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# MISSION STATEMENTS AND VISION STATEMENTS: EXAMINING THE RELATIONSHIP TOWARD PERFORMANCE OUTCOMES

**Jerry Allison, University of Mount Olive**

## ABSTRACT

*This paper examines 798 firms with mission statements and vision statements to show there are relationships between the two and posits that strong relationships produced greater organizational performance. Using the taxonomies of Allison (2017a), Allison (2017b), and an extension of the latter developed in this paper, the statements are classified into their taxonomic groups and then analyzed statistically. The results surprisingly show a single strong link between one type of mission statement and one type of vision statement. This paper then discusses how such a relationship may result in superior performance outcomes. Consequently, this paper significantly contributes to theory by finding a specific relationship between statements, discussing why some firms have this relationship, and then extending this discussion to organizational performance.*

## INTRODUCTION

Mission statements have been a frequently studied topic (Vizeu & Matitz, 2013). Also frequently studied has been the topic of vision by virtue of it being a major component of other subjects such as leadership and strategic management. However, vision statements as a codified document have not been studied as much as mission statements. Nevertheless, because both statements are text, rigorous study of them has been arguably difficult. It has been the increase in computing power that has led to the development of techniques to analyze text such as text analytics.

Text analytics has provided a way in which to analyze mission statements and vision statements without researcher bias. Allison (2017a) provided a natural language taxonomy of vision statements while Allison (2017b) provided a natural language taxonomy of mission statements. Because the mission and vision statements are from the same organizations, it may be possible to find relationships between the two and make some conclusions about performance outcomes. That is why this paper exists.

The purpose of this paper is to explore the relationships between mission and vision statements from the same organizations and to determine if there are organizational performance outcomes from those relationships. The uniqueness of this paper is that it utilizes the natural language taxonomies of textual constructs to study the relationships between those constructs. Additionally, in order to study these relationships this paper extends the three-class taxonomy of mission statements provided by Allison (2017b) by dividing the three parent classes into 20 child classes. Finally, this paper significantly contributes to theory by developing and testing two hypotheses that show there are relationships between types of mission statements and types of vision statements and extending these findings to conclusions about performance.

## LITERATURE REVIEW

### Mission Statements

One of the first topics found in many strategic management textbooks is that of the mission statement (e.g. Hill, Jones, & Schilling, 2015; Grant, 2008). Correspondingly, mission statements have become a commonly studied tool in research (Vizeu & Matitz, 2013). With all the attention brought to the topic, a common definition of mission statement is not to be found. Two general perspectives emerge from the literature. The first is that a mission statement is a “container” that holds several different statements in it. For example, Powers (2012) states that a mission statement consists of mission, values, vision, and philosophy while Rajasekar (2013) adds internal and external analysis, strategy implementation, and strategy evaluation. The second perspective is that a mission statement is a statement of why the firm exists (e.g. Ganu, 2013; David & David, 2008). This simpler definition is what this paper accepts as the definition. In order to discover a relationship between mission and vision statements, the first cannot contain the second or the findings are convoluted. Also, some firms have mission statements but do not have vision statements. In order to determine a relationship between the two, a company will need to have both, implying the narrower definition of mission statement is needed.

Research into mission statements has focused upon three areas. One prevalent focus has been upon what a mission statement should contain. Some research has been performed to examine included strategic issues such as strategic differentiation (Finley, Rogers, & Galloway, 2001) and strategic purpose (Perfetto, Holland, Davis, & Fedynigh, 2013; Orwig & Finney, 2007). Other research has been performed to examine content such as firm customers (Peyrefitte & David, 2006), diversity (Barkus & Glassman, 2008), and marketing information (Anitsal, Anitsal, & Girard, 2012; Anitsal, Anitsal, & Girard, 2013). Other research has been performed to determine what should be in a mission statement (e.g. Alshameri, Greene & Srivastava, 2012; Pearce & David, 1987; King, Case & Premo, 2012; King, Case & Premo, 2014). This latter research has more prescriptive to create a mission statement that creates some form of advantage for the firm.

A second area upon which mission statement research has focused is as a communication tool. Mission statements have been shown to be a tool to communicate meaning to a receiver (Sufi & Lyons, 2003; Nous, 2015) but that meaning should be conveyed both to internal and external stakeholders directly (Amato & Amato, 2002; Biloslavo, 2004; King, Case & Premo, 2013). Additionally, the communication to internal stakeholders is vital for the mission statement to be put into practice (Analoui & Karami, 2002; Rajeasekar, 2013). However, some firms take mission statements further than just a statement of strategic existence. Some firms have used the mission statement as a means to create organizational impression management to build an image in the receiver’s mind (David & David, 2003; Peyrefitte, 2012; Khalifa, 2011).

Research has focused on a third area of mission statements by examining the link between the statement and organizational performance. Several studies have found a relationship between the statement and organizational performance (e.g. Bart & Hupfer, 2004; Sheaffer, Landau & Drori, 2008; Alavi & Karami, 2009; Erol & Kanbur, 2014). However, other studies have shown no relationship between mission statements and performance (e.g. Sufi & Lyons, 2003; Alawneh, 2015). The discrepancy in findings begs the question of what is occurring to produce such results. One explanation may lie in how, or if, the mission statement is communicated to the organization. As stated previously, the mission statement must be communicated and adopted by internal stakeholders in order for the statement to be effective.

## Vision Statements

The literature written about vision statements is as murky as that of mission statements. Much of the ambiguity rests in how the topic is approached. Research has occurred on vision because the topic crosses the fields of strategic management, leadership, and organizational behavior to name a few. In this view, vision has been defined very loosely as organizational purpose, strategic intent, strategic goals, and a future state of the organization (e.g. Baum, 1994; Kantabutra & Avery, 2010) while others define vision as simply the future image of the organization (Brown, 1998; Carver, 2011). However, this organizational vision is ineffective unless it is communication properly to stakeholders (Baum, 1994; Kantabutra & Avery, 2010; O'Connell, Hickerson, & Pillutla, 2011) and accepted by stakeholders (Slack, Orife, & Anderson, 2010). One potential way of communicating the vision is through a vision statement.

This paper focuses upon the vision statement as a written communication of organizational vision. Similar to mission statements, vision statements have also been researched in three areas. One obvious area is the relationship between a vision statement and organizational performance. Vision statements have been found to create goals for employees that create better employee effectiveness and through that customer satisfaction (Kantabutra & Avery, 2010). Organizational effectiveness can also be enhanced through the use of organizational impression management via vision statements (Price, 2012). However, all of the positive effects are negated and can be reversed if the vision statement is just a collection of words and not implemented (Lucas, 1998).

A second area of research has been upon the content of vision statements. Brown (1998) stated that most vision statements were poorly written or had no focus. Since that time, whether coincidentally or not, some research has focused upon the elements that need to be within a vision statement. Some have focused on the length of time (Brown, 1998) while others have focused upon the statement containing motivating and challenging goals (e.g. Lucas, 1998; MacLeod, 2016; Meade & Rogers, 2001). MacLeod (2016) also adds the caveat that the content of the statement is irrelevant if the vision is not taken seriously.

The final area of study for vision statements is how these are implemented. Some of this research has been focused upon ensuring the statement is communicated to internal stakeholders in order to guide their actions (Lucas, 1998; Payne, Blackburn, Hamilton, & Cox, 1994). Kantabutra and Avery (2010) take this notion further and investigate how the statement can be communicated in order to enhance its effectiveness.

## HYPOTHESES

This paper has defined mission statements and vision statements to be separate, individual statements conveying two different aspects of an organization. This definition was a necessity in order to focus upon each of those for analysis. However, the literature does not always distinguish between the two. Some research has tied the two together (e.g. Braun, Wesche, Frey, Weisweiler, & Peus, 2012; Matejka, Kurke, & Gregory, 1993; Powers, 2012; Rajasekar, 2013; Baum, 1994). Similarly, strategic management textbooks have considered mission statements to be a “container” in which mission, vision, values, and other proclamations are kept (e.g. Hill, et al. 2015). Thus, research does not have clearly defined boundaries for mission and vision. If research cannot keep the two separate, then practitioners may have an equally difficult time separating the two. This situation is lamented by Kantabutra and Avery (2010). Thus, when firms are considering creating these statements, they may be created at the same time, implying a consistent theme during creation.

Braun et al (2012) created an extended model of the process of creating the mission “container” in order to achieve positive organizational results. This model emphasizes the creation of the statements should be done concurrently. Strategic management texts (e.g. Grant, 2008; Hill, et al 2015) often place these statements together in the subject presentation, implying these go hand-in-hand and should be developed at the same time. It is not a far stretch to say that statements developed at the same time are going to be similar.

Erol and Kanbur (2014) state mission statements and vision statements are pictures of organizational capability. Fairhurst, Jordan, and Neuwirth (1997) go further and state that these statements are interdependent so that they project the same organizational characteristics, just in their own way. Unity of purpose through the use of these statements is one way of meeting objectives (Gurley, Peters, Collins, & Fifolt, 2015). This unity through these statements can only be met if the statements themselves are unified. Unity in the statements can only be achieved if similar or related wording is used in the statements.

Thus, using a taxonomy based on the language in the statements, the conclusion is that an organization’s mission type and vision type are related. Thus, the following hypothesis can be made:

*Hypothesis 1: There is a significant relationship between the type of mission statement an organization chooses and the type of vision statement an organization chooses.*

Chun and Davies (2001) state companies do not pay enough attention to content in mission statements. In a similar notion, most vision statements are poorly written (Brown, 1998). Some organizations do not seem to put the necessary effort into creating these documents to become a vital component of the organization (Lucas, 1998). Part of the reason for this may be the organizations do not understand the important nature of these statements. As a natural consequence, many vision statements are written simply because it is something to do (MacLeod, 2016) and the same conclusion can be made for mission statements (King, et al, 2011).

Because many organizations do not put effort into creating mission and vision statements but also are encouraged to create them, it would be natural for these organizations to examine statements from similar firms and either use those as templates. This last statement may be corroborated in the literature. Firmin and Gilson (2010) found common themes in mission statements for colleges. Peyrefitte and David (2006) found similarities in mission statements across industry boundaries. Thus, there may be duplication of types of mission statements and vision statements due to “copying”.

Because of this “copying”, common organizations would then have the same type of mission statements and the same type of vision statements. Thus, there should be a relationship between some mission statement types and some vision statement types. The following hypothesis can then be made.

*Hypothesis 2: There is a relationship between at least one mission statement type and vision statements type.*

## METHODOLOGY

One way to test for any relationship between vision statements and mission statements is to adopt a classification system for both. Both of these constructs have taxonomies developed.

Allison (2017a) developed a taxonomy for vision statements while Allison (2017b) developed a taxonomy for mission statements. Each of these is discussed in turn.

Allison (2017a) developed a taxonomy for vision statements where there are two parent classes and several child classes. The two parent classes are called Spatially Oriented statements and Achievementcentric statements. The Spatially Oriented class has eight child classes and the Achievementcentric class has nine child classes.

The vision statement taxonomy of Allison (2017a) has been chosen for several reasons. First, as of the writing of this paper, it may be the only detailed taxonomy of vision statements in existence. Second, this taxonomy was created by using the natural language of 798 vision statements themselves rather than using predetermined classes. This methodology of using natural language may be a far superior method because the classification relies on characteristics in the data rather than potential researcher bias (Duarte & Sarkar, 2011; Kuo-Chung & Li-Fang, 2004). Finally, the methodology of determining the taxonomy was rigorous within the framework just described. This process started with creating classes from the basic data, using that classification to determine rules for classification, and then using those rules to classify the data again to determine a misclassification rate. The parameters of the text analytics software were altered individually to find the lowest misclassification rate. Misclassification rate was chosen because the rules developed by the software would be used to classify statements not in the original data.

Allison (2017b) developed a taxonomy for mission statements consisting of three parent groups: the Producers, the Partners, and the Promoters. This taxonomy was developed using the mission statements from the same 798 organizations as the vision statements. This taxonomy was chosen for this study for the same reasons as for the vision statement taxonomy since the same process was used. The one negative aspect of this taxonomy is that no child classes were developed for the three parent classes. In order to draw comparisons between the vision statements classes and the mission statements classes, the mission statement child classes needed to be developed.

Thus, for this paper, the mission statements were divided based upon the parent classes mentioned previously. For each separate parent class data set, a partition called an unsupervised classification was derived. From this unsupervised classification rules were derived for the classification scheme. These rules were then applied to the original parent data set so that a misclassification rate could be determined. Once the process was created, each parameter was altered one by one until a minimum misclassification rate was found. The classification of each of the parent classes was found using this method. The Producers parent class broke up into four child classes. The Partners parent class divided into twelve child classes. Finally, the Promoters parent class separated into six child classes. The child classes are described in Appendix 1. The rules used to classify mission statements are found in Appendices 2 through 5.

## **Hypothesis 1**

The test for Hypothesis 1 used the same sample that formed the mission statement taxonomy of Allison (2017b) plus the child classes developed here and the vision statement taxonomy of Allison (2017a). The test was conducted on two different levels. First, the parent classes for each type of statement were tested to determine if there is a relationship. Second, the child classes of the parent classes were also tested for a relationship.

For the first test using the parent classes, the Producers, Partners, and Promoters classes of the mission statement taxonomy were compared to the Spatial Oriented class and the Achievementcentric classes of the vision statement taxonomy. This data is nominal data, so the test to be used in this case is the Chi-Square test for independence (Donnelly, 2015; Bluman, 2015).

This test has been used in other research testing such as business type and lean manufacturing usage (Nallusamy, 2016), testing consumer organic produce purchases compared with geographic region (Mrinia & Maharjan, 2015), and testing the relationship of restaurant layout and ambience (Jana & Chatterjee, 2014).

The Chi-Square test depends upon the cells in the cross tabulation of the variables having an expected frequency of five or more. Thus, it was imperative to run a frequency table to find out how many statements are in each of the cells. The frequency table is shown in Table 1.

Since no cell has an expected count of less than five, the Chi-Square test was performed to determine if there is some form of relationship between the mission statement parent types and the vision statement parent types. The results are shown in Table 2.

Table 1: Crosstabulation of the parent classes for mission and vision statements					
			Vision Parent Name		Total
			Achievement	Spatial	
Mission Parent Name	Partners	Count	139	91	230
		Expected Count	140.7	89.3	230.0
	Producers	Count	225	163	388
		Expected Count	237.3	150.7	388.0
	Promoters	Count	124	56	180
		Expected Count	110.1	69.9	180.0
	Total	Count	488	310	798
		Expected Count	488.0	310.0	798.0

Table 2: The results of the Chi-Square test of mission and vision statement parent classes			
	Value	Degrees of Freedom	Significance
Pearson Chi-Square	6.219 <sup>a</sup>	2	.045
Likelihood Ratio	6.339	2	.042
Number of Valid Cases	798		

The Chi-Square test had a p-value of less than 0.05 indicating the test had a significant result. The results show there is support for Hypothesis 1 on the parent level, that there is a relationship between the type of mission statement and type of vision statement chosen by an organization.

The second level of testing was on the child level. Each child type was coded with the hundreds place denoting the parent class and the tens and ones digits denoting the child class. For example, a mission statement with a code of 305 meant the third parent class (Promoters) and the fifth child class under it. A code of 112 meant the first parent class (Partners) and the twelfth child class under it. Each of these codings were regarded as nominal data. However, when the crosstabulation was created, there were many cells (343 out of 374) where the expected frequencies in the cells were less than five. This is shown in Table 3.

Because there are cells that have an expected frequency of less than five, the Chi-Square test can yield distorted results (Agresti & Finlay, 1997). Fisher's exact test and its extensions are designed for tables such as this that have cells of small expected frequencies; however the test was designed for smaller tables and, when large tables are involved, the use of computational time and resources can be unrealistic (Agresti & Finlay, 1997; Schlotzhauer, 2009). Because of the size of

this table, computing resources were not available leaving the Monte Carlo simulation as the last alternative.

The Monte Carlo simulation is a method for taking a test that can yield results that are distorted and finding a more accurate result (Tuffery, 2011). The simulation takes a random sample and runs the test on that sample. This is done many times, with the average of the results becoming the simulation's results. Research using the Monte Carlo simulation includes measuring body absorption of chemicals (Van Landingham, Lawrence, & Shipp, 2004), creating a decision-making tool for plant capacity expansion (Renna, 2013), and forecasting hotel occupancy (Zakhary, Atiya, El-shishiny, & Gayar, 2011).

Table 3: Expected frequencies of mission child classes versus vision child classes

		Table of MissionType by VisionType																			
		VisionType																			
		101	102	103	104	105	106	107	108	201	202	203	204	205	206	207	208	209	Total		
MissionType																					
101	Expected	0.9373	1.3634	0.8947	1.7895	2.3434	1.8321	2.2581	1.7895	4.3885	2.4712	2.5564	2.3434	1.2782	1.8747	3.4511	0.7669	1.6617			
102	Expected	0.4962	0.7218	0.4737	0.9474	1.2406	0.9699	1.1955	0.9474	2.3233	1.3083	1.3534	1.2406	0.6767	0.9925	1.8271	0.406	0.8797			
103	Expected	0.5238	0.7619	0.5	1	1.3095	1.0238	1.2619	1	2.4524	1.381	1.4286	1.3095	0.7143	1.0476	1.9286	0.4286	0.9286			
104	Expected	0.7995	1.1629	0.7632	1.5263	1.9987	1.5627	1.9261	1.5263	3.7431	2.1078	2.1805	1.9987	1.0902	1.599	2.9436	0.6541	1.4173			
105	Expected	0.6065	0.8822	0.5789	1.1579	1.5163	1.1855	1.4612	1.1579	2.8396	1.599	1.6541	1.5163	0.8271	1.213	2.2331	0.4962	1.0752			
106	Expected	0.5238	0.7619	0.5	1	1.3095	1.0238	1.2619	1	2.4524	1.381	1.4286	1.3095	0.7143	1.0476	1.9286	0.4286	0.9286			
107	Expected	0.3308	0.4812	0.3158	0.6316	0.8271	0.6466	0.797	0.6316	1.5489	0.8722	0.9023	0.8271	0.4511	0.6617	1.218	0.2707	0.5865			
108	Expected	0.3308	0.4812	0.3158	0.6316	0.8271	0.6466	0.797	0.6316	1.5489	0.8722	0.9023	0.8271	0.4511	0.6617	1.218	0.2707	0.5865			
109	Expected	0.3584	0.5213	0.3421	0.6842	0.896	0.7005	0.8634	0.6842	1.6779	0.9449	0.9774	0.896	0.4887	0.7168	1.3195	0.2932	0.6353			
110	Expected	0.7719	1.1228	0.7368	1.4737	1.9298	1.5088	1.8596	1.4737	3.614	2.0351	2.1053	1.9298	1.0526	1.5439	2.8421	0.6316	1.3684			
111	Expected	0.3033	0.4411	0.2895	0.5789	0.7581	0.5927	0.7306	0.5789	1.4198	0.7995	0.8271	0.7581	0.4135	0.6065	1.1165	0.2481	0.5376			
112	Expected	0.3584	0.5213	0.3421	0.6842	0.896	0.7005	0.8634	0.6842	1.6779	0.9449	0.9774	0.896	0.4887	0.7168	1.3195	0.2932	0.6353			
201	Expected	3.5564	5.1729	3.3947	6.7895	8.891	6.9511	8.5677	6.7895	16.65	9.3759	9.6992	8.891	4.8496	7.1128	13.094	2.9098	6.3045			
202	Expected	0.8822	1.2832	0.8421	1.6842	2.2055	1.7243	2.1253	1.6842	4.1303	2.3258	2.406	2.2055	1.203	1.7644	3.2481	0.7218	1.5639			
203	Expected	5.0727	7.3784	4.8421	9.6842	12.682	9.9148	12.221	9.6842	23.749	13.373	13.835	12.682	6.9173	10.145	18.677	4.1504	8.9925			
204	Expected	1.1855	1.7243	1.1316	2.2632	2.9637	2.317	2.8559	2.2632	5.5501	3.1253	3.2331	2.9637	1.6165	2.3709	4.3647	0.9699	2.1015			
301	Expected	0.7995	1.1629	0.7632	1.5263	1.9987	1.5627	1.9261	1.5263	3.7431	2.1078	2.1805	1.9987	1.0902	1.599	2.9436	0.6541	1.4173			
302	Expected	0.3584	0.5213	0.3421	0.6842	0.896	0.7005	0.8634	0.6842	1.6779	0.9449	0.9774	0.896	0.4887	0.7168	1.3195	0.2932	0.6353			
303	Expected	0.5238	0.7619	0.5	1	1.3095	1.0238	1.2619	1	2.4524	1.381	1.4286	1.3095	0.7143	1.0476	1.9286	0.4286	0.9286			
304	Expected	0.8546	1.2431	0.8158	1.6316	2.1366	1.6704	2.0589	1.6316	4.0013	2.2531	2.3308	2.1366	1.1654	1.7093	3.1466	0.6992	1.515			
305	Expected	0.8546	1.2431	0.8158	1.6316	2.1366	1.6704	2.0589	1.6316	4.0013	2.2531	2.3308	2.1366	1.1654	1.7093	3.1466	0.6992	1.515			
306	Expected	1.5714	2.2857	1.5	3	3.9286	3.0714	3.7857	3	7.3571	4.1429	4.2857	3.9286	2.1429	3.1429	5.7857	1.2857	2.7857			
Total	Frequency	22	32	21	42	55	43	53	42	103	58	60	55	30	44	81	18	39	798		

With these mission and vision statements, the simulation was run 10,000 times. The final results are shown in Table 4. The 99% confidence interval for the p-value has an upper bound of 0.0005 indicating significance for this test. The Mantel-Haenszel statistic shows there was not a significant difference in the results between each of the samples. The results of this test also show a relationship between mission statement and vision statement child classes and even stronger support for Hypothesis 1.

