).

The comprehensive preparedness guides are meant to offer resources that can help all levels of government create disaster plans that are premised on empirical evidence, and on past failures and successes experienced by governments impacted by disaster. FEMA enlisted the aid of the different levels of government to create plans that are reliable and based on the wisdom of past experiences (Federal Emergency Management, 2010). These plans can be seen as tools that will allow governments across the country to create effective disaster management plans, which will lead to a mitigation in damage and better quality outcomes.

PPD-8 offers a holistic approach to disaster preparedness, and it is a Federal initiative that includes the involvement of entire communities and all layers of government, inclusive of interagency operational plans (Brown, 2011). Further, PPD-8 includes a national research and development initiative that is intended to craft out the best possible outline for a national disaster plan (Brown, 2011). PPD-8 also offers funding assistance and education resources to different levels of government (Brown, 2011).

Information dissemination and gathering has also become more efficient and is more readily available to different stakeholders. In 2017, FEMA partnered with Nextdoor.com, a social media platform that allows individuals in a neighborhood to communicate with one another. The partnership allows FEMA to be able to communicate with the Nextdoor.com members in regards to emergencies (AP News, 2017). In 2011, FEMA launched an app that provides disaster management and situational information (Moynihan, 2015). Further, FEMA is active on both Twitter and Facebook, where it is able to communicate with millions of its followers about impending emergencies and disaster relief, such as available resources and shelters (Rosenbloom, 2017).

FEMA has a grant program that provides funds for the purchase of drones for response and recovery efforts (Federal Emergency Management, 2017). FEMA and other stakeholders also are also using robots in disaster recovery and preparedness (Moynihan, 2015). These tools are a part of the Center

for Robot-Assisted Search and Rescue efforts, which is an organization that partners with governments when disaster strikes (Moynihan, 2015). The purpose of the partnership and these tools are to provide speedy disaster relief, search and rescue, damage visualizations, and assessment (Moynihan, 2015). Furthermore, particularly in Louisiana, there has been a significant investment in a centralized communication system that allows the Local, State and Federal authorities to communicate more effectively with one another during disasters (Moynihan, 2015). The inability to communicate amongst different stakeholders and first responders was an issue that caused huge problems during Katrina (Moynihan, 2015).

All of these new resources and changes in how governments are now able to prepare and respond to disaster have impacted the quality of contingency plans. This, coupled with more readily available information, is a formula for a high-quality disaster-preparedness plan. Based on the foregoing (available resources, advancements in information and communication technology, and the use of social media) our fifth and sixth propositions do not appear to be supported by the facts outlined above.

### **Quality of Leadership Expertise**

In the Bush Era, many decision makers involved in the Katrina disaster were subsequently attacked for a lack of competence (Marek, 2006a). These competency gaps are not surprising, since most decision makers at that time lacked both education and training in disaster management. FEMA director Michael Brown had boasted to colleagues prior to his appointment that his political activities for the Republican Party put him in line for a lucrative government position (Stearns & Borenstein, 2005). In fact, the systematic under-qualification of political appointments has mushroomed into a huge image problem, escalating to the point where such positions are viewed as professional sell-outs and act as a stigma to one's career (Marek, 2006a).

This was not the case with the Obama administration (Moynihan, 2015), nor is it the case with the Trump administration, with the New York Magazine seeming to concede in an article entitled: "Trump's FEMA Director Doesn't Seem Incompetent" (Hart, 2017). In the wake of three major hurricanes, FEMA has responded well to coastal disasters. FEMA's focus and investment in leadership education and training programs seems to have paid off. Under President Obama, the FEMA Administrator, Craig Fugate, was the former Director of the Florida Emergency Management Division (Moynihan, 2015). Fugate had extensive experience in disaster management and this expertise can be viewed as a large contribution to the positive changes that have taken place within FEMA (Moynihan, 2015). In 2017, President Trump appointed William Long to the Administrator of FEMA. Long also has a wealth of experience, since he was previously the Alabama Emergency Management Agency Director as well as a FEMA regional manager under the Bush administration (Collins, 2017).

As is evidenced from the positive progressiveness of FEMA, the organization has benefited from having experienced leaders appointed during the last two administrations; thus, our seventh proposition is not necessarily supported.

### **Inadequate Resources**

Skimping on disaster preparedness programs continues to be a serious problem. FEMA continues to be underfunded and understaffed, which leads to chronic shortages of equipment, supplies, and

personnel (Bagley, 2014; Miller, 2017). Further, the single biggest cause of destruction and death during Hurricane Katrina was the failure of the levee system designed to prevent flooding. The levee system was never designed to withstand anything more than a relatively weaker hurricane (Category 3 or less). The Army Corps of Engineers demanded increased funding in the 1990s, but Congress refused until 2005, and then reallocated all but 10 million out of the 60 million allocated (Gelbspan, 2005). Of those funds, the levee district diverted tens of millions in funds for levee inspection to license a casino, run an airport, and renovate a Mardi Gras statue (Marek, 2006b). The problems with the levee system are persistent today (Schleifstein, 2015). As previously discussed, the Army Corps of Engineers has already rebuilt sections of the new levee system that sank six inches, and current projections place nearly three-quarters of the city of New Orleans below sea level by 2050 (Horowitz, 2016). It does not help that the federal government continues to cut funding for disaster prevention projects, like the levee system upgrade, in Louisiana, (Schleifstein, 2017), even though there is sufficient evidence proving that investing in these infrastructure project could have saved thousands of people during Hurricane Katrina and would do the same in future disasters (Hardy & Mitchell, 2016).

Similarly, a statewide Coastal Master Plan was put into place to guide the restoration of the Louisiana coastline (State of Louisiana, 2017), which is a natural hedge against inland flooding. It also provides the basis upon which activities in the coastal zone such as oil and gas development, ground water management, and transportation will be monitored and regulated to safeguard coastal populations and ecosystems (State of Louisiana, 2017). The Master Plan was budgeted for 50 million (State of Louisiana, 2017). However, a study from Tulane University estimated that the actual cost was closer to 100 billion (Schleifstein, 2015). Without appropriate funding, the coastline of Louisiana will not be corrected in a meaningful or sustainable way. Since public funds are inadequate and these problems persistently continue, Louisiana is considering the use of private funds to protect the wetlands (Rainey, 2016). One could reasonably say that, there appears to be an evident problem with the adequacy of resources available, and therefore one could conclude that our fourth proposition is supported here.

### **Scope of Feasibility Forecasting**

In Louisiana, disaster forecasting continues to be short-range only, despite the fact that one of the root causes of catastrophes like Katrina is likely climate change. However, in 2006, the Bush administration decided to “ignore and deny,” arguably largely due to the previous commitments and favorable policies toward the energy industry; that trend continues today (Gelbspan, 2005). Industries have long refuted global warming because of the potential liability for adversely affecting it. While there is overwhelming scientific evidence supporting global warming, industries and governments still attempt to refute its reality. This is a fairly clear showing of the power of decision premises and its impact on decision making.

In 2015, FEMA proposed a new requirement in its State Mitigation Plan Review Guide. As of March 2016, FEMA requires states to acknowledge their risks and vulnerabilities to human-made global warming (Jergler, 2015). According to Jergler, states are now also required to outline their strategies for reducing the impact on global warming as part of their disaster mitigation plans. As such, if a state does not address how they will mitigate their impact on global warming, they will be ineligible to receive pre-disaster assistance from FEMA with post-disaster assistance eligibility remaining the same (Jergler, 2015).

Regardless of FEMA's efforts, there has not been significant change. Bobby Jindal expressed his dissent and was concerned that the new requirements would make it difficult for governors to obtain funds to help prepare for and recover from emergencies such as hurricanes and floods (Jergler, 2015). Since federal support can save lives, Jindal argued that the White House should attach no strings restricting the use of federal funds, because there should be no "political leverage to force acquiescence to their left-wing ideology" (Jergler, 2015, para. 13). Placing the priority of economic redevelopment over the "temptation to stray into climate change politics," and developing climate change resilience would not improve disaster preparedness according to Jindal (Alpert, 2015, para. 6). Coincidentally, Louisiana's "Master Plan" budget shortfall will likely only increase should climate change costal resilience efforts not be pursued (Schleifstein, 2015).

Despite opposition to even the mention of climate change, some improvements, while historically fragmented, have been made by local and state agencies.

### RECOMMENDATIONS AND CONCLUSION

Post-Katrina Louisiana featured a flurry of disaster relief, contingency planning, and hurricane preparedness programs. However, Louisiana has not been hit by a seriously disastrous hurricane for over 8 years. As the memory of Katrina fades, and the frequency of these crises decreases, so will the focus on disaster relief—out of sight, out of mind.