Table 4: Monte Carlo results for comparing mission and vision statement child classes

Statistic	Degrees of Freedom	Value	Probability
Chi-square	336	513.0448	<0.0001
Likelihood Ratio	336	448.9864	<0.0001
Mantel-Haenszel	1	2.6737	0.1020
Phi coefficient		0.8018	
Contingency coefficient		0.6256	
Cramer's V		0.2005	

## Hypothesis 2

As with the previous hypothesis, the goal is to test the hypothesis on two levels. The first level of testing was the parent level where there are three levels of mission statements and two levels of vision statements. Because there are two levels of vision statements, the second hypothesis can be tested using logistic regression with the two levels of vision statements being the dependent variable and the levels of mission statements being the independent variable. Binary logistic regression is applicable when there is a binary dependent variable and at least one independent variable that is continuous, ordinal, or nominal (Tuffery, 2011). This method has been used in other research such as classifying Norway Spruce Saw Logs (Jappinen & Beauregard, 2000) and in studying motorized versus non-motorized transportation in Ireland (Lawson, McMorrow, & Ghosh, 2013). The model results are shown in Table 5.

Table 5: Likelihood Ratio Test Results for Global Null Hypothesis (Binary Logistic Regression)				
Model	-2 Log Likelihood	Chi-Square	DF	Sig.
Intercept only	1066.223			
Final	1060.241	5.9815	1	0.0145

Because the model is significant, the individual levels can then be examined. For this analysis, a step-wise selection approach was used. The results of this are shown in Table 6.

Table 6: Level Significance Test Results (Binary Logistic Regression)							
Parameter	Vision Parent Name	DF	Estimate	Standard Error	Chi-Square	Sig	Exp(Est)
Intercept	Spatial	1	-0.5574	0.0903	40.90	<.0001	0.561
Promoters	Spatial	1	0.2176	0.0903	5.81	0.016	1.243

Only the third parent class of mission statements, the Promoters, had a significant result. The table above tells us that the Promoters have a 24.3% greater chance of being identified with a Spatially Oriented vision statement than the others. This is not to say the majority of Promoters are assigned to Spatially Oriented vision statements. Table 1 shows that statement is not true. It only shows there is a greater probability that it will happen. This finding supported Hypothesis 2 on the parent level.

Testing Hypothesis 2 on the child level requires using multinomial logistic regression. Multinomial regression is similar to binary logistic regression except it allows for more than two levels of a dependent variable (Tuffery, 2011). Thus, the twenty levels of mission statements can be tested against the 17 levels of vision statements. The results of the model test are in Table 7.

Table 7: Likelihood Ratio Test Results for Global Null Hypothesis (Multinomial Logistic Regression)				
Model	-2 Log Likelihood	Chi-Square	DF	Sig
Intercept only	4369.227			
Final	4212.398	156.8295	48	<0.0001

Since the model itself is significant, the individual levels for mission statements can be checked. The coding for mission statements was the same as for Hypothesis 1. Only three of the levels for mission statements were significant – statements 301, 304, and 305. All of these are from the Promoters parent class, the same class that was significant in the parent level test. The results for the individual levels is shown in in Table 8.

Table 8: Level Significance Test Results (Multinomial Logistic Regression)			
Effect	DF	Chi-Square	Sig
Mission301	16	35.3427	0.0036
Mission304	16	39.8244	0.0008
Mission305	16	32.8455	0.0077

To further understand the results, one must look at the individual level results. These results are found in Appendix 6. The table shows the mission 301 type is associated with the vision types 105 and 107 about four times more often than other mission statements except the mission 304 type that is associated with the vision 107 type about 3.4 times more often than other mission statements. The mission 301 type is also associated with the vision statement types 201, 202, 203, 206, and 207 at least 2.2 times more often than other mission statements except the mission statement 304 type that is associated with vision 202 3.6 times more often and vision 207 4.2 times more often. Finally, mission 305 is less often associated with vision 205 than other mission statements by about 61%. Thus, most of the significant relative associations occur between the third parent class of the mission statements (the Promoters statements) and the second vision statement class (the Spatially Oriented statements), supporting the first test for Hypothesis 2. As a result, there seems to be support for Hypothesis 2.

## ANALYSIS AND DISCUSSION

Hypothesis 1 was tested in two different ways. First, a Chi-Square test was run on the three parent levels of mission statements and the two parent levels of vision statements. The test showed significance, providing parent level support for Hypothesis 1. Because of small cell counts in analyzing the child levels, the Chi-Square test could not be performed. However, because of the magnitude of computations, the Fisher Exact test could not be performed either. Consequently, a Monte Carlo simulation was used to take 10000 sample of the table, use the Chi-Square test, and compose a confidence interval for the significance of the test. The confidence interval falls very easily into the level of significance providing support for Hypothesis 1 on the child level.

Based on the two tests mentioned, there seems to be good support for the supposition there is a general relationship between mission statements and vision statements. If there were no relationship, then the pairings would occur at about the expected cell frequencies. Thus, there seems to be some form of preferred linking of mission statements types and vision statement types. But the specific relationship cannot be determined using these test. This is where hypothesis two helps.

In order to find specific relationships between the mission statement types and the vision statement types, two levels again were tested. On the parent level, since vision statements had two levels, this could be used as the dependent variable of a binary logistic regression. The results of the regression analysis showed a definite relationship between the third level of mission statements – the Promoters – and the second level of vision statements – the Spatially Oriented statements. This is not to say that the Promoters mostly pair with the Spatially Oriented statements. What the results do say is the Promoters are more likely to pair with the Spatially Oriented statements than other mission statements do. This provides support for Hypothesis 2 that there is a form of relationship between the mission statement types and the vision statement types.

The second testing for specific relationships occurred on the child level. Because the dependent variable, vision statement types, was extended to 17 levels rather than two, multinomial

logistic regression was used. The results from this test corroborate the findings from the parent test. The only significant mission statements came from the Promoters which is level three of the mission statement parent taxonomy. Mission statements 301, 304, and 305 were significant and related to vision statements in the Spatially Oriented group, the second parent level in the taxonomy. This lends even more support for Hypothesis 2

The evidence appears to show a dependency relationship between the types of mission statements and types of vision statements. Going even further, this dependency relationship seems to be mostly isolated to three types of Promoter mission statements and their relationship to some types of Spatially Oriented vision statements. As stated by the rationale for Hypothesis 2, these links may be indicators that company has not paid attention to the substance of its statements and instead may have “copied” its statements from other firms.

Finding there was a relationship between mission statements and vision statements was not surprising. What is surprising is the lack of many relationships between types of mission statements and types of vision statements. As stated in the groundwork laid for Hypothesis 1, mission statements and vision statements are theoretically prepared at the same time and would consequently should have a similar focus and wording. This similar focus and wording would translate into similar taxonomic classes and produce a strong relationship between the classes. However, that was not the case. This became evident when the generation of the taxonomies created three parent classes for the mission statements and two parent classes for the vision statements. If most organizations are maintaining a strong linkage between the mission statement and the vision statement, then there should be the same number of taxonomic classes for mission and vision statements and they should be strongly related. To make matters worse the test on the parent level showed a stronger likelihood of Promoter mission statements being paired with Spatially Oriented vision statements than any other statements. Again, if organizations generally had a strong link between the mission and vision statements, then the results would have shown much stronger linkages with more types involved. The tests on the child level showed few relationships.

The implications of these findings is contrary to what authors of textbooks such as Hill, et al (2015) and Grant (2008) have been teaching should be done. The general presumption by researchers such as Braun, et al (2012) is that creation of these statements should be done concurrently to maximize presentation of a common theme and to maximize positive organization results. With the exception of the Promoter-Spatially Oriented linkage, there does not appear to be any relationship between the statements. This may indicate the statements are created independently of each other, whether in different time periods or by different people, without much of a desire to link the two. The worst case scenario is the mission statement and the vision statement present opposing paths for the organization.

This may explain some of the issues researchers have had in the past. Researchers such as Analoui and Karami (2002), David and David (2003), Desmidt, Prinzie, and Decramer (2011), and Sheaffer, et al (2008), show mission statements are definitely related to organization performance. Other researchers such as Amato and Amato (2002), Calfee (1993), Khalifa (2011), and O’Gorman and Doran (1999) claim there is tentative evidence at best to link mission statements to performance. Similar disagreement exists on the vision statement side with Gulati (2016) and Kantabutra and Avery (2010) showing there is a link between the statement and performance and then Shamsi, et al (2015) saying there is no link. The studies demonstrating a positive influence on performance may have included samples where the relationship between the mission statement and vision statement was strong and promoted a boost to performance. The studies that did not

show any influence on performance may well have had samples with weak or no relationship between mission and vision statements and the opposing directions of these statements may have helped eliminate any positive performance benefits.

Another discovery in these findings comes from the two types that paired together – the Promoter mission statement type and the Spatially Oriented vision statement type. The Promoter vision statements are focused upon raising the quality of life through treatment or education. This seems to indicate health care firms and education organizations. These firms more likely also adopted the Spatially Oriented vision statement that recognizes a spatial boundary for the firm's existence. The pairing of these two types of statements seems to be natural since health care institutions and education institutions generally seek to improve their clientele, but are also generally limited by geographic boundaries. Thus, the pairing is natural, whether because of practical circumstances or intentional design. This finding supports Gulati's (2016) finding that when examining acute care hospitals, there was a significant relationship between effective vision statements and performance.

Finally, the results here may be indicators illustrating each statement's type upon performance. For example, firms with Spatially Oriented vision statements may have better performance than those firms with Achievementcentric vision statements. The first offers a commitment to meet the needs of a geographic area while the second requires the firm to become the best at some particular goal. This latter vision could introduce stress, anxiety, and negative competition into the organization. Kantabutra and Avery (2010) state that vision statements work best when the vision is shared and the vision has positive effects on all stakeholders. Additionally, Long and Vickers-Koch (1994) state that vision statements work best when the focus is upon customer needs, contrary to the Achievementcentric theme. Thus, there may be organizational performance benefits to those firms adopting a Spatially Oriented vision statement.

Similarly, there may be performance benefits associated with some mission statement types. The Producer statements focus on delivering products or services without much mention of customers. The Partners statements concentrate on working with individuals for the development of those same individuals. The Promoters concentrate on the quality of life through treatment or education. Amato and Amato (2002) state that mission statements that emphasize the quality of life (as do Promoters) connect with internal and external stakeholders and imply that there may be a performance benefit. Bart and Hupfer (2004) note that mission statements with stakeholder content have more of an impact on performance than other content, consequently minimizing the effects of the Partners type of statement. Both of these seem to imply that positive stakeholder content is beneficial in a mission statement and, as Braun, et al (2012) state, positive stakeholder attitudes toward the mission statement create positive organizational outcomes. Thus, Partners mission statements and Promoters mission statements may have performance benefits associated with them more than the Producer statements. In terms of this study, the Promoter-Spatially Oriented link found may be one of the strongest for creating organizational performance benefits.

## LIMITATIONS

Every study has limitations and this one is no exception. One limitation is the reliance upon the 798 documents that were collected. These documents were a convenience sample rather than a random sample and, consequently, may not be representative of the population. As a result, some of the findings may be more or even less significant than if a random sample were obtained. Additionally, the sample may not have included firm statements that may have produced another

type for either mission or vision statements. This lack of discovery may also have skewed the results.

Another limitation is the data involved is nominal data rather than continuous data. The statistical tests used for nominal data do not produce as distinct results as the tests for continuous data. Thus, there is some ambiguity in the nominal test results and their interpretation. This is especially true for the results of the logistic regression tests that can provide statistically significant relative test results, but not absolute test results.

Finally, the data used for this study included all types of organizations, both for-profit and not-for-profit. Some of the results might be clearer if the data were solely for-profit or solely not-for-profit. Data within industries might have also painted a better picture of the results.

## **DIRECTIONS FOR FUTURE RESEARCH**

The findings presented in this paper have several implications for research. This section examines some of those ramifications to provide general direction for future research. The taxonomies for mission statements and for vision statements can provide much needed help in extending this research.

One area of potential research is to examine studies that examined one statement with some organizational measure and determine if the same results extend to the other statement. For example, Slack, et al (2010) determined vision was correlated with employee satisfaction. This study could be performed again to determine if the corresponding mission type is correlated with employee satisfaction. Another example is David and David (2003) who found higher financial measures for firms that have well-crafted mission statements than for those that do not. The question then arises as to whether this result would extend to vision statements as well, particularly if the type of vision statement was paired with the corresponding type of mission statement.

Research such as David and David (2003); Desmidt, Prinzie, and Decramer (2011); Green and Medlin (2003); and Sheaffer, et al (2008) show a relationship between a mission statement and some measure of organizational performance. On the other hand, studies such as O’Gorman and Duran (1999) and Calfee (1993) have shown no relationship and Erol and Kanbur (2014) have shown a relationship in some and no relationship in others. These studies beg the question of why the mixture of results. As mentioned in the last section, one possibility lies in whether companies take their statements seriously. The results from this study seem to indicate there are mission-vision pairings that are carelessly created. It may be possible to use the pairings as indicators of which companies do not take their statements seriously. It may also provide a way of explaining why there are so many divergent results in the literature.

The question also arises whether the types of mission statements and types of vision statements are related to other types of organizational statements. For example, Allison (2015a) developed a taxonomy for ethics statements and Allison (2015b) developed a taxonomy for values statements. Since these statements all have taxonomies, it is now possible to determine if there is a relationship between any and all of them. It would be necessary to find organizations that have all the statements being tested.

Mission statements and vision statements have been identified as part of strategic management and of strategic communication (Allison, 2017a; Allison, 2017b). These studies also developed the natural language taxonomies used in this study. But language is an integral part of organizational culture (Schein, 1983; Costanza, Balcksmith, Coats, and DeCostanza, 2015). It may be possible to now determine if there is a relationship between the pairings of mission-vision

types and the types of organizational culture. For example, it might be possible that Daher's (2016) mechanistic culture might be related to a particular mission-vision pairing or group of pairings while the organic culture might be related to other pairings. The same study could be done on Cameron and Quinn's (2006) Clan, Adhocracy, Hierarchy, and Market types of culture.

## SUMMARY

This purpose of this paper was to provide unique findings by examining mission and vision statements using the taxonomies of Allison (2017a) and Allison (2017b) and how these relationships affect performance. The mission statement taxonomy of Allison (2017b) had to be extended in this paper to allow comparison of child classes of the respective statements. The goal was to compare the parent classes of the two taxonomies and the child classes of the two taxonomies in order to find relationships between them. Two hypotheses were generated that proposed these relationships.

The importance of this paper lies in the results of the hypothesis tests. Both hypotheses were supported by the tests at the parent level as well as the child level. As a result, it has been established that there are specific relationships between the mission statement types and the vision statement types, but not nearly as many as expected. The lack of a relationship between types of mission and vision statements seems to indicate firms do not always strategically link the two and may not gain performance synergies from such a linkage. In fact this paper suggests the close linkage of the Promoter mission statement with the Spatially Oriented vision statement creates superior performance in firms adopting those types.

Finally, this paper has contributed not only to the body of knowledge regarding mission statements and vision statements but also to the fields of strategic management, strategic communication, and quite possibly organizational culture. Unique taxonomies for the statements were used for the first time to determine a relationship between these two textual constructs. Knowing there is a way to measure these relationships and knowing there is a relationship between these two constructs may help extend theory into areas not possible until now.

## REFERENCES

- Agresti, A. & Finlay, B. (1997). Statistical methods for the social sciences. Upper Saddle River, NJ: Prentice Hall.
- Alavi, M. T. & Karami, A. (2009). Managers of small and medium enterprises: Mission statement and enhanced organizational performance. *Journal of Management Development*, 28(6), 555-562.
- Allison, J. (2015a). Ethics Statements: A Taxonomy from Natural Language. Paper presented at the meeting of the Christian Business Faculty Association in Virginia Beach, VA.
- Allison, J. (2015b). Organization Values Statements: A Natural Language Taxonomy. Paper presented at the meeting of the Christian Business Faculty Association in Virginia Beach, VA.
- Allison, J. (2017a). A Vision Statement Taxonomy: Linking Strategic Management, Strategic Communication, and Organizational Culture. *Global Journal of Management and Marketing*, 1(2), 1-18.
- Allison, J. (2017b). Advancing Strategic Communication Through Mission Statements: Creation of a Natural Language Taxonomy. *Academy of Strategic Management Journal*, 16(3), 1-15.
- Alshameri, F., Greene, G. R., Srivastava, M. (2012). Categorizing top Fortune 500 company mission and vision statements via text mining. *International Journal of Management & Information Systems*, 16(3), 227-238.
- Anitsal, M. M., Anitsal, I., & Girard, T. (2012). The core of retail mission statements: Top 100 retailers. *Academy of Strategic Management Journal*, 11(1), 131-143.
- Amato, C. H. & Amato, L. H. (2002). Corporate commitment to quality of life: Evidence from company mission statements. *Journal of Marketing Theory and Practice*, 14(4), 69-86.
- Analoui, F. & Karami, A. (2002). CEOs and development of the meaningful mission statement. *Corporate Governance*, 2(3), 13-20.