Based on the foregoing analysis of the facts outlined above, we find that, in the aftermath of Hurricane Katrina, the following conclusions appear evident. With each disaster situation, a fact analysis would need to be conducted in order to conclude which of our propositions are either supported or not. Future research, using the hypotheses we posited in this paper, could be applied not only to large disasters involving governmental response, but to private organizations that have endured disaster, such as the financial and auto industry during the United States financial crisis and big bailout. With that data, we could draw conclusions that have a more general applicability in the business world.

*The following propositions we presented, were supported:*

**Proposition 1:** As the length of time between disasters increases, the tendency to allocate resources on the basis of political and economic ideological goals instead of science will also increase.

**Proposition 2:** As the length of time between disasters increases, the tendency to divert funds away from meaningful disaster preparation towards personal opportunism and political patronage will also increase.

**Proposition 3:** As the length of time between disasters increases, the tendency to filter information and prioritize impression management over accurate problem assessment and remediation will also increase

**Proposition 4:** As the length of time between disasters increases, the tendency to impose resource constraints on disaster preparedness will also increase.

*The following propositions we presented, were not supported:*

**Proposition 5:** As the length of time between disasters increases, information accessibility, quality, and consistency will decrease.

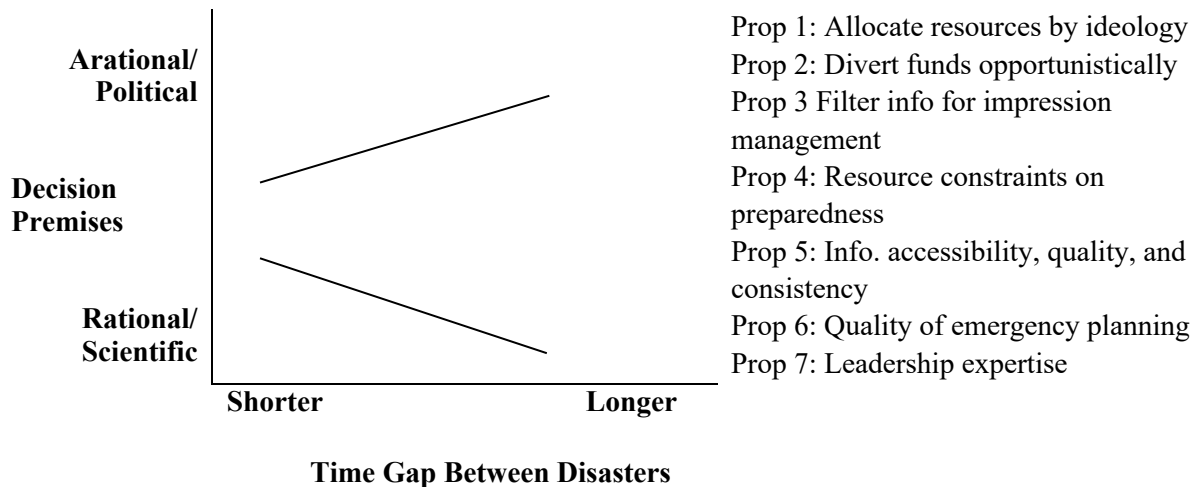


**Proposition 6:** As the length of time between disasters increases, the quality of emergency planning will decrease.

**Proposition 7:** As the length of time between disasters increases, leadership expertise will decrease.

These relationships are modelled in Figure 1:

FIGURE 1: A Decade of Disaster Mitigation Trajectories



There is evidence that arational mediators are to blame here, as discussed above. Thus, in order to have a truly effective disaster management plan, it is also imperative that the impact of arational mediators—like political agendas and misappropriations of funds—be controlled in a meaningful way. It is easy to forget the devastation and amount of resources it actually takes to address a crisis of the magnitude of Hurricane Katrina as the years pass without a disaster taking place. As time goes on, more and more money that is allotted for disaster relief is used for other purposes, partly because the oversight of the money is also reduced as time passes. This is a huge contribution to inadequate infrastructure and resource constraints—namely money, equipment, and supplies—which frequently causes disaster plans to fail, as can be seen with Katrina.

Private sector organizations can learn from and even model an appropriate response during a crisis. In fact, a popular, private-sector retailer was among the first to provide necessary supplies to victims and emergency personnel immediately after Hurricane Katrina (Scott, 2015).

Imposing a penalty for diverting disaster relief funds (for example, towards furthering other political and governmental interests) could help curb this type of gross mismanagement. Penalties could take the form of a claw back from the initial funder (i.e. the Federal Government), or a percentage tax that would be imposed when money was not preserved for its earmarked purpose. Imposing steep monetary or even criminal charges, with the potential for imprisonment, to the misappropriation of disaster relief funds can also have a chilling effect on this type of behavior.

Louisiana is exceptionally prone to hurricanes and extremely vulnerable to flooding. It is not a question of whether there will be another disaster in New Orleans, but rather a question of when and how severe. With climate change adversely affecting weather patterns, one can only presume that the severity will likely increase, especially since climate change continues to worsen as a result of political ignorance to its existence and power.

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## **INDICATORS OF VERITABLE TEACHING EFFECTIVENESS THAT PROMOTE EXCELLENCE IN INSTRUCTION, RESEARCH, SERVICE, AND PRACTICE**

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### **ABSTRACT**

Improvisations in classrooms and teaching effectiveness are still the most coveted styles of professors. Stalwart philosophers like Avolio, Bass, Bennis, Burns, Gardner, and Greenleaf have each cast different kinds of philosophies of leadership, management and teaching effectiveness. Bass and Avolio improved their construct of organizational effectiveness that led to the concepts of teaching effectiveness. Bennis's seminal concept of 'Becoming a Leader' became a milestone in leadership thought and in the classroom performance. Burns invented transformational leadership and criteria of such leadership to be applied in the classroom. Gardner wrote many treatises on exceptional leadership qualities from an ethical standpoint and professors imitated him. Bass improved charismatic leadership theory by eliminating Idealized Influence—attributed and behavior. And Greenleaf, a professor from Yale, innovated a term not accidentally, but showed it in practice, that applied servant leadership as a reverse psychological paradigm of "servant as a leader" in university atmosphere. But no one in the western academic campuses imitated him. Individually, taking their clues of essential premises of leadership effectiveness, this empirical research of university professors will apply those fundamental concepts of classroom leadership from such eminent gurus in academia. Empirically it will test applicable hypotheses of psychological capital and psychological ownership as Indicators of veritable teaching effectiveness in promoting excellence in instruction, research, service, and practice.

*Keywords:* Teaching Effectiveness, Scholarship Excellence, Instruction, Research, Service, and practice, Exceptionalism

### **INTRODUCTION**

#### **Transformational Leadership**

Burns (1978) first introduced the concept of transformational leadership. As a scholarly contribution to leadership thought Burns offered a new insight of leadership called 'Transforming Leadership' that focused on the ways that leaders and teachers emerged from being ordinary "transactional" leaders to become major transformational leaders bringing social changes by developing empowered followers. Burn's period was followed by Bass (1985) who refined and operationalized the concepts of leadership styles, particularly Charismatic Leadership and Transformational Leadership.

#### **Five I's of leadership in the classroom**

Literature on transformational and transactional leadership are replete with organizational leadership and professorial leadership studies. According to Burns (1978), Burns used Charisma as a primary fulminator of transformational leadership. He said, transformational leadership occurs when one or more persons engage with others in such a way that they (leaders and followers) raise

one another's aspiration reciprocally to a higher level of motivation, performance, and morality (p. 20). Transformational leaders have been described in prior literature as highly interactive, passionate, empowering, visionary, and creative (Hackman & Johnson, 2004). In the world today Burn's theories were building blocks only, so they may be construed as having some relevance of an original thinker, but they are not completely accurate for the modern world as theories contradicting his theories with better measurable constructs have emerged.

Bass and Avolio (1993) diverged from and expanded Burn's theory by conceptualizing distinct higher order domains of transformational leadership behaviors using five categories: individualized consideration (IC), Idealized Influence-Attributed (II-A), Idealized Influence-Behavioral (II-B), Inspirational Motivation (IM) and Intellectual Stimulation (IS).

### **Transformational Teaching Styles**

Between the period 1985 and 1990, hasty revisions occurred as new refinements were envisioned and added to the continuum of leadership behaviors. A final and comprehensive nine- component theoretical model of leadership has emerged and matured. A comprehensive survey instrument has also simultaneously evolved using the above constructs of leadership theory. It is called Full Range Leadership Model (FRLM) and has a questionnaire called The Multifactor Leadership Questionnaire-5X (MLQ-5x). Many researchers have used this refined model which became very popular after the publication of Bass and Avolio's 1994 book titled *Improving Organizational Effectiveness through Transformational Leadership*.

Burn's proclamation, that leadership has two dimensions: one--the power wielding dimension; and the other 'motivational power of the recipients' dimension, are both tenable in that "*power and leadership are measured by the degree of production of intended effects.*" He elaborates this on 'leadership and followership' premise, emphasizing on the symbiotic relationship between the leader and the follower by a most succinct precis which is most luminescent: "leadership over human beings is exercised when persons with certain motives and purposes mobilize, in competition or conflict with others, institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of the followers." This, we apply judiciously in the classroom for transformational effect in teaching.

### **Transactional Teaching Styles**

I am a student of Chester I. Barnard (1938/1985), and I can explain Burns philosophy in a little different way as to why followers (learners or students) are needed by the leaders (teachers) in order to achieve a mutual goal. The followers are needed because of the leader's physiological, psychological (or biological limitations). This was explained by Barnard in 1938 at Harvard, when he discussed about contribution to a common purpose through communication, cooperation, control, and coordination-the 4-c's (foresee) of executive function. I find Burns premise interesting in his philosophy of mutual goals of leader and followers for mutual benefit, but it was explained succinctly by Chester Barnard in 1938, forty years before Burns. The essence of his exposition was, "Cooperation, not leadership, is the creative process, but leadership is the indispensable fulminator of its forces."

## **Contingent Reward and Management-by-Exception**

Burns was a great political scientist as well as a great historian and he excelled in both the disciplines. So evidently he has tried to educate us about history, political science and leadership, which he has combined in an excellent way. I must say that Burns cultivated in me a desire to understand his leadership concept and to inculcate in me the strict sense of morality.

This, in his opinion is the building block of successful leadership. To that degree I've been very influenced by his enunciation of psychological matrix of leadership. Since Burns was an original thinker of leadership to implement change, he has dealt about the origins of leadership very well philosophizing about the 'power and purpose,' which was his main theme to influence us. After discussing the origins of leadership he discusses the most important point which is 'transforming leadership' with a real moral power where he grabs my interest very well. Then he discusses about the 'transactional leadership' implying the need for reciprocal interests that is evident in leader and follower relationship. I believe Burns has reached his audience very well because his intellectual contribution has been greatly accepted by students like us who want to do research, extension and 'practice the profession' on his seminal idea.

On moral grounds only I have liked Burns approach to morality that should be endowed on human greatness. Great leaders have great moral character and great achievements, and small leaders have small moral characters and smaller achievements. Great leaders have been continuing an unabated influence on masses for thousands of years, whereas smaller leaders can be only popular for their lifetime at most. "The potential for influence through leadership is usually immense." Burns said: "The ultimate test of moral leadership is its capacity to transcend the claims of multiplicity of every day wants and needs and expectations, to respond to the higher levels of moral development, and to relate leadership behavior- its roles, choices, style, commitments--to a set of recent, relatively explicit, conscious values" (1978, p. 46).

Leadership in the shaping of private and public opinion, leadership of reform and revolutionary movements-that is transformational leadership-seems to take on significant and collective proportions historically, but at the same time and point of action, leadership is intensely individual and personal [with morals].

On transforming leadership, prescribing the ingredients of transformational leadership, Burns as an intellectual, has provided us a unique concept, precept, and contribution to intellectual leadership for the ideals as moral power. This is a significant contribution to the field of leadership and teaching of leadership in any field.

## **Classroom Practice: Utilization of Transformational Leadership**

Transformational leadership is a long drawn process of effectiveness by the instructor whether he is in the classroom or he is teaching by the Internet, but where the interaction demands that the student may be deeply ingrained or engaged through a subconscious state of mind to follow the teacher instinctively and consciously. I will give you one example to impress upon you that transformational leadership can be practiced and I'm giving you an example of one of my teachers from an engineering college, 50 years back in India. If I could explain why I considered him to be transformational then, and transformational now after 50 years, then hopefully I will be able to apply for myself, transformational leadership in the classroom. This professor was teaching us

applied mathematics which everybody feared but the instructor was genuinely interested in the student welfare. He never came with a book or attendance register to the class, which was a must during those days of college teaching. He used to carry plenty of chalks in his hand. I remember in an afternoon class, he said, “*We will derive a long formula for catenary, from the first principles, and then we will use it for suspension bridges which you have seen 3 miles away over the Power Channel River. We will take a trip to that place sometime so you can see for yourself how the bridge is made.*” Without any references to the text, and with plenty of calculus, he derived equation of the catenary cable. He said, you’ll have to learn about applied mechanics in order to apply this theoretical derivation. Right in front of our engineering college there was a huge suspension bridge. The professor asked us to go and enjoy the bridge and the breeze and then he said you wouldn’t appreciate what you have done in this class. It is ready for application provided you visit the suspension bridge and see the silent activity of stress and strain within that bridge. I understood the first application of mathematics so well, that I’d simply say that he was a transformational teacher gifted with the ability to transform students’ thinking and driving them toward application. 50 years later I can perhaps define his teaching style as truly transformational for the student who is completely flabbergasted. Transformational leadership, in fact, is so simple that it cannot be explained any further. Application of most simple educational practices in the classroom, where the student would appreciate and apply an elegant theory for practice. This is transformational behavior of the teacher which inspires a student to learn, and learn and apply well. Transformational teachers are hard to replace in the classroom.

There are certain times when transformational leadership or pioneering leadership does not work. I give an example of a professor who was able to apply theories from pure mathematics to engineering structures as a fun experiment. I’ll give another example where the student was a total failure even though the instructor was truly transformational. I came to the United States to do Masters on industrial land management systems engineering but I was placed in the master student in mechanical engineering. My advisor was an articulately very famous mechanical engineer who taught mechanical engineering at MIT. On my first meeting with him, he evaluated my inadequacies in advanced engineering mathematics and asked me to take advanced courses in that area. He gave me an inkling toward it research project which would lead me to my Master’s thesis. The subject was all inspiring to me because I was so inadequately prepared for completing the project in the standard that he expected. But for the time that the American veterans who are returning from Vietnam with hands and legs torn apart, this suggestion of mechanical modeling of prosthetics of human bipedal locomotion was a wonderful proposition. But the amount of mathematics that it needed was absolutely mind-boggling. I was so terrified with the subject and the instructor himself, that I eventually transferred out from that school. The instructor went to teach at MIT and created a name for himself with that great seminal design and idea of that historical time, but he was too much of a transformational idealist for me. This total professionalism without any personal affinity toward me made me realize my biological limitations (mathematical capabilities) that I decided to get away from the subject, from the school, and from the discipline altogether.

Later on this discussion I decided to speak about the concept of biological limitations -- mental, physical, psychological, and emotional-- imposed on the unprepared students. Particularly this is the area in which most of the students could succeed if adequate supervision were given to overcoming such limitations, but as in my case, many students good completely overwhelmed with the presence of the transformational leader or teacher himself, who was so inspired by his own transformational qualities himself, but could not understand the biological limitations of the

student.

We the instructors can utilize the above teaching effectiveness in the classroom which is derived from simple human behavior in leadership excellence. I will emphatically say that Burns theory or construct is the structure of moral leadership (pure leadership of instrumental nature) which makes us strong, as you will see how I relate. He has worked very hard to influence us greatly and philosophically about the precondition of being a moral instrumental leader; and in teaching business, management, and organizational behavior, or anything else morality that gives importance to instrumental decision-making, is the precursor to everything. Burn's strongest point comes out very strongly in the precept of moral leadership, which can be applied in classroom. I find this concept of leaders' moral instrumental leadership as pre-existing condition to be an effective classroom teacher.