- Anitsal, I., Anitsal, M. M., Girard, T. (2013). Retail mission statements: Top 100 global retailers. *Academy of Strategic Management Journal*, 12(1), 1-20.
- Bart, C. K. & Hupfer, M. (2004). Mission statements in Canadian hospitals. *Journal of Health Organization and Management*, 2(3), 92-110.
- Bartkus, B. R. & Glassman, M. (2008). Do firms practice what they preach? The relationship between mission statements and stakeholder management. *Journal of Business Ethics*, 83, 207-216.
- Baum, J. R. (1994). *The relation of traits, competencies, vision, motivation, and strategy to venture growth* (Doctoral dissertation). Available from the University of Maryland . (UMI No. 9526175)
- Biloslavo, R. (2004). Web-based mission statements in Slovenian enterprises. *Journal for East European Management Studies*, 9(3), 265-277.
- Bluman, A. G. (2015). *Elementary statistics: A step by step approach* (7<sup>th</sup> ed.). New York: McGraw-Hill.
- Braun, S., Wesche, J. S., Frey, D., Weisweiler, S., & Peus, C. (2012). Effectiveness of mission statements in organizations – A review. *Journal of Management & Organization*, 18(4), 430-444.
- Brown, M. G. (1998). Improving your organization's vision. *The Journal for Quality and Participation*, 21(5), 18-21.
- Calfee, D. L. (1993). Get your mission statement working! *Management Review*, 82(1), 54-57.
- Cameron, K. S. & Quinn, R. E. (2006). *Diagnosing and changing organizational culture: Based on competing values framework*. San Francisco: Jossey-Bass.
- Carver, D. W. (2011). *Influences of organizational vision on organizational effectiveness* (Doctoral dissertation). Available from ProQuest LLC. (UMI No. 3515012)
- Chun, R. & Davies, G. (2001). E-reputation: The role of mission and vision statements in positioning strategy. *Brand Management*, 8(4/5), 315-333.
- Costanza, D. P., Blacksmith, N., Coats, M. R., Severt, J. B., & DeCostanza, A. H. (2015). The effect of adaptive organizational culture on long-term survival. *Journal of Business Psychology*, 31, 361-381.
- Daher, N. (2016). The relationships between organizational culture and organizational innovation. *International Journal of Business and Public Administration*, 13(2), 1-15.
- David, F. R. & David, F. R. (2003). It's time to redraft your mission statement. *The Journal of Business Strategy*, 24(1), 11-14.
- Desmidt, S., Prinzie, A., & Decramer, A. (2011). Looking for the value of mission statements: A meta-analysis of 20 years of research. *Management Decision*, 49(3), 468-483.
- Donnelly, R. A. (2015). *Business statistics*. Boston: Pearson.
- Duarte, V. & Sarkar, S. (2011). Separating the wheat from the chaff – a taxonomy of open innovation. *European Journal of Innovation Management*, 14(4), 435-459.
- Erol, Y. & Kanbur, E. (2014). Entrepreneurial characteristics of Turkey's top 100 industrial enterprises according to their mission and vision statements. *Business and Economics Research Journal*, 5(3), 149-165.
- Fairhurst, G. T., Jordan, J. M., & Neuwirth, K. (1997). Why are we here? Managing the meaning of an organizational mission statement. *Journal of Applied Communication Research*, 25(4), 243-263.
- Finley, D. S., Rogers, G., & Galloway, J. R. (2001). Beyond the mission statement: Alternative futures for today's universities. *Journal for Marketing for Higher Education*, 10(4), 63-82.
- Firmin, M. W. & Gilson, K. M. (2010). Mission statement analysis of CCCU member institutions. *Christian Higher Education*, 9, 60-70.
- Ganu, J. (2013). Institutional mission statements and attitudinal outcomes of selected faith-based tertiary institutions in Ghana. *Journal of Applied Business and Economics*, 14(2), 20-30.
- Grant, R. M. (2008). *Contemporary Strategy Analysis* (6th ed). Malden, MA: Blackwell Publishing.
- Green, K. W. & Medlin, B. (2003). The strategic planning process: The link between mission statement and organizational performance, *Academy of Strategic Management Journal*, 2, 23-32.
- Gulati, R. (2016). Vision statement quality and organizational performance in U.S. hospitals. *Journal of Healthcare Management*, 61(5), 335-351.
- Gurley, D. K., Peters, G. B., Collins, L., Fifolt, M. (2015). Mission, vision, values, and goals: An exploration of key organizational statements and daily practice in schools. *Journal of Educational Change*, (16), 217-242.
- Hill, C.W., Jones, G.R., & Schilling, M.A. (2015). *Strategic management: An integrated approach* (11th ed). Stamford, CT: Cengage.
- Jana, A. & Chatterjee, R. (2014). The effect of servicescape of casual restaurants on youths dining experience. *International Journal on Customer Relations*, 2(2), 37-44.
- Jappinen, A. & Beauregard, R. (2000). Comparing grade classification criteria for automatic sorting of Norway Spruce saw logs. *Scandinavian Journal of Forest Research*, 15(4), 464-471.

- Kantabutra, S. & Avery, G. C. (2010). The power of vision: Statements that resonate. *Journal of Business Strategy*, 31(1), 37-45.
- Khalifa, A. S. (2011). Three F's for the mission statement: what's next? *Journal of Strategy and Management*, 4(1), 25-43.
- King, D. L., Case, C. J., & Premo, K. M. (2011). A mission statement analysis comparing the United States and three other English speaking counties. *Academy of Strategic Management Journal*, 10(Special Issue), 21-45.
- King, D. L., Case, C. J., & Premo, K. M. (2012). An international mission statement comparison: United States, France, Germany, Japan, and China. *Academy of Strategic Management Journal*, 11(2), 93-119.
- King, D. L., Case, C. J., & Premo, K. M. (2013). 2012 mission statements: A ten country global analysis. *Academy of Strategic Management Journal*, 12(1), 77-93.
- King, D. L., Case, C. J., & Premo, K. M. (2014). Does company size affect mission statement content? *Academy of Strategic Management Journal*, 13(1), 21-33.
- Kuo-Chung, S. & Li-Fang, S. (2004). Taxonomy in logistics management: A resource-based perspective. *International Journal of Management*, 21(2), 149-165.
- Lawson, A. R., McMorrow, K., & Ghosh, B. (2013). Analysis of the non-motorized commuter journeys in major Irish cities. *Transport Policy*, 27, 179-188.
- Long, C. & Vickers-Koch, M. (1994). Creating a vision statement that is shared and works. *The Journal for Quality and Participation*, 17(3), 74.
- Lucas, J. R. (1998). Anatomy of a vision statement. *Management Review*, 87, 22-26.
- MacLeod, L. (2016). Mission, vision and values statements: The physician leader's role. *Physician Leadership Journal*, 3(5), 18-25.
- Matejka, K., Kurke, L. B., & Gregory, B. (1993). Mission impossible? Designing a great mission statement to ignite your plans. *Management Decision*, 31(4), 34-37.
- Nous, R. (2015). Building cathedrals: Mission statements in academic libraries. *Library Leadership & Management*, 29(4), 1-12.
- Meade, L. M. & Rogers, K. J. (2001). Selecting critical business processes: A case study. *Engineering Management Journal*, 13(4), 41-46.
- Nallusamy, S. (2016). Frequency analysis of lean manufacturing system by different critical issues in Indian automotive industries. *International Journal of Engineering Research in Africa*, 23, 181-187.
- O'Connell, D., Hickerson, K., & Pillutla, A. (2011). Organizational visioning: An integrative review. *Group & Organization Management*, 36(1), 103-125.
- O'Gorman, C. & Doran, R. (1999). Mission statements in small and medium-sized businesses. *Journal of Small Business Management*, 37(4), 59-66.
- Orwig, B. & Finney, R. Z. (2007). Analysis of the mission statements of AACSB-accredited schools. *Competitiveness Review*, 17(4), 261-273.
- Payne, J. S., Blackbourn, J. M., Hamilton, L. E., & Cox, D. W. (1994). Make a vision statement work for you. *The Journal for Quality and Participation*, 17(7), 52-54.
- Pearce, J. A. & David, F. (1987). Corporate mission statements: The bottom line. *The Academy of Management Executive*, 1(2), 109-116.
- Perfetto, J. C., Holland, G., Davis, R., & Fedynich, L. (2013). A comparison of mission statements of national Blue Ribbon schools and unacceptable Texas high schools. *Journal of College Teaching & Learning*, 10(4), 289-294.
- Peyrefitte, J. (2012). The relationship between stakeholder communication in mission statements and shareholder value. *Journal of Leadership, Accountability and Ethics*, 9(3), 28-40.
- Peyrefitte, J. & David, F. R. (2006). A content analysis of the mission statements of United States firms in four industries. *International Journal of Management*, 23(2), 296-301.
- Powers, E. L. (2012). Organizational mission statement guidelines revisited. *International Journal of Management & Information Systems*, 16(4), 281-290.
- Price, W. H. (2012). Vision statement impact on organization strategic roles. *Leadership & Organizational Management Journal*, 2012(1), 132-142.
- Rajasekar, J. (2013). A comparative analysis of mission statement content and readability. *Journal of Management Policy and Practice*, 14(6), 131-147.
- Renna, P. (2013). Capacity investment decision by Monte Carlo approach in a cooperation network. *International Journal of Production Research*, 51(21), 6455-6469.
- Schein, E. H. (1983). The role of the founder in creating organizational culture. *Organization Dynamics*, Summer, 13-28.

- Shamsi, A. F., Panhwar, I., Ahmed, A., Ali, L., Faraz, M., Khoso, B., & Pasha, M. A. (2015). Reflection of vision accomplishment through financial statements. *Journal of Business Strategies*, 9(2), 1-11.
- Sheaffer, Z., Landau, D., & Drori, I. (2008). Mission statement and performance: An evidence of “Coming of Age”. *Organization Development Journal*, 26(2), 49-62.
- Singh, M. & Maharjan, K. L. (2015). The market for local organic produce in urban and semi-urban areas of Nepal: A case study of Kathmandu valley and Chitwan district. *Journal of Contemporary India Studies: Space and Society*, 5, 39-49.
- Slack, F. J., Orife, J. N., & Anderson, F. P. (2010). Effects of commitment to corporate vision on employee satisfaction with their organization: an empirical study in the United States. *International Journal of Management*, 27(3), 421-436.
- Schlotzhauer, S. D. (2009). Elementary statistics using SAS. Cary, NC: SAS Institute Inc.
- Sufi, T. & Lyons, H. (2003). Mission statements exposed. *International Journal of Contemporary Hospitality*, 15(5), 255-262.
- Tuffery, S. (2011). Data mining and statistics for decision making. West Sussex, UK: Wiley.
- Van Landingham, C. B., Lawrence, G. A., & Shipp, A. M. (2004). Estimates of lifetime-absorbed daily doses from the use of personal-care products containing polyacrylamide: A Monte Carlo analysis. *Risk Analysis: An International Journal*, 24(3), 603-619.
- Vizeu, F. & Matitz, Q. R. S. (2013). Organizational sacralization and discursive use of corporate mission statements. *Brazilian Administration Review*, 10(2), 176-194.
- Zakhary, A., Atiya, A. F., El-shishiny, H., & Gayar, N. E. (2011). Forecasting hotel arrivals and occupancy using Monte Carlo simulation. *Journal of Revenue and Pricing Management*, 10(4), 344-366.

## APPENDIX 1

*The child classes for the mission statement taxonomy. The key words are in descending order based on relevance.*

Name of Class	Key Words	Description
<b>Partners (Parent)</b>		
Child 1 – 101	Development, staff, systems, management, project, training, expectations	These statements focus on working to develop people in other organizations
Child 2 – 102	Cancer, patients, treatments, lives, help, improve, solutions, develop	These statements focus upon helping cancer victims live a better life.
Child 3 – 103	Life, quality, world, well, building, work, opportunities, seek, improve	These statements focus on helping people create a better quality of life
Child 4 – 104	Values, produce, drive, grow, leadership, stakeholders, product, core, innovation, profitably	These statements focus on working with stakeholders to grow the organization.
Child 5 – 105	Women, serve, businesses, members, providing, growth, promote, dedicated, opportunities, environment	These statements focus on providing growth opportunities for women
Child 6 – 106	Create, relationships, design, guests, services, trusted, goal, world, customers, leader	These statements focus on generating relationships
Child 7 – 107	Programs, community, education, children, students, focused, process, families, lives, enhanced	These statements focus on community programs to enrich peoples' lives
Child 8 – 108	Service, level, achieving, team, strive, aim, deliver, vision, work, businesses, goal	These statements focus on accomplishing some organizational goal
Child 9 – 109	Supply, chain, experience, delivering, markets, solutions, offer, employee, systems, best	These statements focus on working with those inside the organizational value chain

Child 10 – 110	People, working, strive, brands, share, meet, spirit, performance, work, live, help	These statements focus on helping people where they need help
Child 11 – 112	Company, growth, manner, leading, aim, guests, meet, practices, standards, building	These statements focus on relationships through keeping standards and regulations
Child 12 - 113	Industry, lead, value, leading, partner, committed, trusted, profitability, responsibility	These statements focus on building trust and commitment
<b>Producers (Parent)</b>		
Child 1 – 201	Customer, quality, deliver, business, development, service, leader	These statements focus on delivering products or services that are high quality or the best in the market
Child 2 – 202	Customers, excellence, shareholders, value, needs, employees, providing	These statements focus on delivering products or services that create value for stakeholders and customers
Child 3 – 203	Products, world, differentiated, entertainment, consumer, information, people, industry	These statements focus on delivering products or services that are unique
Child 4 – 204	Services, client, contracting, security, clients, needs, class, software, individuals	These statements focus on delivering products or services to meet client needs
<b>Promoters (parent)</b>		
Child 1 – 301	Health, research, improve, support, promote, education, community, system, excellence	These statements emphasize health, education, and community programs
Child 2 – 302	Technology, success, employees, company, customer, development, making, committed, needs	These statements emphasize need fulfillment through technology
Child 3 – 303	Care, organization, providing, physicians, quality, committed, business, customer	These statements emphasize quality health care
Child 4 – 304	Communities, serve, healing, families, spirit, healthcare, well-being, caring, quality services	These statements emphasize community well-being through the healthcare system
Child 5 – 305	Mission, students, world, help, energy, technology, innovation, life, growth, learning, people	These statements emphasize helping people learn and grow as individuals

## APPENDIX 2

*The following are the rules by which mission statements are classified.*

### Parent Class Rules

Step 1: If any of the following are true, the mission statement is a Promoter. If none of these are true, go to Step 2.

- The statement does not have the word “products”, does not have the words “customers” or “customs”, and has “health” in the same statement.
- The statement has “mission” or “missions”; does not have “customer” or “custom”; does not have “products”; does not have “delivery”, “delivers”, or “deliver”; does not have “delivery”, “delivers”, or “deliver”; and does not have “solutions” or “solution”.
- The statement has the word “clients”, has either “achieves” or “achieve”, and does not have “services”.
- The statement has either “care” or “cares” and does not have “customs” or “customers”.

- e. The statement does not have “products”, it does not have “solution” or “solutions”, it does have “technology”, and does not have “customs” or “customers”.
- f. The statement does not have “products”, it does have “clients”, it does not have “solution” or “solutions”, and it does not have “services”.
- g. The statement does not have “value” and has “research”.

Step 2: If any of the following statements are true, the mission statement is one of the Partners statements. If none of the statements are true, the mission statement is of the Producers class.

- a. The statement contains “member”, “members”, “treatment”, “treatments”
- b. The statement does not contain “mission” or “missions”, does not contain “products”, does contain “people” or “peoples”, does not contain “solution” or “solutions”, does not contain “customs” or “customer”, and does not contain “health”.
- c. The statement does not contain “products”, does not contain “customs” or “customers”, and does contain “industry”.
- d. The statement contains “values” and it does not contain “customs” or “customers”.
- e. The statement contains “run” or “runs” but not “value”.
- f. The statement contains “program” or “programs” and it contains “skill” or “skills”.
- g. The statement contains “steel” but not “communities”.
- h. The statement does not contain “missions” or “mission” but does contain “women”.

### APPENDIX 3

#### *The rules for classifying mission statements of the Producers parent class*

Step 1: If the rule below is true, the statement belongs to the second child class of the Producer statements: the statement does not contain “customer” or “custom”, does contain “products”, and does not contain “deliver” or “delivers”

Step 2: If the rule below is true, the statement belongs to the fourth child class of the Producer statements: the statement does not contain “business”, it does not contain “improve” or “improved”, it does not contain “growth”, it does not contain “customers” or “customs”, it does contain “services”, and it does not contain “return” or “returns”.

Step 3: If any the rules below are true, the statement belongs to the first child class of the Producer statements. Otherwise it belongs to the third child class.

- a. The statement contains “solution” or “solutions”, it does not contain “customs” or “customers”, and it does not contain “services”.
- b. The statement contains “deliver” or “delivers”, it does not contain “customs” or “customers”, and it does not contain “services”.
- c. The statement contains “strive”, “strives”, or “strides” and it does not contain “services”.
- d. The statement contains “business” and “development”.
- e. The statement contains “natural” and does not contain “services”.
- f. The statement contains “competitive” or “highest”.

### APPENDIX 4

#### *The rules for classifying mission statements of the Partners parent class*

Step 1: If the following rule is true, then the statement belongs to the eleventh child class of the Partners statements: the statement contains “company”.

Step 2: If the following rule is true, then the statement belongs to the seventh child class of the Partners statements: the statement contains “program”, “programs”, “children”, or “community”.

Step 3: If the following rule is true, then the statement belongs to the eighth child class of the Partners statements: the statement contains “service”, “achieving”, or “vision”.

Step 4: If either of the following rules are true, then the statement belongs to the ninth child class of the Partners statements.

- a. The statement contains “supply”.

- b. The statement does not contain “people” but does contain “experience”, “experienced”, or “experiences”.
- Step 5: If the following rule is true, then the statement belongs to the twelfth child class of the Partners statements: the statement does not have “people” but does have “industry”.
- Step 6: If the following rule is true, then the statement belongs to the second child class of the Partners statements: the statement contains “cancer”, “patients”, “patient”, “help”, or “helps”.
- Step 7: If the following rule is true, then the statement belongs to the third child class of the Partners statement: the statement contains “life”.
- Step 8: If the following rule is true, then the statement belongs to the sixth child class of the Partners statements: the statement contains “creates”, “created”, or “create” and does not contain “work” or “works”.
- Step 9: If the following rule is true, then the statement belongs to the fifth child class of the Partners statements: the statement contains “women”, “providing”, “committed”, “dedicated”, “members”, or “member”.
- Step 10: If the following rule is true, then the statement belongs to the tenth child class of the Partners statements: the statement contains “people”.
- Step 11: If the following rule is true, then the statement belongs to the fourth child class of the Partners statements: the statement contains “values”, “leadership”, “grow”, “grows”, or “innovation”. Otherwise the statement belongs to the first child class.

## APPENDIX 5

### *The rules for classifying mission statements of the Promoters parent class*

- Step 1: If the following rule is true, then the statement belongs to the second child class of the Partners statements: the statement contains “customer”, “customers”, or “technology”.
- Step 2: If the following rule is true, then the statement belongs to the third child class of the Partners statements: the statement contains “client” or “clients”.
- Step 3: If the following rule is true, then the statement belongs to the first child class of the Partners statements: the statement contains “research”, “system”, “health”, or “healthy”.
- Step 4: If the following rule is true, then the statement belongs to the fifth class of the Partners statements: the statement contains “communities”, “serves”, or “serve”.
- Step 5: If the following rule is true, the statement belongs to the fourth child class of the Partners statements: the statement contains “care” or “cares” but not “communities”. Otherwise, the statement is a member of the sixth child class.