### **Classroom Practice: Utilization of Transactional Leadership**

We use transactional leadership in the class all the time without even realizing it that it exists. I understood its power in the graduate school in the United States. I was taking a graduate-level industrial engineering and management class in which a very young instructor fresh out for his doctorate was teaching us System Simulation using IBM GPSS. I found the class to be very intimidating because I was not cut out to like computer programming. The instructor went through the whole IBM GPSS manual in the whole of the semester teaching us different aspects of simulation blocks, which uses a simple concept called "transaction." It transaction is something to be modeled in which some activity happens. Inter-arrival time of cars in a restaurant is a transaction, joining a queue is a transaction, leaving a queue is a transaction, getting service is a transaction, and leaving the simulation system is a transaction. Etc. etc. The course was so very conceptual that I was very tired and confused. The instructor was from Arkansas and I could not follow his accent. And a major portion of the course was dedicated to an applied simulation project! I had just joined the graduate school having come from India after being away from education, and in the practice field for nearly 7 years. I was running a fleet of 250 semi-articulated outfits which were carrying iron ore from mines up in the mountains, down to the planes, and 300 miles into the port through an expressway. When the project proposals came and became due I submitted one page of "transactions" done by each semi-trailer loaded with 60 metric tons of iron ore from start to finish for a 24-hour journey. This really seemed very exciting to me because it was different than any other student's project. The project became lively to me when I could write program for each transaction that the vehicle was making in a GPSS block. One for the first time the system simulation ran without any error, and I have to correct many errors, he was so inspiring to me that I felt extreme elation at the culmination of a very successful project utilizing the concept of transaction in system simulation. But the concept of transaction in human affairs is something very different which the instructor taught me when he said, "I know that you struggle for the conceptual understanding of the blocks which are called transactions, but you will be happy to know that application of a very simple concept in human affairs that leads to improvement in his or her behavior is the best transaction of all." Here it was a mouthful of a statement that transactions change human behavior. One simple example is that the instructor's recognition of my project well done was a great motivating factor for me. The instructor said to me, "I never thought that you would be able to apply all the blocks that we did in the class, but you did." Later when I was graduating, I went to the instructor and asked for a recommendation for a job. He simply wrote after some introduction, "the student will be an applied person, given initial but adequate supervision on the job." This was a transactional recommendation. The instructor understood the

meaning of his recommendation for a raw student and he wanted to be very cautious in writing that letter of recommendation in a blanket form, although he knew that I had done well in his class. He was being transactionally moral after knowing me for two years. But his letter made lots of sense to me when I read again and again, “given initial but adequate supervision on the job.” Only excellent supervision prepares the subordinate for an excellent performance later. Every student that has received benefits of such supervisory transactions by the instructor in the classroom is bound to be an excellent teacher himself or herself in the classroom. It is a responsibility we cannot just relent to others. A nice quotation that excites me, “The point is that responsibility is the property of individual by which whatever morality exists in him becomes effective in conduct” (Barnard, 1938/1985).

### **Classroom Practice: Utilization of Passive Avoidant Leadership**

However, Burns views have been criticized by Bass (1985) and other philosophers as a narrow and managerial approach. Bass' visualizations emanate from political movements and historical developments in many countries of interest for them, which they studied with interest for extracting a shared meaning and purpose of collaboration between leaders and followers.

Additionally, Bass' (1985) approach is based on his military background which tries to understand such training which leaders use to energize their followers to stimulate them via use of individualized consideration, and influencing them by inspirational motivation, stimulating them with intellectual stimulation, using their own idealized form of influences (attributed and behavioral) to their masses—just like we do in the classrooms.

Bass (1985) proposed that he agreed with Burns philosophy of transformational transactional leadership but also differed with them in certain ways of understanding and prescribing for passive avoidant leadership. Bass differed with Burns (1978) original ideas on transactional and transformational leadership in three different aspects: First Bass (1985) proposed that the task of transformational leader is not only to raise the follower to a higher level of consciousness, but also to assist in the achievement of follower needs and wants. Second, while Burns (1978) asserted that transforming leadership was always morally elevating, but Bass (1985) has argued that transformational leaders may equally lead followers toward an unconstructive, unrealizable, and reactionary goal. Thirdly, although Burns (1978) who opined that transformational and transactional styles of leadership as mutually exclusive, Bass (1985) has consistently maintained that most leaders do both but in different amounts, so they are truly a continuum in the process. And sometimes they do practice passive avoidant leadership in ways that do not get involved until this situation has become extremely bad hoping that the situation owed without any intervention. Since on two instances above, I have given you examples of transformational leadership and transactional leadership applications in the classroom, the third important criterion dealing with passive avoidant leadership must also be examined with an example, as this area has not been researched well in the teaching effectiveness circle, although it's use in industrial arena is very clear. We have caustic managers and industries and we have patronizing managers, as well as we have passive avoidant managers with some discreetly different behaviors which may raise productivity.

I was working as a training manager in Brooke Bond India when I was asked to prepare a couple of management development sessions to raise productivity in the tea and coffee manufacturing and packaging shops. I went to the manufacturing plant where I was able to talk to the present manager

of the plant to get some insight on productivity. I was jotting down important information to draw a plan for raising productivity when this manager had to go on leave for about an extended duration of time for three months. During this time I also met with the man who took the charges from him, a vicious man without any integrity at all and he resented my study of the production or manufacturing personnel. As I was young at the time I did not realize then that productivity is a feeling of sensitivity and a production person is going to produce when he wants to or he would not produce when he doesn't want to. The fact was that the man who was on leave was a man who was in charge in a very passive avoidant way and he did not interfere much in the ongoing affairs of the shop. But he was a popular man and the personnel liked him because he was fair. Even though the man on leave was not a demanding person, he was yet considered fair so people were doing the exact amount of work as laid down by industrial engineering and nothing more. When the new man came and he wanted to show productivity, the people realized that the current manager was trying to show productivity as a means of permanent appointment and that there was a political interest behind. Being a passive avoidant leader the manner leave was able to inspire people, and when instant gain in productivity became political the whole of the production floor dropped the productivity by almost 25% in the first week itself. So what is behind passive avoidant leadership?

Froorman, Mendelson, and Murphy (2012) have shown that passive avoidant leadership is an important leadership to consider for the industry's productivity.

Leadership style affects production absenteeism in the industries. Passive avoidant leadership of noninvasive nature or unobtrusive management reduces production absenteeism because it produces better job satisfaction and satisfaction due to the unobtrusive supervision.

This particular research interest is going to focus on the effects of passive avoidant leadership in the classroom, and how it affects the student behavior due to the unobtrusive instructor behavior in managing the classroom for significant learning activities.

Literature has stated that a passive avoidant leader does not involve in day-to-day activities until the situation gets severely out of hand. This contention may be true but we will focus our attention to a teacher behavior in the classroom to recruit students who are willing to cooperate with the instructor because of his passive avoidant unobtrusive behavior, rather than the lack of it.

My findings from a visiting the production site for three months was that a passive avoidant leader was successful when he had the humane touch for supervision and management. People enjoyed working for him and people enjoyed producing without interference. When the passive avoidant leader was at the helm legitimate absenteeism got reduced. When a caustic or obtrusive supervisor or a manager took the helm of the office to show productivity gain, production people non-cooperative with them and brought the production down by increasing illegitimate absenteeism. The union or the production people wanted to show that the leader who is absent had their allegiance so the union has is back in his absence.

Practical implications of such passive avoidant mechanism or leadership is that when costs of absenteeism is biting the production and when labor turnover has become a crisis, managers with experience in the organizations for a long time tend to be passive avoidant for a cause. And this passive avoidant leadership cannot be replaced by a new manager with obtrusive

management technique.

### **Teaching Effectiveness leading to Organizational Effectiveness**

*“The fine art of executive decision consists in not deciding questions that are not now pertinent, in not deciding prematurely, in not making decision that cannot be made effective, and in not making decisions that others should make.”*

Chester Barnard

Bass and Avolio, while promoting the theory of full range leadership model (FRML), have elaborated on the full range model of leadership which has three foci—Transformational, Transactional and Passive Avoidant Leadership. In order to describe the effectiveness of FRML, the authors have provided evidence of innovative changes in the multinational companies implemented through executive development and management development. Also the authors assert that possible approaches may be taken to determine such changes for categorizing the effects of full range of leadership for organizational change and implementing such continuous development plans and efforts purposefully. This seems that the purpose of their research was to implement changes in the organizations using organizational transformation process as the main objective and for developing strategies for change and improvement.

Interestingly enough, in the 1990s, organizational development in general, and management development in particular, was a very hot topic for implementing organizational change through training and education, even in the universities, and was applied in the teaching arena. I had an occasion to do research at that time around 1996, on ‘management development program evaluation and review technique’ and conducted a study of a university's engineering/ management program evaluation. During that time this FRML concept missed my attention because it had been just out and was not very popular at that time in the purview of management development, *per se*. The transformational leadership idea had not taken a strong root in the minds of researchers then, as it is now, and it's fresh in everybody's mind now. This particular focus looks at *authenticity* as very important and as Barnard (1938/1985) has pointed out as organizational character being essential or seminal. Now I can appreciate the concept of management development with *authenticity* and focus on organizational development with specificity, geared toward leadership development, which develops transformational leaders from the FRML concept. I have a strong belief that mediocre leaders can be exceptional leaders too, if *authenticity* is embedded, and honesty is ingrained in the leader's blood.

This blends in or dovetails very easily into the subject of organizational transformation: strategies for change and improvement. If there is a character in somebody, it may be molded or developed so great leaders are born out of this seminal concept of leadership which is taught in engineering, medical, and management schools.

### **Leadership Excellence: Application of Veritable Teaching Effectiveness**

I have said partly on this topic, the subject of morality in the preceding paragraph when I was discussing divergence of three theories from transformational leadership. In the tumultuous world today relevance becomes a very important facet of theory and the theory works if it is relevant. For this reason of relevance I will like to quote Chester Barnard to make a point which is dear to my heart.