## APPENDIX 6

*These are the level results from the multinomial regression test. Significant variables are italicized.*

Parameter	Vision Type	DF	Estimate	Standard Error	Chi-Square	Pr > ChiSq	Exp(Est)
Intercept	209	1	-0.801	0.7951	1.01	0.3138	0.449
Intercept	208	1	-6.586	97.6404	0	0.9462	0.001
<i>Intercept</i>	207	<i>1</i>	<i>-2.1272</i>	<i>0.9572</i>	<i>4.94</i>	<i>0.0263</i>	<i>0.119</i>
Intercept	206	1	-11.6142	79.6047	0.02	0.884	0
<i>Intercept</i>	205	<i>1</i>	<i>1.6301</i>	<i>0.6524</i>	<i>6.24</i>	<i>0.0125</i>	<i>5.105</i>
Intercept	204	1	-16.2308	90.4946	0.03	0.8577	0
Intercept	203	1	-0.3522	0.7158	0.24	0.6227	0.703
Intercept	202	1	-6.9947	53.6228	0.02	0.8962	0.001
Intercept	201	1	-0.2671	0.6778	0.16	0.6935	0.766
Intercept	108	1	-7.0044	63.9246	0.01	0.9127	0.001
Intercept	107	1	-6.9952	56.0945	0.02	0.9008	0.001

Intercept	106	1	-6.2706	63.1756	0.01	0.9209	0.002
Intercept	105	1	-6.4392	45.1482	0.02	0.8866	0.002
Intercept	104	1	-11.8502	89.7541	0.02	0.895	0
Intercept	103	1	-11.988	116.2	0.01	0.9178	0
Intercept	102	1	-11.0261	93.3427	0.01	0.906	0
Mission301	209	1	0.7982	0.4634	2.97	0.085	2.222
Mission301	208	1	6.0394	97.6374	0	0.9507	419.656
<i>Mission301</i>	207	<i>1</i>	<i>1.2352</i>	<i>0.4579</i>	<i>7.28</i>	<i>0.007</i>	<i>3.439</i>
<i>Mission301</i>	206	<i>1</i>	<i>1.2909</i>	<i>0.5807</i>	<i>4.94</i>	<i>0.0262</i>	<i>3.636</i>
Mission301	205	1	-0.4464	0.3933	1.29	0.2564	0.64
Mission301	204	1	6.1305	55.8566	0.01	0.9126	459.688
<i>Mission301</i>	203	<i>1</i>	<i>0.8093</i>	<i>0.4128</i>	<i>3.84</i>	<i>0.0499</i>	<i>2.246</i>
<i>Mission301</i>	202	<i>1</i>	<i>1.4237</i>	<i>0.5798</i>	<i>6.03</i>	<i>0.0141</i>	<i>4.153</i>
<i>Mission301</i>	201	<i>1</i>	<i>0.9609</i>	<i>0.3832</i>	<i>6.29</i>	<i>0.0122</i>	<i>2.614</i>
Mission301	108	1	6.1062	63.919	0.01	0.9239	448.622
<i>Mission301</i>	107	<i>1</i>	<i>1.3777</i>	<i>0.5805</i>	<i>5.63</i>	<i>0.0176</i>	<i>3.966</i>
Mission301	106	1	6.0688	63.1714	0.01	0.9235	432.154
<i>Mission301</i>	105	<i>1</i>	<i>1.3873</i>	<i>0.5804</i>	<i>5.71</i>	<i>0.0168</i>	<i>4.004</i>
Mission301	104	1	6.1185	63.919	0.01	0.9237	454.19
Mission301	103	1	6.1062	90.3947	0	0.9461	448.622
Mission301	102	1	0.3843	0.3914	0.96	0.3261	1.469
Mission304	209	1	0.4513	0.4399	1.05	0.3049	1.57
Mission304	208	1	0.2758	0.4941	0.31	0.5767	1.318
<i>Mission304</i>	207	<i>1</i>	<i>1.4392</i>	<i>0.5961</i>	<i>5.83</i>	<i>0.0158</i>	<i>4.217</i>
Mission304	206	1	5.763	50.47	0.01	0.9091	318.308
Mission304	205	1	-0.7332	0.4061	3.26	0.071	0.48
Mission304	204	1	5.7745	45.1419	0.02	0.8982	321.983
Mission304	203	1	0.6661	0.4371	2.32	0.1275	1.947
<i>Mission304</i>	202	<i>1</i>	<i>1.2809</i>	<i>0.5975</i>	<i>4.6</i>	<i>0.0321</i>	<i>3.6</i>
Mission304	201	1	0.6161	0.3832	2.58	0.1079	1.852
Mission304	108	1	1.112	0.5987	3.45	0.0633	3.04
<i>Mission304</i>	107	<i>1</i>	<i>1.2355</i>	<i>0.5984</i>	<i>4.26</i>	<i>0.039</i>	<i>3.44</i>
Mission304	106	1	1.0866	0.5991	3.29	0.0697	2.964
Mission304	105	1	5.7465	45.1419	0.02	0.8987	313.088
Mission304	104	1	1.1243	0.5986	3.53	0.0603	3.078
Mission304	103	1	5.7501	73.0542	0.01	0.9373	314.232
Mission304	102	1	5.7078	59.181	0.01	0.9232	301.2
Mission305	209	1	0.4523	0.5274	0.74	0.391	1.572
Mission305	208	1	0.414	0.6401	0.42	0.5178	1.513
Mission305	207	1	1.2317	0.6294	3.83	0.0504	3.427
Mission305	206	1	5.7566	61.5581	0.01	0.9255	316.279
<i>Mission305</i>	205	<i>1</i>	<i>-0.9383</i>	<i>0.4551</i>	<i>4.25</i>	<i>0.0392</i>	<i>0.391</i>
Mission305	204	1	5.7681	55.0595	0.01	0.9166	319.93
Mission305	203	1	0.2037	0.4468	0.21	0.6484	1.226

Mission305	202	1	5.7506	53.6167	0.01	0.9146	314.373
Mission305	201	1	0.6139	0.4581	1.8	0.1802	1.848
Mission305	108	1	0.9102	0.6342	2.06	0.1512	2.485
Mission305	107	1	5.7489	56.0887	0.01	0.9184	313.843
Mission305	106	1	0.1879	0.4621	0.17	0.6842	1.207
Mission305	105	1	0.6918	0.5237	1.74	0.1865	1.997
Mission305	104	1	5.7561	63.0067	0.01	0.9272	316.104
Mission305	103	1	0.5625	0.6387	0.78	0.3784	1.755
Mission305	102	1	5.7014	72.1829	0.01	0.937	299.28

# DOES COGNITIVE AGE PLAY A ROLE AT THE INTERSECTION OF AGE AND LEISURE? AN EXPLORATORY ANALYSIS

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## ABSTRACT

*The authors explore the possibility of cognitive age coming into play in an activity falling at the intersection of age and leisure. Specifically, they study coffee shop customers in Kuwait to determine if people act based on their chronological age or their cognitive age. The authors analyze respondents in matched-groups, where groups with the same cognitive and chronological age are compared to groups where cognitive age differed from chronological age. Findings show that chronological age and cognitive age are highly correlated, but slightly different. Correlations reveal that one or both age indicators are related to most of the coffee variables in the study. However, only three out of fifty-one tests of differences revealed a significant test statistic necessary to support cognitive age. In other words, a vast majority of the tests support chronological age as more relevant than cognitive age, at least in the context of coffee shop customers in Kuwait.*

*Keywords: Cognitive age, chronological age, age, leisure, coffee shops, Kuwait*

## INTRODUCTION

Consumer research is governed and characterized by the myriad aspects resulting from interactions among three fundamental factors, viz., age, leisure, and culture (Nataraajan, 2012; 2016). Environmental factors including the technological one further impact these aspects giving rise to even more aspects of consumer behavior (Nataraajan, 2012; 2016). Clearly, one's age as well as perceptions of it are the dominant drivers of consumer behavior. First, and inarguably, age is a fleeting concept and ephemeral in nature; it begins when one is born and ends when one dies. Second, in anybody's life, age profoundly influences the perceptions of leisure and culture. It follows therefore that the continued study of age in the context of consumer research be it from the supply side (e.g., the study of consumer behavior by a for-profit or not-for-profit company) or the demand side (e.g., consumer education) is of paramount salience. This article is an endeavor to contribute to extant knowledge in this regard.

Age, often construed as the time from inception to present, is a well-established demographic variable used extensively both in market research and academic marketing literature. Studies show that the passage of time directly affects human biological properties, cognitive processes, and emotional operations (e.g., Tepper, 1994; John and Cole, 1986; Phillips and Sternthal, 1977). Considering such profound effect of age on consumer behavior, societies actively enforce age restrictions on several buying behaviors and consumptions (e.g., voting, buying cigarettes, movie age limitations, etc.) to protect the public welfare. Marketers also recognize that over time, consumers' needs, lifestyles, attitudes, and aspirations tend to change in subtle ways (Leventhal, 1997). In turn, consumer preferences and choices vary with time as clothing styles (Badaoui et al., 2012), luxury purchasing (Amatulli et al., 2015), leisure travel

destinations (Chen and Shoemaker, 2014), e-banking vs traditional banking (Harris et al., 2016), and medical tourism (Gan and Frederick, 2013).

While the importance of age in consumer research is obvious, it suffers from two major shortcomings. First, age can potentially act as a mediating variable that confounds or masks motivation since all behaviors occur in time. In reality, time can serve as a composite measure correlated with many consumer variables of interest. Second, while time flows in a physically well-measured fashion, predicting behaviors from age-segmentation has proven to be difficult even for elder groups (Tepper, 1994). This has led many researchers to dispute the prominence of age as “passed time” and paving the way to advance “cognitive age” as a modified concept of chronological age (Amatulli et al., 2015; Lin and Xia, 2012; Gwinner and Stephens, 2001; Barak and Schiffman, 1981).

While the common definition of chronological age reflects the passage of time since birth, cognitive age refers to how persons mentally perceive their age. This perceptual nature of cognitive age is more appealing as an explanatory variable for many consumer behaviors. For example, underage teens oftentimes mimic adult behaviors by buying cigarettes and alcohol. This suggests a cognitive age larger than the relevant chronological age (Dalton et al., 2005). Researchers consider cognitive age to affect consumers’ self-image, lifestyle, and ultimately behaviors related to consumption than chronological age (Gonzales et al., 2009). Lin and Xia (2012) found cognitive age a determinant of fashion preferences. Thus, marketing efforts may fall short of expected results when chronological age is used as the primary ‘age’ indicator in situations where cognitive age is more appropriate. For example, Chang (2008) found that young consumers accept products more when the cognitive age of customers matched the perceived age of the model featured in the advertisement.

In line with the title, the core purpose of this research is to check whether or not cognitive age (a relatively newer concept as compared to chronological age) comes into play at the intersection of age and leisure; more specifically, whether consumers act in relation to their chronological age or their cognitive age in purchasing situations that are often conducted in groups and in public. To accomplish this, the authors focus on customers of all ages in coffee shops in Kuwait. Note that this context could be considered to be at the intersection of age and leisure. Activities falling in the area of such intersection could cover the entire gamut from sipping coffee at the local coffee shop to a vacation at a carefully chosen exotic location. Of course, depending on the location, any of such activities could also be at the intersection of age and culture or, to cover the gamut, in the joint spaces created by the intersections of age, leisure, and culture (Natarajan, 2012; 2016).

## **CHRONOLOGICAL AGE**

Competitive market strategies require an adequate definition of target markets to maintain proper product positioning. Chronological age is among the key demographic segmentation variables used to define target markets, often considered as a well-defined continuous variable that lends itself to be directly applicable to clear and logical market segmentation. The apparent attractiveness of this perspective regarding life cycles is reinforced by the obvious subtle physical and mental changes that actually occur with the progression of age. Not only are many aspects of behavior affected by these changes, but also chronological age itself in world population has been changing.

During the last century, increased life expectancy was propelled by a variety of factors including improved health care & hygiene, and advances in food/water production. These positive conditions resulted in significant numbers of customers in the higher age groups. Although marketing to relatively older customers is still evolving, marketers often perceive senior customers as one contiguous group with similar characteristics. However, research is pointing to the opposite (Sudbury and Simcock, 2009).

Researchers have called for better identification of these elderly groups (Moschis, 1993). Experts are gradually abandoning the typical “Population Pyramid” to use the term “Population Dome” to more accurately reflect the rapidly increasing mature market relative to other age groups (Economists, 2014). When considered with the growing size of these population segments, the older consumers can be a lucrative market segment. According to Oates et al. (1996), as consumers age, their income and spending patterns change dramatically. Older consumers with consistent jobs and sensible saving propensities typically have considerable home equity, private retirement plans, and social security, which allow more discretionary spending compared to younger consumers.

Increasing chronological age can directly influence cognitive and attitudinal processes. Past studies have shown that, as humans age, information processing slows, differences occur in selection of information sources, and the general ability to learn varies (John and Cole, 1986; Lynn and Sternthal, 1977). When considering attitudinal tendencies, Li and Fung (2012) found older customers to be more trusting than did younger individuals to maintain social connectedness. Older shoppers, when compared to younger, are more likely to view shopping as a social or leisure activity, rather than a chore (Myers and Lumbers, 2008). Williams and Drolet (2005) found experimental evidence showing ad-recall differences and preference dissimilarities in ad design related to emotions between older and younger consumers. As consumers age, they seem to attach greater importance to contacts such as family and friends (Carstensen et al., 2003).

A large volume of research touches on age and buyer behaviors and are generally showing that consumer behaviors often differ from one (chronological) age group to another. Dittmar (2005) cited several studies linking young age to overspending and bankruptcies, and his study found younger consumers to be more prone to compulsive buying than their older counterparts. Consumption differences over time are not evident in every category, but it is common enough to be relevant. For example, older consumers, when compared to younger, are shown to be less demanding, more likely to build long-term relationships, and are more loyal (Berbel-Pineda et al., 2011; Karani and Fraccastoro, 2010). Moreover, progressing age has its effects, with lower mobility and less active lifestyles associated with increasing age (Mathur and Moschis, 2005; Karani and Fraccastoro, 2010).

## COGNITIVE AGE

It is common knowledge that when people are younger, they long to become older, and vice-versa. And, by and large, they endeavor to behave as such. The perception of “cognitive age” is aided by this desire, although genetic factors can make “cognitive age” real and factual (e.g., a child prodigy, a youthful looking 50-year-old, a 70-year-old marathoner etc.).

Recent research suggests that, with relatively higher net worth than other age groups, older consumers may act or aspire to mimic behaviors often found in younger age groups (Guido et al., 2014; Barak and Rahtz, 1989). Considering that chronological age has been shown to influence consumer cognitions, attitudes and behaviors, there are increasing numbers of instances when it

can be overshadowed by a similar but distinct construct. Cognitive age, originally coined by Tuckman and Lorge (1954), reflects the mental perception of age and the way it relates to self-image. Cognitive age can diverge from chronological age as our lifespans continue to expand. Social forces, such as media and pop culture, continue to emphasize youth and vitality, leading “desired” age to be increasingly different and younger from chronological age (i.e., “Pepsi, the drink of the younger generation”). Alternatively, in our ever more connected world younger people are exposed to age-restricted products and services long before it is appropriate resulting in aspiring to a perceived age that may be larger than their actual chronological age.

Empirical research has uncovered disparities between cognitive and chronological age in a variety of settings, revealing that cognitive age is correlated with both attitudes and behaviors (Kohlbacher and Cheron, 2012). In this regard, incongruence between chronological age and cognitive age was offered to explain seemingly contradictory behaviors of consumers of older groups. Moschis (1991) revealed that while older customers have relatively larger net-worth and discretionary income, actual spending was inconsistent due to the variability in their psychological perceptions of their age. Furthermore, elderly females with active lifestyles were found to be cognitively younger scoring higher on life satisfaction than less active females (Clark et al., 1999). Individuals with a younger cognitive age expressed higher levels of self-respect and confidence compared to those with an older cognitive age (Barak and Rahtz, 1989). Moreover, consumers with a higher cognitive age may visit fewer unfamiliar venues outside the home than do old consumers with a younger cognitive age (Guido et al., 2014). More importantly, Barak and Schiffman (1981) called for cognitive age to be investigated cross-culturally to identify differences across cultures and the impact of these differences on consumer behavior. Research of mismatch between cognitive age and chronological age was also evident cross-culturally (Barak et al., 2001).

In light of above discussion, it could be inferred that consumer cognition, emotions and behaviors are correlated with age, especially as the plethora of research on chronological and cognitive age indicates a direct influence of age, actual or perceived, on consumer behaviors. However, it is still debatable whether chronological age exert more influence on these constructs than cognitive age. In ideal situations where chronological age and cognitive age are aligned in the target market segments, it would seem that marketers do not need to differentiate between the two when designing their marketing mix. However, as cognitive age becomes more influential on consumer behavior while varying considerably among members of the same age group, it would be prudent to state that more investigation is warranted across product categories before concrete conclusions can be drawn.

Further, while age is a prime influence on how consumers behave (Settersten and Mayer, 1997), cognitive age is considered as the basis of “gerontographics”, which aims to uncover age-relevant dimensions suitable for appropriate market segmentation (Moschis et al., 2011; Moschis, 1992). Barak and Rahtz (1990) found a significant relationship between cognitive age and perceptions of health care quality and several psychographic variables. Mathur and Moschis (2005) explored the relationship between cognitive age and chronological age and found that major life and age marker events reduced the disparity between cognitive age and chronological age. According to Sim Ong et al. (2009), Asian consumers viewed themselves generally many years younger than their actual age, while consumption of age-defying products was lower for those with younger cognitive age.

As indicated earlier, the setting for our study are the coffee shops in Kuwait. Such shops constitute a common meeting place for people of all ages. People frequent a coffee shop for a variety of reasons: to meet friends, study, grab a quick pick-me-up, relax, get out of office or home

for a break, business meetings, etc. Regardless of the purpose, and whether the buyer is alone or with a group, the purchase/consumption takes place in a public setting. Research has shown that people act or decide differently when purchases or consumption is done publicly (Bearden and Etzel, 1982). It may be that coffee shop consumers will act based on their cognitive age - either younger or older than the chronological - due to the presence of others during the consumption process. These friends or colleagues may act as a reference group during the consumption occasion and lead the consumer to act differently than they normally might. For example, bottled water can have a wide price range where higher end brands cost more than 800% of lower end brands. This presents buyers with an opportunity to engage in conspicuous consumption.

Given the foregoing findings, and the chosen context, it seems reasonable to believe that buyers will act similar to their cognitive age rather than their chronological age across a variety of coffee consumption-related variables ( $H_R$ ). In this research, the authors explore the credibility of this belief, and as such, no other separate and formal hypothesis is stated.

### **MODUS OPERANDI**

The stated purpose of this study is accomplished by comparing the tests between matched age groups to a normative guide derived from correlations of age with a variety of consumption-related variables. The authors focus on coffee drinkers of all ages, who score high on power distance, fatalism, and collectivism (Raven and Welsh, 2004; Hofstede, 1980). Initially, the coffee consumption-related variables are correlated with age, both chronological and cognitive. This gives a directional baseline for use in the primary analysis (i.e., as age increases, so does time spent in coffee shops increase). Then, by comparing the matched groups on these variables (group with same chronological and cognitive age vs. group with different chronological and cognitive age), the authors can determine which age variable is more relevant to each of the consumption variables.

### **SAMPLE, CATEGORY, AND DATA COLLECTION**

The data for the current study are derived from a group of consumers who are coffee drinkers in the State of Kuwait. Coffee drinking is an integral part of Arabic customs that has undergone significant modernization like almost every other aspect of Kuwaiti life after the discovery of oil. The focus of this research is on western-style coffee shops in Kuwait. At the time of the study, thirty-nine western-style coffee shop retail brands (i.e. Caribou Coffee, Costa Coffee) were operating in Kuwait. Prior to the study, these thirty-nine retailer brands were operating approximately two hundred and fifty western-style coffee shops; including standard coffee shops, eateries, and specialty foods shops (Kuwait Chamber of Commerce, 2009 & 2011). Any retailer brand is included in the study if coffee is one of the main reasons that consumers might frequent the business. The list of coffee brands originated from a variety of sources: the Kuwait Chamber of Commerce, from activity websites in Kuwait, and from exploratory interviews with coffee shop users.

The authors selected two available descriptors, age and gender, to provide guidelines for selecting a sample that would reflect the coffee-drinking population of Kuwait. Secondary data sources provided the age and gender statistics used as guidelines for the percentages of adults to be included in each age/gender category (CIA World Fact Book, 2011; Kuwait Public Authority for Civil Information, 2011). A test of the expected versus sample frequencies reveals no

differences in age and gender were evident between the sample and the population ( $X^2=2.03$ ,  $p=0.37$ ).

Regarding the potential sample respondents, only those coffee drinkers who had visited a western-style coffee shop within the past three months were included in the study. Data were collected using personal interviews to administer a standard questionnaire. About seventy volunteer and paid workers associated with Kuwait University were trained and assigned the task of collecting information from ten respondents each taken from their family and friends. The ten respondents for each interviewer were to be collected in the following ratios in order to match the adult population in Kuwait: two young males, two young females, two middle-aged males, two middle-aged females, one older male, and one older female. Approximately 82 surveys were discarded due to incomplete questionnaires, resulting in 618 usable respondent surveys.

## MEASUREMENT

The study included a variety of constructs. Note the twenty measures' names are shown in parentheses. There are two general age indicators (i) chronological age ( $Age_{chr}$ ) and (ii) cognitive age ( $Age_{cog}$ ). Also, the eighteen coffee-related variables are (iii) minutes per visit ( $Min$ ), (iv) spending per visit ( $Spend$ ), (v) the importance of coffee drinks ( $Cofi_{imp}$ ), (vi) whether coffee is consumed at home or not ( $Cofi_{hom}$ ), (vii) whether coffee is consumed with friends or not ( $Cofi_{frn}$ ), (viii) the number of coffee drinks per day ( $Cofi_{day}$ ), (ix) coffee drinks as percent of total drinks ( $Cofi\%_{dr}$ ), (x) coffee shop coffees as a percent of coffee drinks ( $Cofi\%_{cs}$ ), (xi) the percent of coffee shop visits to standard coffee shops ( $Cofi\%_{st}$ ), (xii) the percent of coffee shop visits to specialty-food coffee shops ( $Cofi\%_{sp}$ ), (xiii) the percent of coffee shop visits to eatery coffee shops ( $Cofi\%_{ea}$ ), (xiv) the average satisfaction ( $Sat_{avg}$ ), (xv) the percent of brands the buyer is using and considered as satisfied ( $Sat\%_{cu}$ ), (xvi) the true loyalty percent ( $Brands\%_{loy}$ ), (xvii) the brands for which the user is satisfied and loyal ( $Brands\%_{s+l}$ ), (xviii) consumer experience as measured in brands tried ( $Brands\#_{tr}$ ), (xix) the number of brands a respondent is currently using ( $Brands\#_{cu}$ ), and (xx) the number of purchase occasions/visits to coffee shops per year ( $Visits_{tot}$ ).