A democratic president had forgotten that the greatest of all democracies is an Army. Discipline and morale influence the inarticulate vote that is instantly taken by masses of men when the order comes to move forward--a variant of crowd psychology that inclines it to follow the leader, but the Army doesn't move forward until the motion has carried. Unanimous consent only follows cooperation between the individual men in the ranks....

Whether authority is of personal or institutional origin is created and maintained by public opinion, which in turn is conditioned by sentiment, affection, reverence or fatalism. Even when authority rests on mere physical coercion it is accepted by those ruled, although the acceptance may be due to a fear of force. (Barnard, 1938/1985, p. 164)

This portion of the writing is most exciting to me as I always want to find some personal utilization either for my own person, or for my profession and for teaching effectiveness. Such studies have provided me opportunities to use the appropriate leadership in the classroom in appropriate manner. This gives us tools to understand the nature of the executive or professorial responsibility. What he says is very appealing to me and constitutes the most important sentiment about utilization of leadership constructs that are effective in managing teaching responsibly with the best of ethics and responsibility.

“The point is that responsibility is the property of an individual by which whatever morality exists in him becomes effective in conduct.” (Barnard, 1938/1985, p. 267)

In other words, the study of all these leadership theories have compelled me to revisit my morality for my own executive and professorial responsibility. On the other hand, it is a fact that the most important ingredient of transformational leadership is the executive morality or leaders' morality. I'm pretty sure every author has read Barnard of extreme transformational thought, who is also a pioneer in leadership thinking, and who brings lively framework of leadership by the following exhilarating end.

“For the morality that underlines enduring cooperation is multidimensional. It comes from, and may expand to all the world; it is rooted deeply in the past, it faces toward the endless future. As it expands, it must become more complex, its conflicts must be more numerous and deeper, its call for abilities must be higher, its failures of ideal attainment must be perhaps more tragic; but the quality of leadership, the persistence of its influence, the durability of its related organizations, the power of coordination it incites, all express the height of moral aspirations, the breadth of moral foundation (in the classroom).

“So among those who cooperate in the things that are seen, are moved by the things unseen. Out of the void comes the spirit that shapes the ends of men” (Barnard, 1938/1985, p. 284).

### **The nature of professorial responsibility**

The teaching profession within the University is a very complex process requiring through professional excellence deriving it from American exceptionalism or extreme professionalism. Such a concept is very important for the American university professors who really want to demonstrate exceptional professionalism within the strict structure of the organization in which they operate. This structure of the university is a very dynamic process Richard course extreme

form of executive responsibility. Barnard calls this as taking refuge in leadership has the factor of chief significance in human cooperation. Then Bonnard calls upon us and invokes the moral elements on us in order to achieve the results of Corporation. In this context he separates the seeking of cooperation from leadership. In the final broad brush is days and most important thing about leadership which are same to fully understand, cooperation, not leadership, is the creative process; but leadership is the indispensable fulminator of its forces. My understanding from this is that if we have great teachers, we will be able to show that leadership in the classroom, and getting cooperation from the students, will not be it difficult tasks. But it is not so all the time. For this reason we will look at and understand the parallel between executive responsibility and teaching effectiveness.

Recent developments have happened which must be brought into focus of executive behavior in organizations, leadership effectiveness in organizations, and teaching effectiveness in the classroom. Bonnard's essays were devoted to complete moral leadership, although morality is only a part of leadership which is been enunciated in authentic leadership. Authentic leadership has four components: relationship, internal moral compass, balanced processing, and self-awareness. I tend to believe that authentic leadership of the instructor is being applied every day in the classroom and we are careful in applying relationship very carefully. Although, the internal moral compass, balanced processing and intense self-awareness of the instructor are important ingredients of the instructional effectiveness in the classroom. Instructional effectiveness which is connected with the teaching effectiveness comes when four things are simultaneously organized.

- ✓ At the time of communication (instruction) in the class this students must understand that the communication (instruction) is completely understood
- ✓ At the time of communication (instruction) in the class, the students believe that it is best to their personal interest
- ✓ At the time of communication (instruction) in the class the students believe that it is to the organizational interest
- ✓ And at the time of communication (instruction) in the class, with respect to maintenance of instructional effectiveness of the teacher, the students do not have biological limitations to comply. This biological limitation can be physical, mental, emotional, physiological, although recognizing the fact that a little impossibility is a total impossibility!

### **Positive Organizational Behavior and Veritable Teaching Effectiveness**

The purpose of this above introduction was to emphasize that teaching effectiveness is a result of Psychological Capital (PsyCap) and Psychological Ownership (PsyGown) that can be used in developing great professors, instead of giving them leadership development training to be successful later. PsyCap and PsyGown can predict the excellence of professors in the future. The constructs of PsyCap and PsyGown will be explained in the following pages in detail and in the research methodology section. The research methodology section explains the detailed ingredients of four sub-scales of PsyCap and five subscales of PsyGown.

### **Psychological Capital**

Psychological capital is defined as the positive and developmental state of an individual as characterized by enhanced hope, pragmatic optimism, high self-efficacy, and tenacious resiliency.

## **Psychological ownership**

Psychological ownership is the psychologically experienced phenomenon in which an employee develops possessive feelings for the target which are motivational, characterized by territoriality, ease of belonging, accountability, self-efficacy, and a relational identity

Both psychological capital and psychological ownership can be used for predicting the leadership effectiveness of university professors.

## **RESEARCH METHODOLOGY**

This research uses research on Psychological capital and psychological ownership as predictors of professors' excellence. Using Survey monkey, data was collected from professors at individual level. Three instruments were used: Psychological Capital Questionnaire, Psychological Ownership Questionnaire and Multifactor Leadership Questionnaire (MLQ). Psychological Capital and Psychological ownership were used as independent variables, to predict Leadership excellence of professors (independent variable), while controlling for gender, age, education and ethnicity.

The study of psychological capital and psychological ownership as predictors of university professors' leadership excellence uses the predictive power or correlation that tries to explore quantitatively the relationship between the professors' self-assessed psychological capital (PCQ) score and their psychological ownership (POQ) scores and their leadership (MLQ) score. The SPSS regression modeling technique applied the control for gender, age, ethnicity, and education while producing a notebook for such relationship between the independent variables and dependent variable of three different kinds of nutrition, e.g. transformational leadership, transactional leadership, and passive avoidance nutrition. This chapter presents the methodology used in conducting the study, describing the participants, the procedures to collect data, the instruments to be utilized with their operational definitions, and the techniques to analyze the data. The null hypotheses and ethical considerations are also presented in this chapter.

## **SAMPLE**

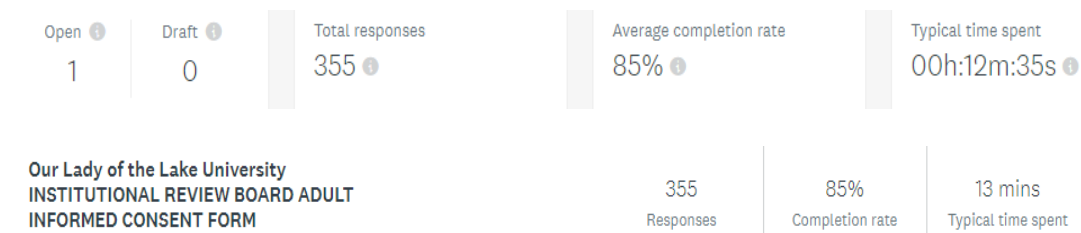
For this study, a sample of convenience was selected, targeting members of university faculty in the contiguous United States. All professors were contacted by e-mail invitations. The professors' e-mails were available to the researcher through personal contact in having attended many conferences. The researcher explained the target audience personally during conferences the importance of this research for the university faculty members in every stage of their current employment. In these many conferences the researcher had come across assistant professors, associate professors, full professors, deans, provosts and vice presidents, and even some chancellors of the universities. The researcher at least had known one of his earlier supervisor to have been a Chancellor of a University and the researcher had recruited his help in getting some responses from university presidents and chancellors, as well as some junior colleagues. Solicitations were also placed in individual emails with a link to SurveyMonkey® after the approval of the IRB process was obtained. This IRB-approved survey link that contained the adult informed consent form also explained the purpose of the research while inviting professors and administrators to participate in the study.

## PROCEDURE

The study procedure requires that that institutional review board (IRB) approve the proposal for the research on the subject: “American exceptionalism: psychological capital and psychological ownership as predictors of University professors leadership style,” after concept proposal approval and final proposal approval from the dissertation committee. The final dissertation proposal was approved by the station committee in the spring semester. In the whole of summer 2018 solicitations were sent to about 500 individual professors and university administrators, who by virtue of having risen to Junior, senior, high-level university administrators after their academic experiences in their areas of expertise. Individuals were sent an invitation through their e-mails to participate in this study. An invitation which was enticing them to participate and a fervent request them to do so because it was about them and it would benefit them if they did participate. A link to the survey was embedded in the solicitation. When the intended participant was enticed enough to participate, she or he would click on the link to get the adult informed consent form to understand his or her rights and privileges regarding the survey regarding maintenance of confidentiality, benefit to the respondent, and incentives or no incentives offered. Before the beginning of the servlet questionnaire there was an agreement radio button that the respondent need to click on that certifies that he or she does fully understand and agree to, and that he or she is willingly participating, and that at any moment he or she is free to quit the survey without any questions or repercussions.

Since individuals were solicited, and there were busy people in the summer teaching, or doing research, or simply vacationing but had access to the University e-mail, at least three reminders were sent to solicit cooperation.

Five hundred e-mails were sent individually and total 355 responses were collected. The total number of questions in the questionnaire was 100 (excluding the IRB agreement radio button question which was the first question). This constituted of 20 PCQ questions, 16 POQ Questions, and 45 MLQ questions, and 15 biographical questions. Because the questionnaire was long, 53 responses were unusable because some of the respondents just abandoned the survey. However, with scrutiny, N = 302 responses were usable. This makes it internal 60.4%. The average response time as registered in the SurveyMonkey® was 12 minutes and 35 seconds. The survey monkey registered an average completion rate of 85%, meaning 302 responses were complete, and 15% or 53 responses were not complete.



## INSTRUMENTATION

Three self-report instruments were utilized with a total of 85 questions: the *Psychological Capital Questionnaire* (PCQ) consisted of 24 questions, the *Psychological Ownership Questionnaire* (PCQ) comprised of 16 questions, and the *Multifactor Leadership Questionnaire* (MLQ) consisted

of 45 questions, but only 36 will be used.

At the end of these 85 questions, there was a set of 15 questions in the demographic section of the questionnaire. Four of the demographic profiles will be used in this research: gender, age, ethnicity and education.

### **PSYCHOLOGICAL CAPITAL QUESTIONNAIRE (PCQ SELF-RATER VERSION)**

The Psychological Capital Questionnaire (PCQ Self-Rater Version) is a 24-item self-report measurement of the four predictor constructs of psychological capital: efficacy, hope, resiliency, and optimism. The PCQ was developed by Luthans et al. (2007) and used pre-existing measures for the individual constructs of efficacy (Parker, 1998), hope (Snyder et al., 1996), resiliency (Wagnild & Young, 1993), and optimism (Scheier & Carver, 1985). It utilizes a 6-point Likert scale (1 through 6) and measures six items under each of the four variables.

The Psychological Capital questions were used (with permission from Mind Garden, Inc.). Courtesy of permission to use was duly appreciated by the author.

#### *Operational Definitions*

Self-Efficacy was calculated with the mean score on questions 1 - 6. Hope was calculated with the mean score calculated from items 7 - 12. Resiliency was calculated with the mean score on questions 13 - 18. Optimism was calculated with the mean score on items 19 - 24. The total composite score for Psychological Capital was calculated as the mean of the sum of all the responses to questions 1-24. Questions 13, 20, and 23 are reversed scored (Luthans, Avolio, & Avey, 2007).

#### *Reliability:*

Internal Reliabilities of Psychological Capital Constructs show the following measurements: Cronbach Alphas: Hope  $\alpha = .75$ , Optimism  $\alpha = .75$ , Resilience  $\alpha = .70$ , Self-efficacy  $\alpha = .79$ , Overall PsyCap  $\alpha = .89$

Another confirmatory measurement study found Cronbach Alphas of each subscale, and PCQ demonstrated adequate internal reliability: Hope  $\alpha = .87$ , Optimism  $\alpha = .78$ , Resilience  $\alpha = .83$ , Self-Efficacy  $\alpha = .92$ , Overall PsyCap  $\alpha = .95$

In four initial studies made by Luthans et al. (2007), the Cronbach alphas of the overall psychological capital score ( $\alpha = .88$  to  $.89$ ) and for each sub-scale they were respectively: efficacy ( $\alpha = .75$  to  $.85$ ), hope ( $\alpha = .72$  to  $.80$ ), resiliency ( $\alpha = .66$  to  $.72$ ), and optimism ( $\alpha = .69$  to  $.79$ ). Another major study conducted by Dawkins, Martin, Scott, and Sanderson (2013) enumerated the psychometric properties of the PCQ in 29 studies, and later with 28 studies reporting internal reliability alphas above the acceptable .70 level. The alpha values from overall psychological capital reliability 27 studies resulted in range between .75 and .98. However, when considering individual sub-scales of optimism ( $\alpha = .63$  -  $.69$ ) and resiliency ( $\alpha = .63$  -  $.66$ ), those alphas were considered lower than those reported for efficacy and hope in two of the studies. This may be due to the reverse- scored items used in optimism and resiliency subscales which could have reduced the scale for reliability (Dawkins et al., 2013; Schmitt & Stults, 1985). It is hoped that this present study and empirical research will present favorable Cronbach alphas due to a robust sample size

of faculty members who showed interest on leadership of scholarship, productivity, and veritable teaching effectiveness.

### **PSYCHOLOGICAL OWNERSHIP QUESTIONNAIRE (POQ SELF-RATER VERSION)**

The *Psychological Ownership Questionnaire* (POQ Self-Rater Version) is a 16-item self-report measurement of the five predictor constructs of psychological ownership: Territoriality, Ease of Belonging, Accountability, Self-efficacy-behavioral, and Relational Identity. The POQ was developed by © 1995 Bruce Avolio and Bernard Bass, and later revised by Avolio, Luthans and Avey (2008). It utilizes a 6-point Likert scale (1 through 6) and measures six items under each of the five variables.

The *Psychological Ownership questionnaire* was used (with permission from Mind Garden, Inc.), and courtesy of permission to use was duly appreciated by the author.

#### *Operational Definitions*

Questions 25-28 of POQ produced the mean score on Territoriality. Questions 29-31 of POQ produced the mean score on Self-efficacy. Questions 32-34 of POQ produced the mean score on Accountability. Questions 35-37 of POQ produced the mean score on Ease of Belonging. Questions 38-40 of POQ produced the mean score on Relational Identity. The total composite score for Psychological Ownership is calculated as the mean of the sum of all the responses to questions 25-40.

#### *Reliability:*

Cronbach Alphas: Territoriality  $\alpha = .84$  Ease of Belonging  $\alpha = .92$  Accountability  $\alpha = .81$ , Self-Efficacy  $\alpha = .90$ , Relational Identity  $\alpha = .73$

Another confirmatory measurement study found Cronbach Alphas of each subscale, and POQ demonstrated adequate internal reliability: Territoriality  $\alpha = .83$ , Ease of Belonging  $\alpha = .92$ , Accountability  $\alpha = .86$ , Self-Efficacy  $\alpha = .89$ , Relational Identity  $\alpha = .80$ , Overall promotion-oriented psychological ownership measure  $\alpha = .91$

It is hoped that this empirical research will present favorable Cronbach alpha of POQ due to a robust sample size and consistent faculty interest on leadership of scholarship, productivity, and veritable teaching effectiveness.

### **MULTIFACTOR LEADERSHIP QUESTIONNAIRE (MLQ SELF-RATER VERSION)**

The Multifactor Leadership Questionnaire (MLQ Self-Rater Version) is a 36-item self-report measurement of the three predictor constructs of MLQ: Transformational, Transactional and Passive Avoidant style of leadership, which are used in this research. The other 9 items measuring job satisfaction, supervision and effectiveness are not used here although data have been collected for future publications. The MLQ was developed by Luthans, Avolio, & Avey, 2004; Avey & Avolio, 2007; Avolio & Bass, 1995, and uses pre-existing measures for the individual constructs of Transformational, Transactional and Passive Avoidant style of leadership. It utilizes a 5-point Likert scale (0 through 4) and measures 20 items in Transformational, 8 items in Transactional

and 8 items in Passive Avoidant leadership.

The Multifactor Leadership Questionnaire was used with permission from Mind Garden Inc. Courtesy of permission to use was duly acknowledged by the author.

#### *Operational Definitions*

Transformational leadership was measured by 20 items.

The subscale of Instrumental Motivation was measured by questions 49, 53, 66, and 76

The subscale of Intellectual Stimulation was measured by questions 42, 48, 70 and 72

The subscale of Idealized Influence-A was measured by questions 46, 54, 63 and 74

The subscale of Idealized Influence-B was measured by questions 49, 53, 66, and 76

The subscale of Individualized Consideration was measured by questions 55, 59, 69 and 71

The total composite score for Transformational leadership was calculated as the mean of the sum of all the responses to the above 20 questions.