### The Age Indicators

*Chronological age ( $Age_{chr}$ ).* Respondents were asked to write down their year of birth in hopes of getting a more honest response than simply asking the age. Then,  $Age_{chr}$  was calculated for each respondent by subtracting the year of birth from the current year. Note that the study only considered those eighteen years or above and used whole numbers which were rounded down for the age. The range of  $Age_{chr}$  was from 18 to 70 with a mean of 34.69 years and a standard mean error of 0.540.

*Cognitive age ( $Age_{cog}$ ).* Previously, studies have included a variety of dimensions that represent cognitive age: feeling, looks, thoughts, acts, and interests (Wilkes, 1992; Barak and Schiffman, 1981). To be thorough, this study includes all five of the items. To measure cognitive age respondents were asked to answer five questions by circling an answer from the following scale for each question: 'teens', '20s', '30s', '40s', '50s', '60s', or '70s or older'. The scale values were taken as the midpoint of each choice, except for the 'teens' and '70s and older' categories, resulting in the following scale values used in calculating  $Age_{cog}$ : 'teens'=17, '20s'=24.5, '30s'=34.5, '40s'=44.5, '50s'=54.5, '60s'=64.5, and '70s or older'=75. The five questions were: (i) I feel like I am in my..., (ii) I look like I am in my ..., (iii) I act like I am in my..., (iv) my interests are like those of a person in their..., and (v) I think like a person in their ....

The five items were subjected to a principal components factor analysis with results explaining 83.24% of total variance in a single factor. Cronbach's Alpha statistic is 0.949 for the five items which is indicative of a reliable indicator. In order to estimate perceived age in years, an arithmetic mean is found for the five items. Note that only whole numbers that were rounded down were used. The level of this scale is arguable. However, even if it is interval or ratio, the transformation of ordinal/nominal data into higher-level rating or ratio scales has a history in scaling research (Emory, 1980; Thurstone, 1927). The range of Age<sub>cog</sub> was from 17 to 68 with a mean of 33.53 years and a standard mean error of 0.434.

### **The Outcome/Consumption Variables**

The time that a respondent spends at each visit to a coffee shop (*Min*) is measured in minutes. Respondents are asked to estimate the average time that he/she takes inside the coffee shop on an average visit by writing the number of minutes in a blank. *Min* ranged from 2 to 240 minutes with a mean of 58.55 minutes and a standard mean error of 1.446.

The amount of money that a respondent spends per visit (*Spend*) is measured in Kuwaiti Dinars (KD). Respondents are asked to estimate the average amount of money that he/she spends during an average visit by writing the number of dinars in a blank. *Spend* ranged from one to 20 KD with a mean of KD4.34 and a standard mean error of 0.099.

The importance to which a respondent attaches to coffee drinks at the coffee shops as a reason for visiting (*Cofi<sub>imp</sub>*) refers to the rating for the respondents on a scale from one (not at all important) to ten (extremely important). *Cofi<sub>imp</sub>* ranged from 1 to 10 with a mean of 8.27 and a standard mean error of 0.100.

Whether coffee is consumed at home or not (*Cofi<sub>hom</sub>*) is determined by asking the respondents to check a box next to the item if he/she uses coffee at home. The *Cofi<sub>hom</sub>* variable ranged from 0 (no) to 1 (yes) with a mean of 0.64 and a standard mean error of 0.019. Therefore, approximately 64% of respondents use coffee at home.

Whether coffee is consumed with friends or not (*Cofi<sub>frn</sub>*) is determined by asking the respondents to check a box next to the item if he/she uses coffee with friends while visiting coffee shops. The *Cofi<sub>frn</sub>* ranged from 0 (no) to 1 (yes) with a mean of 0.81 and a standard mean error of 0.022. Therefore, approximately 81% of respondents use coffee with friends at coffee shops.

The number of coffee drinks per day for each person (*Cofi<sub>day</sub>*) is found by asking the respondents to estimate the number of coffees they have per day by writing a number in a blank. It was possible to have fractions (i.e. 1/month, etc.). The coffee drinks could be anywhere: home, coffee shops, at work, etc. The *Cofi<sub>day</sub>* ranged from 0.008 to 10 with a mean of 2.07 and a standard mean error of 0.059.

The number of coffee drinks as a percentage of total drinks per day (*Cofi<sub>%dr</sub>*) is found by dividing the number of coffees per day (see *Cofi<sub>day</sub>* above) by the total drinks per day for each person. The respondents are asked how many drinks they normally have in a variety of categories per day: coffee, water, milk, soda, etc. The total of the drinks in the categories is taken as an estimate of drinks per day. *Cofi<sub>%dr</sub>* ranged from 0.1% to 100% with a mean of 0.181 and a standard mean error of 0.005. Therefore, an estimated 18% of all drinks are some form of coffee.

The number of coffee shop drinks as a percentage of coffee drinks (*Cofi<sub>%cs</sub>*) is found by dividing the number of visits per day to coffee shops by the coffee drinks per day (see *Cofi<sub>day</sub>* above). *Cofi<sub>%cs</sub>* ranged from 0.3% to 100% with a mean of 0.283 and a standard mean error of 0.186. Therefore, approximately 28% of all coffee drinks are purchased in coffee shops.

The number of visits to the coffee shop sub-categories is found by finding the visits to coffee shop brands for each sub-category and dividing by the total coffee shop visits. Note, the categories were established by MBA students working in groups to determine the number of categories within the western coffee shop market. Inter-group discussions arrived at the following three categories: (i) standard coffee shops (i.e., Starbucks, Gloria Jeans), (ii) specialty foods coffee shops (i.e., Krispy Kreme), or (iii) eatery coffee shops (i.e., Casper & Gambini). Three separate class sections then assigned the coffee shops to the specific categories. Then, the number of visits as a percentage of total visits to (i) standard coffee shops ( $Cofi_{st}$ ), (ii) specialty foods coffee shops ( $Cofi_{sp}$ ), and (iii) eatery coffee shops ( $Cofi_{ea}$ ) are found by dividing the totals for each sub-category for each respondent by the total visits for each respondent.  $Cofi_{st}$  ranged from 0% to 100% with a mean of 0.624 and a standard mean error of 0.009.  $Cofi_{sp}$  ranged from 0% to 95% with a mean of 0.286 and a standard mean error of 0.008.  $Cofi_{ea}$  ranged from 0% to 89% with a mean of 0.101 and a standard mean error of 0.005.

The satisfaction variable ( $Sat_{avg}$ ) refers to the average satisfaction rating for the respondents for each of the thirty-nine coffee shop retailers for which they were considered users. To be considered a user, the respondent had to have visited a given coffee shop brand in the past three months. Respondents were asked to indicate their general experiences with those coffee shop retailers which they had visited in the past three months by writing an appropriate number on a scale ranging from one (not at all satisfied) to ten (extremely satisfied) (Pleshko and Cronin, 1997; Dawes and Smith 1985). The  $Sat_{avg}$  variable was calculated for each respondent by summing the satisfaction responses and then dividing those satisfaction totals by the number of brands they were currently using.  $Sat_{avg}$  ranged from 3.29 to 10 with a mean of 7.22 and a standard mean error of 0.048.

The percent of brands buyer is considered as satisfied ( $Sat_{cu}$ ) refers to the number of brands with which the respondent is satisfied divided by the number of brands that the respondent is currently using (Pleshko & Heiens, 2015). A buyer is considered satisfied with a given brand if the satisfaction rating for the brand is greater than five on a scale to ten (see  $Sat_{avg}$  above). For each respondent the number of brands for which the customer is considered satisfied is totaled and then divided by the number of brands they were currently using.  $Sat_{cu}$  ranged from 10.5% to 100% with a mean of 0.769 and a standard mean error of 0.009.

The true loyalty percent ( $Brands_{loy}$ ) refers to the number of brands for which the respondent is considered to be truly loyal divided by the number of brands currently using. A respondent is considered to be truly loyal if he/she has both high attitudes and high behaviors towards a given brand (Pleshko, 2006; Dick and Basu, 1994). Attitudes in this study are indicated by preference rankings. A respondent is considered to have a high attitude towards a brand if he/she has ranked the given brand in the top five. Similarly, a respondent is considered to have a high behavior towards a brand if he/she has indicated the given brand has been one of the top five most visited coffee shops. Combining the preferences and visits data together leads to an indication of whether a respondent is truly loyal or not. The maximum number of truly loyal brands is five for each respondent.  $Brands_{loy}$  is calculated by totaling the number of brands to which the respondent is considered to be both high attitudes and high behaviors and then dividing this total by the number of brands currently using.  $Brands_{loy}$  ranged from 0% to 100% with a mean of 0.471 and a standard mean error of 0.010.

The brands for which the user is satisfied and loyal ( $Brands_{s+l}$ ) refers to the number of brands for which the respondent is considered both truly loyal (see  $Brands_{loy}$  above) and satisfied (see  $Sat_{avg}$  above) divided by the number of brands currently using (Pleshko and Heiens, 2015).

$Brands_{s+1}$  is calculated by totaling the number of brands to which the respondent is considered to be both satisfied and truly loyal and then dividing this total by the number of brands currently using.  $Brands_{s+1}$  ranged from 0% to 100% with a mean of 0.426 and a standard mean error of 0.010.

The consumer experience variable ( $Brands_{\#tr}$ ) refers to the number of brands out of thirty-nine that the respondent has tried at least once. Respondents are asked to indicate with a checkmark which retail coffee shops they had visited at some time in their lives in the Kuwait market.  $Brands_{\#tr}$  ranged from 1 to 37 with a mean of 11.48 and a standard mean error of 0.229.

The number of brands a respondent is currently using ( $Brands_{\#cu}$ ) refers to the total number of brands out of thirty-nine which the respondent has visited at least once in the past three months. Respondents are asked to estimate how many times he/she had visited each of the coffee shops in the past three months. If a coffee shop has a number greater than zero, then the respondent is considered to be a current user of that shop.  $Brands_{\#cu}$  ranged from 1 to 27 with a mean of 9.07 and a standard mean error of 0.185.

The number of purchase occasions/visits to coffee shops per year ( $Visits_{tot}$ ) is found by asking respondents to estimate their usage on a three-month period (see  $Brands_{\#cu}$  above) and then adjusting it for a full year.  $Visits_{tot}$  ranged from three to 780 coffee shop visits per year, with a mean of 131.73 and a standard mean error of 5.821.

## ANALYSES

The study attempts to provide supporting evidence for the general hypothesis pertaining to whether people act based on their chronological age or their cognitive age. Prior to addressing the hypothesis, the authors proceed by performing two analyses. First, the two age indicators are investigated to determine their relationship, if any. Note that the basic measurement process and statistics for the two age indicators were presented in the measures section. Second, the two age indicators are then correlated with the eighteen outcome variables described in the measures section (i) to determine if and how the age indicators are correlated with the outcomes and more importantly (ii) to establish a baseline for comparison purposes in testing for the dominance of either chronological or cognitive age. These analyses follow.

$Age_{cog}$  and  $Age_{chr}$  exhibited a Pearson correlation of  $r=+0.88$  with a ' $p$ '=0.00. A test of mean differences reveals that  $Age_{chr}$  (34.69 years) is slightly greater than  $Age_{cog}$  (33.53 years) with a mean difference of 1.16 years ( $t'=4.18$ , ' $p$ '=0.00). This suggests that, while the two age indicators are highly correlated, they are slightly different. In other words, the respondents in the sample perceive their age to be slightly younger than their actual chronological age.

A similar but different perspective in comparing the age indicators is shown in Table 1, which presents a cross-tabulation of the two age indicators after combining the respondents into three similar age groups for each: age less than thirty, age between thirty and fifty-four, and age fifty-five or greater. These categories will be used later to test whether people act their chronological age or not ( $H_R$ ). As with the t-test previously mentioned, a statistical test reveals that the age groups are not distributed as would be expected if the respondents perceived their ages to be the same as their chronological ages ( $X^2=435.4$ , ' $p$ '=0.00). Closer inspection of the table reveals that most (76%) of the sample perceives their age to be similar to their actual age but that a significant portion (34%) considers themselves to be younger or older.

<b>Table 1</b> <b>Cross-tabulation of Age<sub>chr</sub> and Age<sub>cog</sub></b>					
		Age <sub>cog</sub>			Total
		<30	30 - <55	55+	
Age <sub>chr</sub>	<30	226	44	1	271
	30 - <55	38	219	1	258
	55+	0	62	22	84
Total		264	325	24	613
$X^2 = 435.4$ , d.f.=4, 'p'=0.000					

The initial tests for baseline purposes is predicated on age being relevant to the various outcome variables. It is necessary to show that age correlates with the outcome variables in order to proceed onward to test the hypothesis. In this case, we are not concerned with the direction of the correlations, just that they are significant. A few, but not all, of these correlations were reported in Pleshko and Heiens (2015). All thirty-six correlations are revealed in Table 2. Note with the table, the 'n' values are between 613 and 616. In total, 30 of 36 (83.33%) outcome variable correlations exhibit a *p*-value of 0.05 or less. Obviously, the t-tests show that both Age<sub>chr</sub> and Age<sub>cog</sub>, are relevant predictors of the coffee consumption/outcome variables. It is important to note that in the case of every variable Age<sub>chr</sub> and Age<sub>cog</sub> move in the same direction. An explanation of the baseline results follows.

From table 2, the statistical tests of correlations reveal that one or both age indicators are related to most of the outcome variables in the study. As it is useless to include variables without a correlation to age in the matched-group analyses, those without a significant correlation are excluded from further study. In this case, Table 2 reveals that Cofi<sub>%st</sub> exhibited an unimportant correlation and is eliminated from further analyses, leaving seventeen outcome variables in the remainder of the study. The direction of the correlations shown in Table 2 are used to develop the expected direction of the differences between the matched groups in the analyses to follow.

To summarize the expectations to be used in the matched-pair comparisons, the tests summarized in Table 2 reveal the following. The relationship with age is shown in parentheses. As age increases then people (i) take more time with each visit to a coffee shop (+), (ii) spend more money with each visit to a coffee shop (+), (iii) perceive coffee drinks to be more important (+), (iv) consume more coffee at home (+), (v) consume less coffee with friends (-), (vi) drink more coffees per day (+), (vii) consume coffee as a larger percentage of total drinks (+), (viii) consume fewer coffees from coffee shops (-), (ix) consume fewer coffees from specialty foods coffee shops (-), (x) consume more coffees from eatery coffee shops (+), (xi) exhibit a higher level of satisfaction with those brands which they are using (+), (xii) are satisfied with more of those brands that they are using (+), (xiii) exhibit higher levels of loyalty (+), (xiv) are more likely to be satisfied and loyal to those brands which they are using (+), (xv) are less likely to try new coffee shops (-), (xvi) are currently using fewer brands (-), and (xvii) visit coffee shops less often (-). The reader is referred to Table 6 towards the end for a summary of the expectations and the matched-group results.

Table 2					
CORRELATIONS OF AGE WITH OUTCOME VARIABLES					
	Age <sub>chr</sub>		Age <sub>cog</sub>		Findings
	'r'	'p'	'r'	'p'	
Min	0.120	0.003	0.071	0.080	as Age increases, so does coffee shops time
Spend	0.156	0.000	0.147	0.000	as Age increases, so spending in coffee shops
Cofi <sub>imp</sub>	0.089	0.028	0.051	0.210	as Age <sub>chr</sub> increases coffee drinks more important
Cofi <sub>hom</sub>	0.152	0.000	0.129	0.000	as Age increases, more coffee consumed at home
Cofi <sub>frn</sub>	-0.057	0.160	-0.094	0.020	as Age <sub>cog</sub> increases, people are less coffee with friends
Cofi <sub>day</sub>	0.154	0.000	0.161	0.000	as Age increases, people drink more coffee
Cofi <sub>%dr</sub>	0.209	0.000	0.159	0.000	as Age increases, more coffee drinks
Cofi <sub>%cs</sub>	-0.216	0.000	-0.202	0.000	as Age increases, fewer coffees in coffee shops
Cofi <sub>%st</sub>	-0.023	0.572	-0.014	0.730	none
Cofi <sub>%sp</sub>	-0.148	0.000	-0.130	0.000	as Age increases, fewer coffees in specialty foods shops
Cofi <sub>%ea</sub>	0.206	0.000	0.140	0.000	as Age increases, more coffees in eateries
Sat <sub>avg</sub>	0.077	0.057	0.069	0.090	as Age <sub>chr</sub> increases, people are more satisfied
Sat <sub>%cu</sub>	0.157	0.000	0.147	0.000	as Age increases, people satisfied with more of their choices
Brands <sub>%loy</sub>	0.109	0.007	0.118	0.000	as Age increases, people more loyal
Brands <sub>%s+l</sub>	0.126	0.002	0.125	0.000	as Age increases, satisfied people more likely to be loyal
Brands <sub>#tr</sub>	-0.202	0.000	-0.196	0.000	as Age increases, people less likely to try new coffee shops
Brands <sub>#cu</sub>	-0.134	0.001	-0.147	0.000	as Age increases, people using fewer brands
Visits <sub>tot</sub>	-0.281	0.000	-0.241	0.000	as Age increases, people visit coffee shops less often

The primary hypothesis  $H_R$  suggests that people will act similarly to their cognitive age rather than their chronological age. This is tested using matched groups, as shown in Table 1, where the groups are paired by chronological age and cognitive age. The t-tests pair an expected group (i.e. middle-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) with the variant group (i.e. middle-Age<sub>chr</sub> + young-Age<sub>cog</sub>) to determine if differences across the seventeen remaining coffee variables are evident. The three group combinations with large enough observations are the following:

- (i) (middle-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) vs. (middle-Age<sub>chr</sub> + young-Age<sub>cog</sub>),
- (ii) (older-Age<sub>chr</sub> + older-Age<sub>cog</sub>) vs. (older-Age<sub>chr</sub> + middle-Age<sub>cog</sub>), and
- (iii) (young-Age<sub>chr</sub> + young-Age<sub>cog</sub>) vs. (young-Age<sub>chr</sub> + middle-Age<sub>cog</sub>).

Again, the reader is referred to Table 6 towards the end for a summary of the expectations and the matched-group results.

For the (middle-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) with the (middle-Age<sub>chr</sub> + young-Age<sub>cog</sub>) comparison, Table 3 reveals the t-tests with the seventeen outcome variables. Based on the findings from Table 2, if people acted based on their cognitive age, then we would expect the (middle-Age<sub>chr</sub> + young-Age<sub>cog</sub>) group to have *smaller* means than the other group on Min, Spend,

Cofi<sub>imp</sub>, Cofi<sub>hom</sub>, Cofi<sub>day</sub>, Cofi<sub>dr</sub>, Cofi<sub>%ea</sub>, Sat<sub>avg</sub>, Sat<sub>%cu</sub>, Brands<sub>%loy</sub>, and Brands<sub>%s+l</sub> while having *larger* means than the other group on Cofi<sub>frn</sub>, Cofi<sub>%cs</sub>, Cofi<sub>%sp</sub>, Brands<sub>#tr</sub>, Brands<sub>#cu</sub>, and Visits<sub>tot</sub>.

The results of this pairing show little evidence to support H<sub>R</sub>, with only one of 17 (5.88%) tests significant at the  $p=.05$  level. This is almost what would be expected by chance.

The results present evidence suggesting, with the (middle-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) vs. the (middle-Age<sub>chr</sub> + young-Age<sub>cog</sub>) pairing, that the sixteen non-significant tests provide no evidence supporting cognitive age as the driver of coffee consumption. In other words, most of the outcome-variable means for the perceived-younger group are not different from the older group, as would be expected if people act based on their chronological age.