Transactional leadership was measured by 8 items

The subscale of Management by Exception-Active was measured by questions 41, 51, 56, 75

The subscale of Contingent Reward was measured by questions 44, 62, 64 and 67

The total composite score for Transactional leadership was calculated as the mean of the sum of all the responses to the above 8 questions.

Passive Avoidant leadership was measured by 8 items.

The subscale of Management by Exception-Passive was measured by questions 43, 52, 57, 60

The subscale of Laissez faire leadership was measured by questions 45, 47, 68, 73

The total composite score for Passive Avoidant leadership was calculated as the mean of the sum of all the responses to the above 8 questions.

The total composite score for MLQ was calculated as the mean of the sum of all the responses to the questions 41-76.

#### *Reliability:*

Internal Reliability Ranges of MLQ Constructs : One confirmatory measurement study found that Cronbach Alphas of each dimension of MLQ demonstrated adequate internal reliability:

Cronbach's Alphas: Transformational  $\alpha = .62 - .76$ , Transactional  $\alpha = .60 - .75$ , Passive Avoidant  $\alpha = .60 - .64$ .

Another confirmatory measurement study (Bass & Avolio, 2004; Rowold, 2005; © Mindgarden) found that Cronbach Alphas of each dimension of MLQ demonstrated adequate internal reliability:

Cronbach's Alphas: Transformational  $\alpha = .62 - .84$ , Transactional  $\alpha = .60 - .76$ , Passive Avoidant  $\alpha = .60 - .73$

### **DEMOGRAPHIC SURVEY QUESTIONNAIRE**

The instrument to identify demographic variables was exhaustive with 15 questions covering all areas of demography to enunciate an academic and personal profile of the respondents that included four important areas of investigation: Gender, Age, Ethnicity and Education.

#### *Operational Definitions*

Gender is the state of being male or female as proclaimed by the respondent. Ethnicity concerns

the respondents' self-identified ethnic affiliation (African America, Asian American, Pacific Islander American, Hispanic America, White American, and Other). Age refers to the number of years lived and is identified by the respondent as the respondent's last birthday in whole number. Education referred to the respondent's highest degree obtained: e.g. Doctorate, Masters, Bachelors, Associate, or 2yr/4yr Community College.

## **RESEARCH DESIGN**

The purpose of this study was to determine if psychological capital (hope, optimism, resiliency, and self-efficacy), Psychological Ownership (Territoriality, Ease of Belonging, Accountability, Self-Efficacy, and Relational Identity), and the selected demographic variables (Gender, Age, Ethnicity, and Education) could predict variance in multifactor leadership (Transformational, Transactional, and Passive Avoidant) behaviors. To explore the predictive capabilities of the independent variables e.g., Psychological Capital and Psychological Ownership (IVs) control variables (from the set of demographic variables e.g., Gender, Age, Ethnicity and Education), a non- experimental survey design was selected, utilizing a one-time convenience sample with no treatments, no pretests or posttests, no random selection of participants, and no random assignment to groups (which clearly ruled out experimental design that may indicate causal effect). The collected data was analyzed using descriptive statistics to provide a profile of the participants, calculating mean, median, mode, skewness, standard deviation, and range for gender, age, ethnicity, and education. Psychological Capital (Overall PsyCap of Efficacy, Hope, Resiliency, and Optimism), and Psychological Ownership (Overall PsyGown of Territoriality, Ease of Belonging, Accountability, Self-Efficacy, and Relational Identity).

The Pearson Product-Moment Correlation coefficients were calculated to examine the linear relationships for all continuous variables and to identify magnitude, direction, and statistical significance of the bivariate correlations (Overall PsyCap, Hope, Efficacy, Resiliency, Optimism, Psychological Ownership (Territoriality, Ease of Belonging, Accountability, Self-Efficacy, and Relational Identity), Gender, Age, Ethnicity, and Education, and Overall MLQ style (Transformational, Transactional, and Passive Avoidant) .

To test the 6 null hypotheses (only one hypothesis will be tested here), multiple regressions were performed using four regression Blocks were used (STEPWISE method and ENTER method) to control for the selected demographic variables. The  $R^2$  and  $\Delta R^2$  were reported in order to explain the variance in the dependent variable accounted for by the independent variables. Additionally, the beta weights ( $\beta$ ) (slope of the line in a regression equation) and partial correlations ( $r_p$ ) (strength and direction of a linear relationship between two continuous variables while controlling for the effect of one or more other continuous variables) were reported.

If gender was identified as a significant predictor in the multiple regression model, an independent *t*-test was performed on this dichotomous categorical variable to determine if a significant difference existed between the mean scores of female (= 1) and male (= 2) respondents. If ethnicity was identified as a significant predictor in the multiple regression model, then a one-way Analysis of Variance (ANOVA) was performed to detect significant differences between different group means. If the differences between the groups were significant, a post-hoc test (Fisher's Least Significant Difference (LSD) was conducted to confirm where there were differences in the means of groups. Fisher's LSD was selected because it was more sensitive to mean differences and computed the smallest significant difference (Fisher's was considered because it produces the most



conservative estimate). This is important for a new population group like university professors which have not been extensively studied earlier. The accepted level of significance was set at  $p \leq .05$  using the software Statistical Package for Social Science (SPSS) version 21.0 (IBM Corp, 2012) and XLSTAT-2018, Excel Based Statistical Software .

### **Null Hypotheses**

Stated in “Null Hypothesis terms” in order to “be able to prove the Null” or “Fail to prove the Null” there were six Research Hypotheses, but only two are tested in this paper.

#### **Null Hypothesis 1**

H<sub>0</sub>: There is no relationship between Professors’ Psychological Capital (PsyCap) Score and MLQ Leadership Score.

#### **Null Hypothesis 2**

H<sub>0</sub>: There is no relationship between Professors’ Psychological Ownership (PsyGown) Score and Transformational Leadership Score and MLQ Leadership Score.

## **RESULTS AND DISCUSSION**

Results are shown below from correlation and regression analyses using XLSTAT excel based statistical software for advanced statistical analyses. XLSTAT is used here, instead of SPSS 21 statistical package because its graphics output is much better.

As can be seen from the output at Appendix A that there are bivariate correlations of PsyCap score, PsyGown score and MLQ score. Correlation of PsyCap and PsyGown is .69, but correlation of PsyCap and MLQ is .29. Correlation of PsyCap and PsyGown is .69, but correlation of PsyGown and MLQ is also .29. PsyCap, PsyGown and MLQ are statistically significant at  $p < .0001$ . Strong correlation of PsyCap with PsyGown indicates that there may be collinearity. This is important in doing the multiple regression with independent variables and one dependent variable which may lead us to false believe that there is causation. We are getting a notion that PsyCap and PsyGown are strong predictors of leadership, but no way we tend to believe that they cause the professors’ leadership effectiveness. Causation is a complex phenomenon and is caused by three important simultaneous governing criteria—there is time factor of the independent variable occurring first so the dependent variable may be measured; there must be a covariation, and third there must be any spurious variables causing it.

While doing regression analysis, it is seen that PsyCap Scores and PsyGown scores are very strongly correlated with each other at ( $r = .71, p < .05$ ) and producing a goodness of fit model. In an advanced modeling we will like to examine the correlation of the two independent variables PsyCap and PsyGown with Leadership while controlling for Gender, Age, Ethnicity and Education by using Stepwise method and Enter method of multiple regression..

Statistical Analysis and Results below show that PsyCap (Hope, Optimism, Resiliency, and Self-efficacy-a) and PsyGown (Territoriality, Ease of Belonging, Accountability, Self-efficacy- b, and Relational Identity) total scores have significant effect on professors’ leadership styles and

veritable teaching effectiveness. Regression is significant at  $p < .0001$ .

|                                                                   |  |  |  |  |  |
|-------------------------------------------------------------------|--|--|--|--|--|
| Equation of the model (Var1):                                     |  |  |  |  |  |
| Var1 = -0.21433749013251+0.981607735445402*X1+0.24573443709342*X2 |  |  |  |  |  |

Var 1 = Leadership Style; X1 = Psychological Capital; X2 = Psychological Ownership

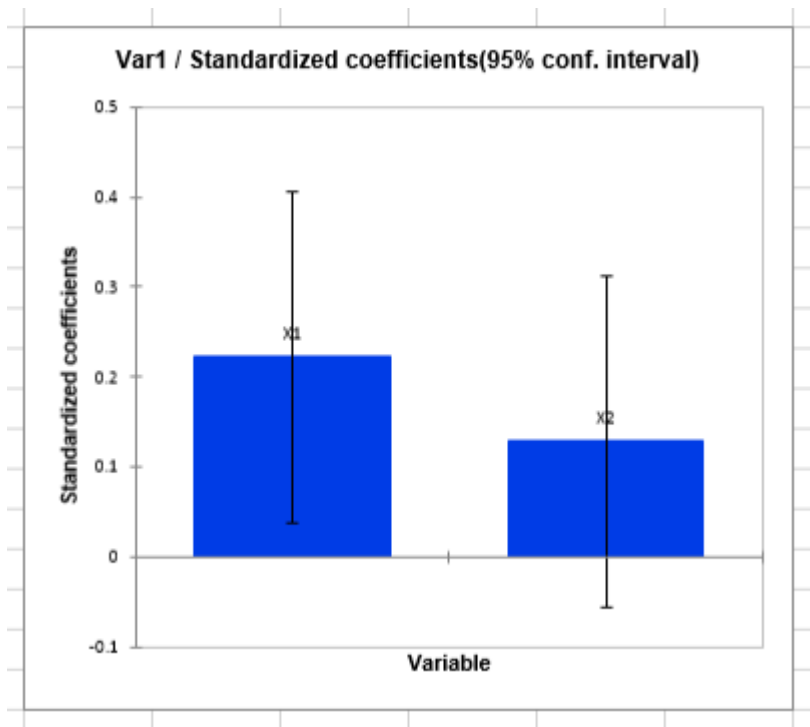
|                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| XLSTAT 2018.1.49205 - Correlation tests - Start time: 1/29/2018 at 4:23:28 PM / End time: 1/29/2018 at 4:23:28 PM / Observations / Quantitative variables: Workbook = XLSTAT AMERICAN EXCEPTIONALISM NUMI                                                                                                                               |  |  |  |  |  |
| Type of correlation: Pearson                                                                                                                                                                                                                                                                                                            |  |  |  |  |  |
|     |  |  |  |  |  |
| Summary statistics (Quantitative data)                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |

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# APPENDIX A

| Summary statistics (Quantitative data):                                         |                    |                        |                      |         |         |       |                    |
|---------------------------------------------------------------------------------|--------------------|------------------------|----------------------|---------|---------|-------|--------------------|
| Variable                                                                        | Observations       | Obs. with missing data | Without missing data | Minimum | Maximum | Mean  | Standard deviation |
| PSYCAPMEAN                                                                      | 210                | 0                      | 210                  | 0.000   | 6.000   | 4.547 | 0.593              |
| PSYGOWNMEA                                                                      | 210                | 0                      | 210                  | 0.000   | 6.000   | 4.024 | 0.759              |
| MLQMEAN                                                                         | 210                | 0                      | 210                  | 0.000   | 4.511   | 2.991 | 1.450              |
| Correlation matrix (Pearson):                                                   |                    |                        |                      |         |         |       |                    |
| Variables                                                                       | PSYCAPMEAN         | PSYGOWNMEAN            | MLQMEAN              |         |         |       |                    |
| PSYCAPMEAN                                                                      | <b>1</b>           | <b>0.693</b>           | <b>0.288</b>         |         |         |       |                    |
| PSYGOWNMEA                                                                      | <b>0.693</b>       | <b>1</b>               | <b>0.287</b>         |         |         |       |                    |
| MLQMEAN                                                                         | <b>0.288</b>       | <b>0.287</b>           | <b>1</b>             |         |         |       |                    |
| <i>Values in bold are different from 0 with a significance level alpha=0.05</i> |                    |                        |                      |         |         |       |                    |
| p-values (Pearson):                                                             |                    |                        |                      |         |         |       |                    |
| Variables                                                                       | PSYCAPMEAN         | PSYGOWNMEAN            | MLQMEAN              |         |         |       |                    |
| PSYCAPMEAN                                                                      | <b>0</b>           | <b>&lt; 0.0001</b>     | <b>&lt; 0.0001</b>   |         |         |       |                    |
| PSYGOWNMEA                                                                      | <b>&lt; 0.0001</b> | <b>0</b>               | <b>&lt; 0.0001</b>   |         |         |       |                    |
| MLQMEAN                                                                         | <b>&lt; 0.0001</b> | <b>&lt; 0.0001</b>     | <b>0</b>             |         |         |       |                    |
| Coefficients of determination (Pearson):                                        |                    |                        |                      |         |         |       |                    |
| Variables                                                                       | PSYCAPMEAN         | PSYGOWNMEAN            | MLQMEAN              |         |         |       |                    |
| PSYCAPMEAN                                                                      | <b>1</b>           | 0.480                  | 0.083                |         |         |       |                    |
| PSYGOWNMEA                                                                      | 0.480              | <b>1</b>               | 0.082                |         |         |       |                    |
| MLQMEAN                                                                         | 0.083              | 0.082                  | <b>1</b>             |         |         |       |                    |



| Analysis of variance (Var1):                                      |        |                |             |         |                   |                   |
|-------------------------------------------------------------------|--------|----------------|-------------|---------|-------------------|-------------------|
| Source                                                            | DF     | Sum of squares | Mean square | F       | Pr > F            |                   |
| Model                                                             | 2      | 46.840         | 23.420      | 12.355  | < 0.0001          |                   |
| Error                                                             | 207    | 392.389        | 1.896       |         |                   |                   |
| Corrected Total                                                   | 209    | 439.229        |             |         |                   |                   |
| Computed against model Y=Mean(Y)                                  |        |                |             |         |                   |                   |
| Model parameters (Var1):                                          |        |                |             |         |                   |                   |
| Source                                                            | Value  | Standard error | t           | Pr >  t | Lower bound (95%) | Upper bound (95%) |
| Intercept                                                         | -0.214 | 0.664          | -0.323      | 0.747   | -1.524            | 1.095             |
| X1                                                                | 0.982  | 0.413          | 2.376       | 0.018   | 0.167             | 1.796             |
| X2                                                                | 0.246  | 0.179          | 1.375       | 0.171   | -0.107            | 0.598             |
| Equation of the model (Var1):                                     |        |                |             |         |                   |                   |
| Var1 = -0.21433749013251+0.981607735445402*X1+0.24573443709342*X2 |        |                |             |         |                   |                   |
| Standardized coefficients (Var1):                                 |        |                |             |         |                   |                   |
| Source                                                            | Value  | Standard error | t           | Pr >  t | Lower bound (95%) | Upper bound (95%) |
| X1                                                                | 0.222  | 0.094          | 2.376       | 0.018   | 0.038             | 0.407             |
| X2                                                                | 0.129  | 0.094          | 1.375       | 0.171   | -0.056            | 0.313             |

| Summary statistics:                |                                     |         |         |       |                    |  |  |
|------------------------------------|-------------------------------------|---------|---------|-------|--------------------|--|--|
| Variable                           | Observations without missing values | Minimum | Maximum | Mean  | Standard deviation |  |  |
| Var1                               | 210                                 | 0.000   | 4.511   | 2.991 | 1.450              |  |  |
| X1                                 | 210                                 | 0.000   | 3.250   | 2.258 | 0.328              |  |  |
| X2                                 | 210                                 | 0.000   | 6.000   | 4.024 | 0.759              |  |  |
| Correlation matrix:                |                                     |         |         |       |                    |  |  |
|                                    | X1                                  | X2      | Var1    |       |                    |  |  |
| X1                                 | 1                                   | 0.712   | 0.314   |       |                    |  |  |
| X2                                 | 0.712                               | 1       | 0.287   |       |                    |  |  |
| Var1                               | 0.314                               | 0.287   | 1       |       |                    |  |  |
| Regression of variable Var1:       |                                     |         |         |       |                    |  |  |
| Goodness of fit statistics (Var1): |                                     |         |         |       |                    |  |  |
| Observations                       | 210.000                             |         |         |       |                    |  |  |
| Sum of weights                     | 210.000                             |         |         |       |                    |  |  |
| DF                                 | 207.000                             |         |         |       |                    |  |  |
| R <sup>2</sup>                     | 0.107                               |         |         |       |                    |  |  |
| Adjusted R <sup>2</sup>            | 0.098                               |         |         |       |                    |  |  |
| MSE                                | 1.896                               |         |         |       |                    |  |  |
| RMSE                               | 1.377                               |         |         |       |                    |  |  |
| MAPE                               | 16.818                              |         |         |       |                    |  |  |
| DW                                 | 1.720                               |         |         |       |                    |  |  |
| Cp                                 | 3.000                               |         |         |       |                    |  |  |
| AIC                                | 137.281                             |         |         |       |                    |  |  |
| SBC                                | 147.322                             |         |         |       |                    |  |  |
| PC                                 | 0.919                               |         |         |       |                    |  |  |

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