<b>Table 3</b>						
<b>TEST RESULTS: Middle-Age<sub>chr</sub> + Middle-Age<sub>cog</sub> vs. Middle-Age<sub>chr</sub> + Young-Age<sub>cog</sub></b>						
Outcomes	Mean: MAge <sub>chr</sub> + MAge <sub>cog</sub> (n=219)	Mean: MAge <sub>chr</sub> + YAge <sub>cog</sub> (n=38)	't'	d.f.	'p'	Findings
Min	63.49	52.63	2.178	255	0.030	MAge <sub>chr</sub> +MAge <sub>cog</sub> > MAge <sub>chr</sub> +YAge <sub>cog</sub>
Spend	4.62	4.64	-0.055	255	0.960	none
Cofi <sub>imp</sub>	8.62	8.63	-0.026	255	0.980	none
Cofi <sub>hom</sub>	0.62	0.74	-1.421	254	0.160	none
Cofi <sub>frn</sub>	0.84	0.74	1.340	254	0.190	none
Cofi <sub>day</sub>	2.30	2.18	0.421	255	0.670	none
Cofi <sub>%dr</sub>	0.20	0.19	0.474	255	0.640	none
Cofi <sub>%cs</sub>	0.24	0.25	-0.076	255	0.940	none
Cofi <sub>%sp</sub>	0.29	0.26	0.848	255	0.400	none
Cofi <sub>%ea</sub>	0.10	0.12	-1.086	255	0.280	none
Sat <sub>avg</sub>	7.19	7.35	-0.755	253	0.450	none
Sat <sub>%cu</sub>	0.77	0.79	-0.552	253	0.580	none
Brands <sub>%loy</sub>	0.46	0.42	0.896	255	0.370	none
Brands <sub>%s+l</sub>	0.42	0.39	0.632	255	0.530	none
Brands <sub>#tr</sub>	11.70	13.42	-1.668	255	0.100	none
Brands <sub>#cu</sub>	9.39	9.84	-0.526	255	0.600	none
Visits <sub>tot</sub>	102.93	129.68	-1.360	255	0.180	none

For the (old-Age<sub>chr</sub> + old-Age<sub>cog</sub>) with the (old-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) comparison, Table 4 reveals the t-tests with the seventeen coffee outcome variables. From the findings shown in Table 2, if people acted based on their cognitive age, then we would expect the (old-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) group to have *smaller* means than the other group on Min, Spend, Cofi<sub>imp</sub>, Cofi<sub>hom</sub>, Cofi<sub>day</sub>, Cofi<sub>dr</sub>, Cofi<sub>%ea</sub>, Sat<sub>avg</sub>, Sat<sub>%cu</sub>, Brands<sub>%loy</sub>, and Brands<sub>%s+l</sub> while having *larger* means than the other group on Cofi<sub>frn</sub>, Cofi<sub>%cs</sub>, Cofi<sub>%sp</sub>, Brands<sub>#tr</sub>, Brands<sub>#cu</sub>, and Visits<sub>tot</sub>. The results of this

pairing again show little evidence to support  $H_R$ , with only 2 of 17 (11.76%) tests significant at the  $p=.05$  level. This is only slightly more than would be expected by chance. The results present evidence suggesting, with the (old-Age<sub>chr</sub> + old-Age<sub>cog</sub>) vs. the (old-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) pairing, that the fifteen non-significant tests provide no evidence supporting cognitive age as the driver of coffee consumption. In other words, most of the outcome-variable means for the perceived-younger group are not different from the older group, as would be expected if people act based on their chronological age.

Table 4						
TEST RESULTS: Old-Age <sub>chr</sub> + Old-Age <sub>cog</sub> vs. Old-Age <sub>chr</sub> + Middle-Age <sub>cog</sub>						
Outcomes	Mean: OAge <sub>chr</sub> + OAge <sub>cog</sub> (n=22)	Mean: OAge <sub>chr</sub> + MAge <sub>cog</sub> (n=62)	't'	d.f.	'p'	Findings
Min	59.090	65.850	-0.748	82	0.460	none
Spend	4.480	5.190	-0.932	82	0.350	none
Cofi <sub>imp</sub>	7.680	8.450	-1.232	82	0.220	none
Cofi <sub>hom</sub>	0.860	0.770	0.891	82	0.380	none
Cofi <sub>frm</sub>	0.640	0.730	-0.782	82	0.440	none
Cofi <sub>day</sub>	2.200	2.400	-0.472	82	0.640	none
Cofi% <sub>dr</sub>	0.190	0.210	-0.662	82	0.510	none
Cofi% <sub>cs</sub>	0.150	0.140	0.143	82	0.890	none
Cofi% <sub>sp</sub>	0.160	0.220	-1.320	82	0.190	none
Cofi% <sub>ea</sub>	0.120	0.180	-1.078	82	0.280	none
Sat <sub>avg</sub>	7.510	7.480	0.100	82	0.920	none
Sat% <sub>cu</sub>	0.900	0.840	1.190	82	0.240	none
Brands% <sub>loy</sub>	0.650	0.540	1.521	82	0.130	none
Brands% <sub>s+l</sub>	0.620	0.480	1.961	82	0.050	OAge <sub>chr</sub> +OAge <sub>cog</sub> > OAge <sub>chr</sub> + MAge <sub>cog</sub>
Brands# <sub>tr</sub>	6.180	8.520	-1.863	82	0.070	none
Brands# <sub>cu</sub>	5.270	7.610	-2.117	82	0.040	OAge <sub>chr</sub> +OAge <sub>cog</sub> < OAge <sub>chr</sub> + MAge <sub>cog</sub>
Visits <sub>tot</sub>	64.450	73.610	-0.384	82	0.700	none

For the (young-Age<sub>chr</sub> + young-Age<sub>cog</sub>) with the (young-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) comparison, Table 5 reveals the t-tests with the seventeen outcome variables. Based on the findings in Table 2, if people acted based on their cognitive age, then we would expect the (young-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) group to have *larger* means than the other group on Min, Spend, Cofi<sub>imp</sub>, Cofi<sub>hom</sub>, Cofi<sub>day</sub>, Cofi%<sub>dr</sub>, Cofi%<sub>ea</sub>, Sat<sub>avg</sub>, Sat%<sub>cu</sub>, Brands%<sub>loy</sub>, and Brands%<sub>s+l</sub> while having *smaller* means than the other group on Cofi<sub>frm</sub>, Cofi%<sub>cs</sub>, Cofi%<sub>sp</sub>, Brands#<sub>tr</sub>, Brands#<sub>cu</sub>, and Visits<sub>tot</sub>. The results of this pairing offers no evidence to support  $H_R$ , with none of 17 (0.00%) tests significant at the  $p=.05$  level. The results present evidence suggesting, with the (young-Age<sub>chr</sub> + young-

Age<sub>cog</sub>) vs. the (young-Age<sub>chr</sub> + middle-Age<sub>cog</sub>) pairing, that the seventeen non-significant tests provide no evidence supporting cognitive age as the driver of coffee consumption. In other words, most of the outcome-variable means for the perceived-younger group are not different from the older group, as would be expected if people act based on their chronological age.

<b>Table 5</b> <b>TEST RESULTS: Young-Age<sub>chr</sub> + Young-Age<sub>cog</sub> vs. Young-Age<sub>chr</sub> + Middle-Age<sub>cog</sub></b>						
Outcomes	Mean: YAge <sub>chr</sub> + YAge <sub>cog</sub> (n=226)	Mean: YAge <sub>chr</sub> + MAge <sub>cog</sub> (n=44)	<i>t'</i>	<i>d.f.</i>	<i>p'</i>	Findings
Min	52.99	58.86	-1.061	268	0.290	none
Spend	3.83	4.38	-1.611	268	0.110	none
Cofi <sub>imp</sub>	7.92	8.18	-0.610	268	0.540	none
Cofi <sub>hom</sub>	0.56	0.71	-1.908	268	0.060	none
Cofi <sub>frm</sub>	0.83	0.80	0.319	268	0.750	none
Cofi <sub>day</sub>	1.76	1.93	-0.790	268	0.430	none
Cofi <sub>%dr</sub>	0.15	0.15	0.360	267	0.720	none
Cofi <sub>%cs</sub>	0.37	0.36	0.249	268	0.800	none
Cofi <sub>%sp</sub>	0.31	0.32	-0.113	268	0.910	none
Cofi <sub>%ea</sub>	0.08	0.07	0.519	268	0.600	none
Sat <sub>avg</sub>	7.12	7.27	-0.757	268	0.450	none
Sat <sub>%cu</sub>	0.73	0.75	-0.520	268	0.600	none
Brands <sub>%loy</sub>	0.46	0.44	0.646	268	0.520	none
Brands <sub>%s+l</sub>	0.41	0.40	0.303	268	0.760	none
Brands <sub>#tr</sub>	11.90	13.11	-1.397	268	0.160	none
Brands <sub>#cu</sub>	9.24	9.93	-1.013	268	0.310	none
Visits <sub>tot</sub>	177.70	169.43	0.292	268	0.770	none

To help summarize the findings with the paired t-tests, the following Table 6 has been constructed. The results of all three matched-pair analyses reveal the same thing: little or no support that people act based on their cognitive age. Therefore, the authors must conclude that people act based on their chronological age in coffee consumption-related activities.

Table 6							
SUMMARY OF PAIRED-GROUP FINDINGS							
Outcomes	Age	(1) MAge <sub>chr</sub> + MAge <sub>cog</sub> vs (2) MAge <sub>chr</sub> + YAge <sub>cog</sub>	(1) vs. (2)	(3) OAge <sub>chr</sub> + OAge <sub>cog</sub> vs (4) OAge <sub>chr</sub> + MAge <sub>cog</sub>	(3) vs. (4)	(5) YAge <sub>chr</sub> + YAge <sub>cog</sub> vs (6) YAge <sub>chr</sub> + MAge <sub>cog</sub>	(5) vs. (6)
		Expected	Findings	Expected	Findings	Expected	Findings
Min	+	(1) > (2)	<b>support</b>	(3) > (4)	no support	(6) > (5)	no support
Spend	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Cofi <sub>imp</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Cofi <sub>hom</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Cofi <sub>fm</sub>	-	(2) > (1)	no support	(4) > (3)	no support	(5) > (6)	no support
Cofi <sub>day</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Cofi <sub>%dr</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Cofi <sub>%cs</sub>	-	(2) > (1)	no support	(4) > (3)	no support	(5) > (6)	no support
Cofi <sub>%sp</sub>	-	(2) > (1)	no support	(4) > (3)	no support	(5) > (6)	no support
Cofi <sub>%ea</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Sat <sub>avg</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Sat <sub>%cu</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Brands <sub>%loy</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Brands <sub>%s+l</sub>	+	(1) > (2)	no support	(3) > (4)	no support	(6) > (5)	no support
Brands <sub>#tr</sub>	-	(2) > (1)	no support	(4) > (3)	<b>support</b>	(5) > (6)	no support
Brands <sub>#cu</sub>	-	(2) > (1)	no support	(4) > (3)	<b>support</b>	(5) > (6)	no support
Visits <sub>tot</sub>	-	(2) > (1)	no support	(4) > (3)	no support	(5) > (6)	no support

## DISCUSSION, MANAGERIAL IMPLICAIONS, AND LIMITATIONS

The purpose of this manuscript was to investigate whether age is an important predictor variable in the western-style coffee shops sector of the Kuwait market. The study includes an alternative indicator for age, cognitive age, and presents evidence that it is similar but different to chronological age. Both indicators of age are shown to correlate with many outcome variables. Finally, evidence is provided suggesting that people act based on their chronological age rather than their cognitive age.

Specifically, regarding age and the coffee variables, the findings suggest that as age increases then people (i) take more time with each visit to a coffee shop, (ii) spend more money with each visit to a coffee shop, (iii) perceive coffee drinks to be more important, (iv) consume more coffee at home, (v) consume less coffee with friends, (vi) drink more coffees per day, (vii) consume coffee as a larger percentage of total drinks, (viii) consume fewer coffees from coffee shops, (ix) consume fewer coffees from specialty-foods coffee shops, (x) consume more coffees from eatery coffee shops, (xi) exhibit a higher level of satisfaction with those brands that they are

using, (xii) are satisfied with more of those brands that they are using, (xiii) exhibit higher levels of loyalty, (xiv) are more likely to be satisfied and loyal to those brands that they are using, (xv) are less likely to try new coffee shops, (xvi) are currently using fewer brands, and (xvii) visit coffee shops less often.

The empirical findings of this study portray an interesting relationship between chronological age and cognitive age as it relates to coffee consumption in Kuwaiti market. Cognitive age emerged as having a direct impact on coffee consumption (Pleshko and Heiens, 2015), but that it is not important enough to add to what chronological age already provides in understanding buyers in this market sector. Additionally, only three of fifty-one comparison tests support cognitive age, when compared to chronological age, as more important in coffee consumption. This finding that chronological age is more important than cognitive age is counter to previous research supporting the superiority of cognitive age in explaining consumer behavior when compared to cognitive age. (Lin and Xia 2012; Gwinner and Stephens, 2001; Barak and Schiffman, 1981).

When considering older consumers in this setting, there may be possible explanations for why cognitive age showed little differences in affecting coffee purchasing compared to chronological age. In this research, the neutrality of cognitive age can be explained more intuitively by understanding the attitude toward age in the Arab culture. Not only do people amass larger wealth as they age like many other western societies, they also establish greater social prominence in a highly collectivistic culture with strong tribal and extended family relationships. In fact, older Kuwaitis are more socially respected giving them strong prominence in their collectivities, and therefore they would be less willing to emulate younger customers (and act on their cognitive age). Evidence from previous research provides some support. Gram and Smed (2011) found that Danish customers tend to perceive age more positively as a privilege that carries some entitlements.

Another possible explanation/limitation for the findings is perhaps that the product category used, albeit widespread, may not be as conspicuous (in front of others) as other durable products used in public. If that were the case, then age-specific behavior would not be elicited. Since coffee consumption is less involving during purchase and consumption (low cost, inconsequential product, repeated frequency), memory decay may affect precise recall of previous consumption events, especially when they are not markedly distinct from each other. Products that signal particular age affiliation (i.e., clothing, jewelry, or car ownership) may provide more insight into the effects of chronological age on consumer decision making. Future research may extend this investigation to other product categories that may allow a better examination of the true nature of perceived age.

Also possibly limiting the present research is a distinction between coffee drinkers accompanying others and those who are drinking coffee alone. Pressure to act in ways different from the norm may increase age-related consumption when that consumption is public with others of whom their opinion matters to the buyer. This study did not differentiate between those coffee buyers who are alone with those who are in groups.

Finally, the correlational method adopted seems apt for this exploratory research. While correlation is no proof of causation, the Pearson product moment correlation has, over the decades, proven to be an effective first step toward more complex methods. Future research could use a causal modeling approach or better still, employ the relatively “newer on the scene” method of fuzzy set analysis to delve deeper into this area.

The above limitations notwithstanding the current study paves the way for similar and possibly deeper research using other contexts that are representative (perhaps, even more tellingly so) of the joint spaces formed by the intersections of age, leisure, and culture, as well as those further colored by the physical and the technological environments.

## REFERENCES

- Amatulli, C., Guido, G., and Natarajan, R. (2015), "Luxury purchasing among older consumers: exploring inferences about cognitive age, status, and style motivations", *Journal of Business Research*, 68 (9), pp. 1945-1952.
- Badaoui, K., Lebrun, A.M., and Bouchet, P. (2012), "Clothing style, music, and media influences on adolescents' brand consumption behavior", *Psychology & Marketing*, 29 (8), pp. 568-582.
- Barak, B., Mathur, A., Lee, K., and Zhang, Y. (2001), "Perceptions of age-identity: A cross-cultural inner-age exploration", *Psychology & Marketing*, 18, (10), pp. 1003-1029.
- Barak, B. and Rahtz, D.R. (1989), "Cognitive age and youthfulness: Demographic and psychographic dimensions", *Advances in Health Care Research*, pp. 47-51.
- Barak, B. and Rahtz, D.R. (1990), "Cognitive age: Demographic and psychographic dimensions", *Journal of Ambulatory Care Marketing*, 3 (2), pp. 51-65.
- Barak, B. and Rahtz, D.R. (1999), "Perceived youth: Appraisal and characterization", *International Journal of Ageing and Human Development*, 49 (3), pp. 231-257.
- Barak, B. and Schiffman, L.G. (1981), "Cognitive age: A non-chronological age variable", *Advances in Consumer Research*, 8 (1), pp. 602-606.
- Bearden, W.O. and Etzel, M.J. (1982), "Reference group influence on product and brand purchase decisions", *Journal of Consumer Research*, pp. 183-194.
- Berbel-Pineda, J.M., Cambra-Fierro, J., Ruiz-Benitez, R. and Vazquez-Carrasco, R. (2011), "Managing service recovery processes: The role of customers' age", *Journal of Business and Economics Management*, 12 (3), pp. 503-528.
- Carstensen, L. L., Fung, H.H., and Charles, S.T. (2003), "Socioemotional selectivity theory and the regulation of emotion in the second half of life", *Motivation and Emotion*, 27 (2), pp. 103-123.
- Chang, C. (2008), "Chronological age versus cognitive age for younger consumers: Implications for Advertising Persuasion", *Journal of Advertising*, 37 (3), pp. 19-32.
- Chen, S. C., and Shoemaker, S. (2014), "Age and cohort effects: The American senior tourism market", *Annals of Tourism Research*, 48, pp. 58-75.
- CIA World Fact book (2011), [www.cia.gov/library/publications/the-world-factbook/](http://www.cia.gov/library/publications/the-world-factbook/)
- Clark, S.D., Long, M.M., and Schiffman, L.G. (1999), "The mind-body connection: The relationship among physical activity level, life satisfaction, and cognitive age among mature females", *Journal of Social Behavior and Personality*, 14 (2), pp. 221-240.
- Dalton, M.A., Bernhardt, A.M., Gibson, J.J., Sargent, J.D., Beach, M.L., Adachi-Mejia, A.M., Titus-Ernstoff, L.T., and Heatherton, T.F. (2005), "Use of cigarettes and alcohol by preschoolers while role-playing as adults: Honey, have some smokes", *Archives of Pediatrics & Adolescent Medicine*, 159 (9), pp. 854-859.
- Dawes, R. and Smith, T. (1985), "Attitude and opinion Measurement", in *Handbook of Social Psychology*, 3rd ed. (1), G. Lindzey and E. Aronson, eds., New York: Random House, pp. 509-566.
- Dick, A. and Basu, k. (1994), "Customer loyalty: Toward an integrated framework", *Journal of the Academy of Marketing Science*, 22 (Spring), pp. 99-113.
- Dittmar, H. (2005), "Compulsive buying—a growing concern? An examination of gender, age, and endorsement of materialistic values as predictors", *British Journal of Psychology*, 96 (4), pp. 467-491.
- Emory, C.W. (1980), *Business Research Methods*, Revised Edition, R.B Fetter & C. McMillan eds., Irwin, Homewood, Ill., pp. 265-276.
- factbook/geos/ku.hym1, July
- Gan, L. L., and Frederick, J. R. (2013), "Medical tourists: Who goes and what motivates them?", *Health Marketing Quarterly*, 30 (2), pp. 177-194.

- González, A.M., Rodríguez, C., Miranda, M.R., and Cervantes, M. (2009), "Cognitive age as a criterion explaining senior tourists' motivations", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 3, No. 2, pp. 148-164.
- Gram, M., and Smed, K.M. (2011), "We can drink our coffee more slowly: Discursive uses of age in relation to holiday consumption—examples among Danish and German mature travelers", *Sensoria: A Journal of Mind, Brain & Culture*, 7 (1), pp. 2-7.
- Guido, G., Amatulli, C., and Allesandro, M. (2014), "Context effects on older consumers' cognitive age: The role of hedonic versus utilitarian goals", *Psychology and Marketing*, 31 (2), pp. 103-114.
- Gwinner, K.P., and Stephens, N. (2001), "Testing the implied mediational role of cognitive age", *Psychology & Marketing*, 18 (10), pp. 1031-1048.
- Harris, M., Cox, K. C., Musgrove, C. F., and Ernstberger, K. W. (2016), "Consumer preferences for banking technologies by age groups", *International Journal of Bank Marketing*, 34 (4), pp. 587-602.
- Hofstede, G. (1980), "Culture and organizations", *International Studies of Management & Organization*, 10 (4), pp. 15-41.
- John, D.R. and Cole, C.A. (1986), "Age differences in information processing: Understanding deficits in young and elderly consumers", *Journal of Consumer Research*, pp. 297-315.
- Karani, K.G. and Fraccastoro, K.A. (2010), "Resistance to brand switching: The elderly consumer", *Journal of Business & Economics Research*, 8 (12), 77-83.
- Kohlbacher, F. and Chéron, E. (2012), "Understanding "silver" consumers through cognitive age, health condition, financial status, and personal values: Empirical evidence from the world's most mature market Japan", *Journal of Consumer Behavior*, pp. 179-188.
- Kuwait Chamber of Commerce (2009), [www.kuwaitchamber.org.kw](http://www.kuwaitchamber.org.kw).
- Kuwait Chamber of Commerce (2011), [www.kuwaitchamber.org.kw](http://www.kuwaitchamber.org.kw).
- Kuwait Public Authority for Civil Information (2011).
- Lambert-Pandraud, R., Laurent, G., Mullet, E., and Yoon, C. (2014), "Brand memory and aging: Accounting for specific age reveals superior memory for older compared to young consumers", *Advances in Consumer Research*, 42, 106-112.
- Leventhal, R.C. (1997), "Aging consumers and their effects on the marketplace", *Journal of Consumer Marketing*, 14 (4), pp. 276-281.
- Li, T., and Fung, H.H. (2012), "Age differences in trust: An investigation across 38 countries", *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, gbs072.
- Lin, Y.T. and Xia, K.N. (2012), "Cognitive age and fashion consumption", *International Journal of Consumer Studies*, 36, pp. 97-105.
- Mathur, A., and Moschis, G.P. (2005), "Antecedents of cognitive age: A replication and extension", *Psychology & Marketing*, 22 (12), pp. 969-994.
- Moschis, G.P. (1993), "Gerontographics: A scientific approach to analyzing and targeting the mature market", *Journal of Consumer Marketing*, 10 (3), pp. 43-53.
- Moschis, G.P. (1992), "Gerontographics: A scientific approach to analyzing and targeting the mature market", *Journal of Services Marketing*, 6 (3), pp. 17-26.
- Moschis, G.P. (1991), "Marketing to older adults: An overview and assessment of present knowledge and practice", *Journal of Services Marketing*, 5 (2), pp. 33-41.
- Moschis, G.P., Ferguson, J.L., and Zhu, M. (2011), "Mature consumers' selection of apparel and footwear brands and department stores", *International Journal of Retail & Distribution Management*, 39 (10), pp. 785-801.
- Myers, H. and Lumbers, M. (2008), "Understanding older shoppers: A phenomenological investigation", *Journal of Consumer Marketing*, 25 (5), pp. 294-301.
- Natarajan, R. (2012). The countenance of marketing: A view from the 21<sup>st</sup> century ivory tower. In A. Diamantopoulos, W. Fritz, & L. Hildebrandt (Eds.), *Quantitative Marketing and Marketing Management* (pp. 485-499), Wiesbaden: Springer-Gabler.
- Natarajan, R. (2016). Knowledge and innovation: Musings from the 2015 GIKA Ivory Tower, *Journal of Business Research*, 69 (9), 3572-3575.
- Oates, B., Shufeldt, L., and Vaught, B. (1996), "A psychographic study of the elderly and retail store attributes", *Journal of Consumer Marketing*, 13 (6), pp. 14-27.
- Parker, J. (2014), "The World Reshaped", *The Economist*, November 20<sup>th</sup>, 2014, <http://www.economist.com/news/21631911-end-population-pyramid-world-reshaped>

- Pleshko, L.P. (2006), "Multiple measures of loyalty: Validity and reliability tests in two retail settings", *Academy of Marketing Studies Journal*, 10 (1), pp. 77-88.
- Pleshko, L.P. and Heiens, R.A. (2015), "An investigation of chronological and cognitive age impact in the Kuwait coffee shops market", *Organizations and Markets in Emerging Economies*, 6 (1), pp. 78-92.
- Pleshko, L.P. and Cronin, J.J. (1997), "An investigation into the relationship between consumer satisfaction, marketing performance, and firm performance in a service environment", *Journal of Customer Service in Marketing & Management*, 3 (1), pp. 7-18.
- Pleshko, L.P. and Heiens, R.A. (2015), "Customer satisfaction and loyalty in a Kuwaiti retail services market: Why are satisfied buyers not always loyal buyers?", *International Review of Retail, Distribution, and Consumer Research*, 25 (1), pp. 55-71.
- Raven, P., and Welsh, D. H. (2004), "An exploratory study of influences on retail service quality: A focus on Kuwait and Lebanon", *Journal of Services Marketing*, 18 (3), 1pp. 98-214.
- Rousseau, G.G. and Venter, D.J.L. (2014), "Mall shopping preferences and patronage of mature shoppers," *South Africa Journal of Industrial Psychology*, 40 (1), pp. 1-12, ISSN 2071-0768.
- Settersten, Jr., R.A. and Mayer, K.U. (1997), "The measurement of age, age structuring, and the life course", *Annual Reviews of Sociology*, 23, pp. 233-261.
- Sim Ong, F., Lu, Y. Y., Abessi, M., & Phillips, D. R. (2009), "The correlates of cognitive ageing and adoption of defensive-ageing strategies among older adults", *Asia Pacific Journal of Marketing and Logistics*, 21 (2), pp. 294-305.
- Sudbury, L. and Simcock, P. (2009), "A multivariate segmentation model of senior consumers", *Journal of Consumer Marketing*, 26 (4), pp. 251-262.
- Tepper, K. (1994), "The role of labeling processes in elderly consumers' responses to age segmentation cues", *Journal of Consumer Research*, pp. 503-519.
- Thurstone, L.L. (1927), "A law of comparative judgement", *Psychological Review*, Vol. 34, pp. 273-286.
- Tuckman, J. and Lorge, I. (1954), "Classification of the self as young, middle-aged, or old", *Geriatrics*, 9 (11), pp. 534-536.
- Wilkes, R.E. (1992), "A structural modeling approach to the measurement and meaning of cognitive age", *Journal of Consumer Research*, pp. 292-301.
- Williams, P., and Drolet, A. (2005), "Age-related differences in responses to emotional advertisements", *Journal of Consumer Research*, 32 (3), pp. 343-354.
- Yoon, C., Cole, C.A., and Lee, M.P. (2009), "Consumer decision making and aging: Current knowledge and future directions", *Journal of Consumer Psychology*, 19 (1), pp. 2-16.

# UNIVERSITY PARKING: A PERCEIVED PUBLIC GOOD IN A REVENUE CONSTRAINED ENVIRONMENT

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## ABSTRACT

*Parking Management Units (PMU) at the vast majority of university campuses in the United States represent a self-sustaining auxiliary unit. Given the decline in state financial support for many higher education institutions, PMUs are increasingly being pressured to maximize revenue while at the same time managing what is very often perceived by users as a public good. Maximization of revenue requires a clear understanding of price sensitivity across target markets. This is especially true in instances where substitutable products offered by a single purveyor exist, such as different types of parking permits offered by a single institution. The primary objective of this research is to assess the price sensitivity of various target markets with respect to university parking at a mid-sized, state-funded university located in the Inland Northwest of the United States (University of Idaho). Utilizing data collected from a conjoint survey of administrators, faculty, staff, and students, price sensitivity is assessed by estimating the demand function for various types of parking permits. Furthermore, the degree of substitutability between various permits types is evaluated by calculating cross-price elasticity of demand. Results from this research can provide managers with insight regarding the pricing dynamics in a university parking setting and allow for more efficient pricing of parking permits.*

*Keywords: campus parking, conjoint analysis, higher education, pricing strategy*

## INTRODUCTION

Campus parking has long been a pressing issue for universities, both domestically and internationally (Bennett, 1956, 1958; Forman, 1971; Meng, Du, Li, & Wong, 2018; Mooney, 1993; Narragon, Dessouky, & DeVor, 1974; Pendakur, 1968; Sandland, 2006; Tezcan, 2012; van der Waerden, Borgers, & Timmermans, 2006). The persistence of the campus parking problem has accordingly led to several entertaining comments and strategic decisions. For instance, Clark Kerr, former president of the University of California system, publicly stated at the inaugural ceremonies for the new president of the University of Washington, Charles E. Odegaard, that “I find that the three major administrative problems on a campus are sex for students, athletics for alumni and parking for faculty” (Anonymous, 1958). Kerr also remarked during a Godkin lecture at Harvard University that “I have sometimes thought of the modern university as a series of individual entrepreneurs held together by a common grievance over parking” (Kerr, 1966, p. 20).

In a similar vein, a former president of Dartmouth College, David McLaughlin, once quipped that the issue that kept him up at night was “...the fear that everyone with a parking permit will show up at the same time” (Anderson, 1996). When the University of Manchester, in England, inquired of Andre Geim, co-recipient of the 2010 Nobel Prize in Physics, as to what would

persuade him to stay at the institution rather than seek employment elsewhere, Dr. Geim's singular request was for a parking space located near his building on campus; the university subsequently granted his request (Troop, 2011).

The persistence of the campus parking problem is likely due to the fact that many university stakeholders view university property that is dedicated to parking as a public commons, while others view parking as being a requisite entitlement or benefit for either enrollment or employment (Anonymous, 2004; Bennett, 1956; Ehrenberg, 2000; Farrell, Mahony, & Caulfield, 2005; Grubb & Oyer, 2008; Schmidt & Westley, 2010; Tudela-Rivadeneira, Shirgoaker, Deakin, & Riggs 2015). Many university parking policies and permit price levels are therefore made in response to the complaints and idiosyncratic wants of university community members rather than based on market forces and data derived from marketing research (Anderson, 1996; Barata, Cruz, & Ferreira, 2011; Rye, Hunton, Ison, & Kocak, 2008; Wang & Zhou, 2010). Thus, as Shoup (2008, p. 122) has observed: "Universities often lead societies in advocating social and economic equality, but their complex parking hierarchies make the *Titanic* look like a one-class ship."

The complexity of campus parking policies and permitting methods is difficult for many stakeholders to comprehend. In fact, courts have described the operating environment of one campus parking organization as being a "corrupt, Machiavellian world" (Stevens, 2007). And when changes to parking policies and permitting methods are made by parking management units (PMUs), they are often perceived as oppressive (Kelly, 2015; Mooney, 1993; Sandland, 2006; Shoup, 2008).

Nevertheless, university PMUs are being pressured to maximize revenue from parking permit fees in order to be self-sufficient, to maintain and enhance current parking facilities, and to increase parking capacity due to growing student enrollments (e.g., Bridgelall, 2014; Chance, 2006; Gadsby et al., 2003; Jeppesen & Dorsett, 2014; Millard-Ball, 2004; Shaheen & Khisty, 1990; Smith, 1994). After review of parking fee management at a number of campuses, it is evident that even in a period of declining state support and tight budgets that public universities have, as a general rule, been extremely hesitant to maximize the potential revenue of their parking asset.

The paper begins by surveying the literature as it pertains to parking on university campuses. In particular, we examine the campus parking issues that have been noted in the literature and some proposed solutions that address these parking issues. We then present a data-driven case study that assesses a solution not yet proposed in the literature. Specifically, we assess demand elasticity for campus parking utilizing an auction allocation system. Finally, we discuss the results of the case study, the implications for PMUs, limitations of our research, and proposed future work that could be conducted to better understand the pricing of campus parking.

## LITERATURE REVIEW

A small but growing body of research has developed attempting to address the problems associated with campus parking. Some of the earliest research concerning campus parking issues was conducted by Bennett (1956, 1958), who details how several university campuses in the United States have attempted to alleviate excess demand for parking. Eikenberry, Maher, Grant, and Kim (2015) and Scruggs, Epperson, Blevins, Mudd, and Franklin (2009) outline numerous issues that arise from the reduction in parking availability on university campuses. They propose several solutions to reduce parking demand on campus through comprehensive transportation demand management (TDM) options, including carpooling, alternative forms of transportation

(e.g., bicycling), and enacting mandates (e.g., restricting underclassmen from having a personal vehicle on campus).

Wang and Zhou (2010) evaluate the parking characteristics at Chang'an University in Xi'an, China. They also propose a variety of TDM measures that could be employed by the institution to control the demand for parking, including economic measures related to the spatial distribution of parking (i.e., proximal versus peripheral) on campus. Similarly, Shang, Lin, and Huang (2007) present a case study of the campus parking issues taking place at Beijing University of Aeronautics and Astronautics. They analyze survey data concerning parking behaviors (e.g., campus inflow and outflow, demand on lots, parking demand over time, parking duration), concluding, based on their analysis, that the "campus clearly lacks [a sufficient number of] parking berths."

Using survey data, Barata et al. (2011) assessed commuter satisfaction and willingness to pay for campus parking at the University of Coimbra in Portugal. Policy changes are suggested in their study, partially based on their willingness to pay results. A study to assess the mode of transportation that faculty at the Ayazaga Campus of Istanbul Technical University choose based on faculty rank was conducted by Tezcan and Taniş (2011). They found that age and income were the most highly correlated variables in predicting transportation mode, and they suggested policy changes that could be employed to encourage employees using private vehicles to switch to public modes of transportation.

Similar results regarding income level were found by Harmatuck (2007) using data collected at the University of Wisconsin-Madison campus. Harmatuck, however, also examines parking choice based on the monetary value that a permit holder places on walking time between their parking location and the building where they work, finding that the value of this walking time ranged from \$4 to \$30 per hour. Sultana (2015) also found that students' choice to purchase a parking permit at the University of North Carolina at Greensboro significantly increased with age and income.

Narragon et al. (1974) developed a probabilistic model to evaluate various policies related to the over-issuance of permits given a limited number of campus parking spaces. Batabyal and Nijkamp (2007) contribute to the literature stream by estimating a probability density function of the number of parking violators at given parking lot inspection times. Armed with this information, they argue that a PMU can maximize revenue obtained from ticketing parking violators by optimizing the time in which they inspect lots. Schmidt and Westley (2010) suggest that universities, which purportedly profit from parking violators via the issuance of tickets resulting in fines, have a long run interest in not deterring parking violations. They contend, however, that this ultimately results in reduced parking availability for individuals that purchase legitimate parking permits.

Shaheen and Khisty (1990) present a case study that outlines the action plan taken at Washington State University to minimize the resistance to parking fee increases at the institution. Interestingly, Shaheen and Khisty appear to approach the parking issue solely from the perspective that too few parking spaces exist on campus rather than an issue concerning the availability of parking spaces. Consequently, their article focuses on how increased parking permit fees would allow for the construction of additional parking spaces (i.e., increased supply) on campus. As Kelly (2016) suggests, increasing parking space supply can lead to economic inefficiency (i.e., subsidy) by not capturing the full value of preferred parking spaces currently available.

Considerable research regarding university parking has focused squarely on the fact that parking is underpriced and therefore oversold, resulting in parking demand far exceeding available

supply (e.g., Anderson, 1996; Batabyal & Nijkamp, 2007; Narragon et al., 1974). These researchers generally argue that underpriced campus parking directly leads to time spent “hunting” for parking (a hidden cost), illegal parking behaviors, false information being provided to secure a certain permit type, increased traffic congestion, decreased transportation-related safety, and permit holder frustration, inconvenience, and dissatisfaction (Anonymous, 2004; Bridgelall, 2014; Burr, 2011; Chance, 2006; Guo, Huang, & Sadek, 2013; Schmidt & Westley, 2010; Shaheen & Khisty, 1990; van der Waerden, et al. 2006). For instance, Shoup (1997, 2005a, 2005b, 2008), in a series of publications, provides a comprehensive assessment of parking issues faced by many university campuses in the United States, essentially reducing these issues to one root cause; namely, the inappropriate pricing of campus parking permits. Shoup presents a persuasive argument showing that when universities price campus parking below market rates in order to mollify various user groups (i.e., provide a subsidy), then the concomitant outcome is inflated demand for parking that far exceeds the available supply of parking spaces.

Some researchers have directly evaluated the impact of price on demand for campus parking through empirical research. Heath (2005), for example, presented a simulated campus parking game that demonstrates the effect that price discrimination has on increasing parking efficiency. The simulation revealed that, theoretically, price discrimination can reduce search costs and opportunity costs, while simultaneously and counterintuitively increasing consumer surplus.

Gadsby et al. (2003) evaluated the willingness of purchasers of George Mason University parking permits to participate in an online auction to bid for the right to park in specific lots. They conducted a simulated auction using campus permit buyers as participants and found that net permit revenue would increase by approximately \$2 million over the university’s present system of permit pricing (zone-based pricing). Pretty (1994) calculated the elasticity of demand for campus parking at an Australian university after the introduction of parking fees, finding that students were less price sensitive than university staff.

In a recent study, Tezcan (2012) assessed the use of price as a tool to adjust the travel demand at the Ayazaga Campus of Istanbul Technical University. He found that if a fee, rather than free parking, was placed upon campus parking, then a significant number of individuals driving private vehicles to campus would switch their mode of transportation to mass transit. van der Warden et al. (2006) found a similar effect for charging a fee for parking at the Eindhoven University of Technology, which had otherwise been free.

## STUDY OBJECTIVES

While preceding literature has added significantly to the understanding of the parking dilemma at university campuses, very little research has been conducted to understand the demand for campus parking from a fundamental economic perspective. As previously mentioned, Shoup (1997, 2005a, 2005b, 2008) advances the idea that market prices ultimately dictate the availability of campus parking.

Similar to Tezcan (2012) and Shoup (2008), we subscribe to the position that price is likely to be the most powerful demand management tool that can be utilized by universities to better control and address their campus parking problems. In this study, we also recognize that universities are monopolists with respect to their parking assets (Schmidt & Westley, 2010), a fact that appears to be overlooked in the majority of the literature discussing university parking. In other words, the sole control of parking by an academic institution and the spatial location of parking lot assets on a university campus results in economic rent, which takes the form of a

monopolistic return similar to that experienced by municipalities that own parking assets (e.g., Ross 1958). From an economic perspective, however, the challenge of a monopoly is the provision of a product that, from their consumers' perspective, is of adequate quality and priced fairly.

Our objective is to assess the substitutability between different campus parking permit types offered by a PMU based on proximity and market price. Additionally, we extend the current field of research by going beyond a simulation (e.g., Zhao, Li, Wang, Li, & Du, 2018) to consider demand effects at various price levels. This research provides a first glimpse into the price dynamics of parking on a university campus using survey data. In addition, similar to Gadsby et al. (2003), we assess the demand for campus parking using an auction model, but add a twist in that we also incorporate the availability of reserved parking spaces in our auction analysis.

The primary objectives of this study, using a specific university as a case example, are enumerated as follows:

- *Estimate the demand function for each PMU parking permit type under an auction system.*
- *Determine the substitutability of PMU parking permit types through estimation of cross-price elasticity of demand.*
- *Investigate the nature of current PMU parking permit pricing with respect to market distortion (e.g., subsidies).*
- *Develop policy recommendations to ensure efficient means of allocating PMU parking supply such that it meets expected demand.*

## CASE UNIVERSITY

This University of Idaho (UI), the State of Idaho's flagship institution of higher education, represents this study's case example. The UI is located in Moscow, Latah County, Idaho, and is situated approximately eight miles east of Washington State University (WSU), in Pullman, Whitman County, Washington. Both UI and WSU are land-grant universities, and demand for parking at both universities is partly affected by shared academic programs and the cross-listing of courses between the institutions.

The study was undertaken at the request of the PMU, with the explicit direction that the research explore the auctioning of parking. The PMU provided full cooperation in the execution of the study.

The UI's parking permit pricing system is largely based on parking lot proximity to high demand locations on campus, which is very similar to the university parking permit pricing schemes described by Shaheen and Khisty (1990) at WSU and Filipovitch and Boamah (2015) at Minnesota State University, Mankato. The majority of parking permits issued by the UI fall into one of five categories and are described by the UI's PMU as follows:

- *Gold Permit: Gold permits are available for purchase by board-appointed UI faculty and staff only and are priced at annual rate of \$325. Parking spaces for gold permits are located at high demand locations. Gold permits are valid in all gold, red and blue parking lots on campus. Gold permits are not valid in silver or purple lots, meters, pay station lots, any specially marked space, or on the campus walkway system. About 13 percent of the PMU's gross revenue is generated from the sale of gold permits.*

- *Red Permit: Red permits are available for purchase by any UI faculty, staff, or student and are priced at annual rate of \$172. Parking spaces for red permits are located between high demand locations and the periphery of campus. Red permits are not valid in gold, silver, or purple, meters, any specially marked space, or on the campus walkway system. About 32 percent of the PMU's gross revenue is generated from the sale of Red permits.*
- *Blue Permit: Blue permits are available for purchase by any UI faculty, staff, student, or frequent visitor and are priced at \$64 for a one-year permit. Parking spaces for blue permits are located on the periphery of campus and tend to be in large lots. Blue permits are valid in all blue lots on campus. Blue permits are not valid in any other colored lot, meters, any specially marked space, or on the campus walkway system. About 12 percent of the PMU revenue is generated from the sale of blue permits, though 25 percent of parking spaces on campus are in blue lots.*
- *Purple Permit: Purple permits are available for purchase by current Greek members who reside in a campus-based sorority or fraternity house, as well as residents of two university-sponsored student living halls. Priced at \$147, the permit is valid for one year. Purple permits can be used in all purple, silver, and blue lots on campus. Purple permits are not valid in gold or red lots, meters, any specially marked space, or on the campus walkway system.*
- *Silver Permit: Silver permits are available for purchase by current residents of UI Housing (i.e., dormitories) and are priced at \$147 for a one-year permit. Silver permits are valid in all silver, purple, and blue lots on campus. Silver permits are not valid in gold or red lots, meters, any specially marked space, or on the campus walkway system.*

It should be noted that certain university administrators (president, provost, vice provosts, vice presidents, and college deans) are provided the option to purchase a parking space that is reserved 24 hours a day, seven days a week, and is located very near their respective offices.

Several other types of permits are issued by the university, (e.g., delivery vehicle, disability, media, retiree), but these represent a substantially smaller proportion of permits sold. Total gross revenue generated by parking permit sales and parking fines during the academic year of 2011-2012 was about \$1.44 million.

The total number of current students, administrators, faculty, and staff on the UI campus is approximately 14,000, while the number of parking spaces the UI supplies on campus is 5,804. Thus, the ratio of the number of regular campus users to the number of campus parking spaces is about 2.4. Aggressive institutional efforts are underway to increase student enrollment at the UI campus by 50 percent over the next decade. If no new parking supply is added or parking restrictions implemented (e.g., ban freshman vehicles on campus) while the university proceeds with its growth plan, then the ratio of regular campus users to campus parking spaces will exceed 3, and likely increase negative parking related issues across campus.

## METHODS

A web-based survey instrument was utilized to collect data for this study using the Tailored Design Method developed by Dillman, Smyth, and Christian (2008). The sample frame, provided by the university's PMU, consisted of all UI administrators, faculty, staff, and students that had

purchased a campus parking permit within the past year, yielding a total of 5,065 sampling units (820 Gold, 1,700 Red, 1,250 Blue, 525 Purple, 770 Silver). An email message describing the research was sent to all 5,065 sampling units, which also included a link to the web-based survey instrument. An incentive, representing a 25 percent off coupon for any university-branded merchandise sold at the UI Bookstore, was provided to increase the survey response and completion rates.

The survey instrument consisted of demographic, behavioral, and perceptual measures, as well as a conjoint component specifically designed to assess price sensitivity to different permit types currently offered by the PMU. The design of the conjoint study was put into the context of an auction market, including the auctioning of parking spaces exclusive to the purchaser (i.e., reserved parking).

In a conjoint study, attributes considered to have a substantial influence on consumers' preferences, and therefore their demand, are identified (Orme, 2006). Individuals are then asked to state their preference for combinations of different levels of a product's (service's) most relevant demand-inducing attributes. Ranking each individual's preferences for these different combinations of attribute levels allows one to estimate, or decompose, what share of the total utility is gained from specific attributes of a purchased or consumed product (Hair, Black, Babin, & Anderson, 2010). Furthermore, conjoint analysis allows researchers to characterize the relative importance to consumers of each attribute; the amount each attribute contributes to total utility of a product for an individual can be represented as a percentage share, and these shares can then be averaged to compute the attribute importance for a group (e.g., market segment) as a whole. An extensive body of literature exists that describes conjoint analysis method and its application (e.g., Green & Srinivasan, 1990; Gustafsson, Hair et al., 2010; Herrmann, & Huber, 2010; Orme, 2006).

A total of four separate conjoint surveys were conducted in the study, but each study participant completed only one survey; the conjoint survey that a study participant completed was based on the parking permit type that they had purchased within the past year (gold, red, blue, or silver). Thus, if a study participant had purchased a gold parking permit within the past year, then the conditional logic of the web-based survey would have the individual complete the gold permit survey. With the exception of the conjoint portion of the survey instruments, all other questions across the four separate surveys were identical and presented in the same order.

All four conjoint surveys were based on a part-worth linear preference model (cf. Hair et al., 2010), using a full concept orthogonal design (IBM Corporation, 2012). The model consisted of the following two attributes: permit category and permit price. It is important to make the distinction of permit types and permit category. Permit type, as previously discussed, represents the color of the parking permit, which provides a designation for which lots a purchaser can park. The permit category represents whether the permit is a standard parking permit or a reserved parking permit. Permit types and categories included gold, reserved gold, red, reserved red, blue, reserved blue, silver, and reserved silver. The survey specifically stated that a reserved parking permit would "provide you an exclusive parking space in a particular [insert permit color type] lot." Thus, a reserved gold parking permit would dedicate to the purchaser a parking space in a specific gold lot, but would also allow the purchaser to park in any other gold, red, or blue lot. Similarly, a reserved blue permit would dedicate to the purchaser an exclusive parking space in a particular blue lot, while at the same time allowing parking in any other gold, red, or blue. The following parking permit prices were used in the conjoint portion of the study: \$300, \$350, \$400, \$450, \$500, \$750, \$1,000, \$1,250. Output generated from the conjoint analyses included utility

estimates for the price levels and the permit categories (i.e., reserved and standard for each permit type), as well as importance scores for the variables price and permit category.

## RESULTS AND DISCUSSION

A total of eight email surveys were undeliverable, resulting in a total effective sample size of 5,057. The number of fully completed surveys was 1,182, yielding an effective response rate of 23.4 percent. An additional 41 survey were fully completed, but the participant failed to indicate which type of permit they had most recently purchased, which was a requirement for inclusion in the conjoint analyses. The number of responses and associated response rate by permit type are shown in Table 1. Interestingly, with the exception of silver permit purchasers, the survey response rate increased with the increase in the price of the permit most recently purchased from the UI. For instance, the response rate for gold permit purchasers was more than 150 percent greater than that of purchasers of a purple permit.

Table 1 SUMMARY OF SURVEY RESPONSE BY MOST RECENT PERMIT TYPE PURCHASED			
Permit Type	Sample Size	Number of Responses	Response Rate (%)
Gold	820	295	36.0
Red	1,700	395	23.2
Blue	1,250	265	21.2
Purple	525	75	14.3
Silver	762	152	19.9
Total	5,057	1,182	23.4

From a demographic perspective females respondents outnumbered males, representing 58 percent of the study participants. Study participants' ages ranged from 19 to 83 years, with a mean of 33.2 years and a median 28 years. The majority of study participants were single (53.1 percent), while 42.2 percent were married, and 4.2 percent were divorced and not remarried. Unemployed individuals represented 23.1 of the study participants, while 22.9 were part-time employed, and 43.6 percent were employed full time. Just over 10 percent of the respondents did not indicate their employment status. Students represented 48.4 percent of the study participants, followed by staff (32.2 percent), faculty (10.4 percent), and 9.0 percent failing to indicate an affiliation with the institution. Of the 592 students responding to the survey, 19 percent were freshman, 20 percent sophomore, 20 percent junior, 18 percent senior, 6 percent fifth year undergraduate, and 7 percent graduate student.

Both the average and median gross income reported by study participants fell within the range of \$20,000 and \$24,999. The median gross income reported by students was in the range of \$0 to \$4,999, while staff reported a median gross income in the range of \$40,000 to \$44,999. Faculty reported a median gross income in the range of \$75,000 to \$79,999.

A series of questions were asked of survey participants to understand their current disposition toward and use of the current UI parking permit system. More than 90 percent of respondents indicated that they were able to purchase their desired parking permit type, though the mean probability that a respondent would purchase the same permit type as their most recent purchase was 75 percent. This suggests that there may be latent demand for parking permits that provide access to premium lots (e.g., gold permits). Alternatively, purchasers may be considering

“buying down” their choice of permit, finding the value of the benefits obtained from the purchase of premium permits being less than expected.

Individuals purchasing purple and silver permits reported an average distance of travel to campus as 0.15 miles. In other words, these individuals either lived on campus (e.g., dormitory), an apartment adjacent to campus, or in Greek housing. Individuals purchasing blue parking permits travel an average distance of 2.0 miles to campus from their home, while those purchasing red parking permits travel an average distance of 1.9 miles. Purchasers of gold parking permits were found to travel an average distance of 6.1 miles to arrive on campus from their place of residence.

Study participants were asked how often they found a parking space in the lot associated with their parking permit. Results, displayed in Table 2, indicate that more than 70 percent of gold and blue parking permit holders either always or almost always can find a parking space in their permitted lots. Individuals purchasing red, purple, and silver parking permits were much less likely to find a parking space in their permitted lots. Approximately one-third of all purple parking permits holders indicating that they either never or sometimes found a parking space in their permitted area. These results strongly suggest demand for red, purple, and silver parking spaces exceeds the available supply.

<b>Table 2</b> <b>ABILITY OF SURVEY PARTICIPANTS TO FIND A PARKING SPACE IN THE LOT ASSOCIATED WITH THEIR PERMIT TYPE</b>						
	I usually find a parking space in the lot I have a permit for. (percent of responses)					Total Number of Responses
Permit Type Purchased	Never	Sometimes	Most of the Time	Almost Always	Always	
Gold	0.4	9.3	19.7	32.6	38.0	279
Red	1.6	21.3	32.3	29.1	15.7	362
Blue	0.0	6.2	16.8	33.2	43.8	256
Purple	2.8	29.3	31.9	22.2	13.8	72
Silver	0.7	21.8	26.8	29.6	21.1	142
All Types	0.9	15.4	24.8	30.5	28.4	1,111

Conjoint analyses were conducted for each parking permit type except purple, for a total of four analyses; data from purchasers of purple parking permits was excluded from analysis due to the relatively low number of responses from this group. The significance values for Pearson’s R, a measure of conjoint model fit, for the gold, red, and blue parking permit analyses were quite high, being 0.034, 0.000, and 0.041, respectively. The Pearson’s R significance value for silver parking permit conjoint analysis was 0.186, suggesting unstable estimates. This instability may be a function of a low response rate by purchasers of silver permits and/or a high level of variability in their responses to the conjoint-related questions in the survey.

Table 3 presents the importance scores for the attributes of permit price and permit category generated for each parking permit type. Results of the gold, red, and silver parking permit conjoint analyses indicate that permit price carried significantly more weight on calculated attribute level utilities than permit category. Results of the blue parking permit conjoint analysis, however, indicated that permit category had substantially more weight on calculated attribute level utilities. This result suggests that blue permit holders are less sensitive to permit price as it relates to whether the permit category is reserved or standard.

<b>Table 3</b> <b>ATTRIBUTE IMPORTANCE VALUES ASSOCIATED WITH PERMIT AND PRICE CATEGORY BY PARKING PERMIT TYPE</b>		
	Importance Value	
Permit Type	Permit Price	Permit Category
Gold	68.91	31.09
Red	81.64	18.36
Blue	26.78	73.22
Silver	85.76	14.24

After obtaining the initial conjoint results, the information was used to conduct simulations in order to estimate the price elasticity of demand for each of the four permit types; price elasticity of demand information allows for inspection of the impact of price changes on the resulting demand for parking permits. Note that price elasticity of demand, as defined by economists, is specified as the percentage change in quantity demanded divided by the percentage change in price. With the use of conjoint analysis, however, demand share is used to estimate price elasticity of demand rather than quantity demanded. In other words, the changes in consumers' choice of one product relative to another (i.e., trade-off) are reflected in changes in price, where the total sum of share across products is 100 percent (cf. Orme, 2006). The interpretation of estimates of price elasticity of demand using either quantity demanded or demand share are the same; namely, measured in absolute value, estimates less than 1.0 are considered inelastic, estimates greater than 1.0 are considered elastic, while estimates of 1.0 are unitary elastic.

In this study, gold parking permits ranged in price from \$300 to \$1,250. Using the conjoint results, we simulated the price elasticity of demand for standard gold parking permits (i.e., an unreserved parking permit) by removing the reserved permits and only allowing price to change (Orme, 2006). Similar simulations were conducted for standard red, blue, and silver parking permits. Red and blue parking permits ranged in price from \$60 to \$500, while silver parking permit prices ranged from \$125 to \$500.

The price elasticity of demand estimate for standard gold parking permits was found to be 0.32, indicating a relatively inelastic demand curve. The price elasticity of demand estimates for standard red and blue parking permits were also found to be slightly inelastic, being 0.97 and 0.92, respectively. The price elasticity of demand estimate for standard silver parking permits was found to be extremely elastic, at 7.65, indicating that purchasers of this type of permit are very price sensitive. Given that silver parking permits are only available to students who are residents in university-owned housing, it is not particularly surprising that these buyers are highly sensitive to changes in permit prices. These individuals tend to be very income constrained, while at the same time expending a considerable sum of money to pay for their education.

Next, we assessed the premium that study participants would pay for a reserved parking permit for each of the four parking permit types. This premium was calculated using a multistep process, beginning with the calculation of the difference between the estimated utilities for the price variable and dividing by the full range of price used in the study. This value was then divided into the difference in estimated utilities for the permit category attribute (i.e., the difference between standard and reserved parking permits), and then subtracted from the current market price for each permit type. Those individuals completing the conjoint analysis for gold parking permit purchasers were found to be willing to pay, on average, a premium of \$377.70 for a reserved gold parking permit. Thus, a premium gold parking permit under this scenario would cost the buyer \$702.70 (i.e., base permit price plus premium) on an annual basis. Recall that a reserved gold

parking permit allows one to park in a specific reserved space in a gold parking lot, while also allowing parking in all other lots. Obtaining a reserved gold parking permit eliminates the need to search for a parking space in a gold parking lot. Thus, the \$377.70 premium may reflect a portion of the annualized search cost (“hunting” cost) of finding a parking space in gold lots.

Red parking permit purchasers were found to be willing to pay a premium of \$84.91 for a reserved space in a red parking lot, which would also allow the purchaser to park in other available lots on campus except gold lots. Blue parking permit purchasers were willing to pay \$219.63 for a reserved space in a blue parking lot. Interestingly, if one adds the premium prices for red and blue reserved parking permits to their standard permit equivalents, then the resulting prices for each are well below the current standard gold permit price (\$68.09 less for red permits and \$41.37 less for blue permits). The discount for blue reserved parking permits relative to standard gold parking permits is somewhat surprising given the importance blue permit purchasers placed on permit category; in other words, our results strongly suggest that blue permits are significantly underpriced by the institution.

The premium associated with a reserved blue permit could possibly be attributed to a prestige value that a purchaser of such a permit may ascribe to a reserved parking permit. If this is indeed true, then it suggests that a conversion of a certain proportion of blue parking capacity to a higher priced reserved status would substantially increase revenue obtained from these lots.

Silver parking permit purchasers were found to be willing to pay a premium of \$154.37 for a reserved space in a silver parking lot, while being able to park in any other campus parking lot. This represented a \$34.63 discount relative to a standard gold parking permit.

Given the results, if the PMU at the UI were to reserve 10 percent of spaces in gold, red, blue, and silver lots, and price these reserve spaces at the average premiums aforementioned, then gross revenue would increase by nearly \$89,000 per year. Similarly, reserving 50 percent of spaces in these same lots would generate additional gross revenue of \$444,000 per year.

## CONCLUSION

In this case study, the price premiums that participants indicated that they would be willing to pay to obtain reserved parking spaces reflect an underpricing of parking permits. It is worth noting that study participants were not allowed to “trade up” from their current permit type (e.g., from red to gold). Thus, the calculated gross revenue gains from increasing permit prices across all permit types may be underestimated in our results.

The PMU at the UI is likely substantially underpricing gold, red, blue, and silver permits given the magnitude of the premiums individuals indicated that they are willing to pay for reserved parking; this is especially true for blue permits.

According to the PMU at the UI, the total revenue from permit sales and parking fines at the time this study took place was \$1.44 million. Reserving 10 percent of gold, red, blue, and silver parking spaces would therefore increase gross revenue by \$89,000 (6 percent increase), and reserving 50 percent of parking spaces would generate additional gross revenue of \$444,000 (30 percent increase). From the consumers’ perspective, a significant percentage increase in the price of parking permits would likely lead to a high degree of outrage on campus, as would the reservation of a large number of parking lot spaces. For instance, in conversations with our colleagues in the College of Business and Economics, we heard repeatedly from individuals with advanced training in economics that the institution had a moral obligation to provide nearby and “fairly priced” parking for administrative staff. Yet, few (if any) large corporations with

constrained parking options feel any responsibility to provide parking (or a subsidy) for their administrative staff, nor do administrative staff seem to believe that they should. Indeed, a benefit that many administrative staff obtain by the requirement that they arrive early to work is that they have access to preferred parking on a consistent basis.

While our study was undertaken at the request of our PMU, once provided with the results there was not only no change in university parking policies, there was little comment or feedback. Our interpretation is that the administration “blinked” when considering the nonmonetary costs of providing higher priced reserve permits. In other words, in their view, the potential cost of ill will among members of the university community exceeded the rather significant increase in gross revenue. That this occurred in the midst of very tight budgets, increasing student tuition, stagnant wages for faculty and staff, reduced faculty positions, and larger classroom sizes makes the inaction of the administration all the more significant.

Rather than segment its parking permit market based on consumer price sensitivity and extract greater revenue on a target that is willing to pay more for a service, the university instead chose to increase across the board tuition and fees and restrict wage and salaries as well. Furthermore, maximizing revenue from those that would pay more would lessen the need for increases of basic permit prices (i.e., non-reserved spaces). In other words, the university could be employing a reserved-based parking permit system that would significantly reduce price inflation of non-reserved permits and still substantially increase gross revenue.

Finally, by having access to what our study clearly shows is below market value 24/7 reserved permits, administrators have little personal interest in changing parking policies that would have no direct impact on them. It is also worth noting that the PMU is located adjacent to the largest blue lot on campus. Ironically, the head of PMU, as well as the entire PMU staff, has access to consistently available parking at the lowest cost on campus.

Arguably, parking is a complex good with layers of meaning beyond a simple space for those of the campus community to use. For professors, the status of parking permits goes almost hand-in-hand with their degrees and titles, starting with their student permits and working up to the faculty permit that goes with their doctorate degree. Indeed, the traditional conferring of a Ph.D. includes the language “with all the rights and privileges pertaining thereto.” This could readily be modified to “including the right to buy a faculty parking permit.” Moreover, faculty members experience the constant status reminder of their position relative to the administration when searching for parking space when passing 24/7 reserved administrator spaces (i.e., premium spaces) that are very often not being used.

Students might argue that the university exists primarily to educate them but feel that parking policies treat them as the most inferior of customers. The UI campus is rather compact, and to walk from one extreme corner of campus to the other requires less than fifteen minutes. In our estimation, the farthest anyone would need to walk from a blue lot to their office would take no more than ten minutes. Numerous individuals that purchase a gold permit also pay for access to the university’s workout facilities or spend their lunch hour engaged in strenuous physical exertion that far exceeds any effort they would expend walking to their office from a blue lot. Thus, the belief that parking is a public good seems somewhat irrational and puzzling. The institution’s pricing strategies, however, do not need to be irrational in turn. Rather, PMU pricing strategies should capitalize on this irrationality among consumers.

As a monopolist, PMUs are likely to provide inadequate parking spaces and charge a higher price than would be expected under competition. However, most PMUs should be viewed as regulated monopolists that are required only to cover their variable costs. University administrators

are motivated to leave PMU units alone if variable costs are being met rather than create a controversy in an area viewed as non-central to the institution's core mission. The UI PMU is a self-sustaining unit. While this means that the university does not directly subsidize parking, it does remove from the PMU the incentive to pursue innovative solutions to better meet parking demands and improve constituents' satisfaction with their parking choices. For instance, we suggested that a business plan be developed to assess the financial feasibility of a parking garage facility. The offer was rejected on the basis that adequate parking was being provided to meet the *needs* of the university. Ignored was that parking *wants* are certainly not being met, as demonstrated by the premium that some are willing to pay for reserved parking, and that any enrollment growth will certainly create more stress on parking.

Against the perception of campus parking as a public good is the growing realization of the environmental costs associated with parking. Not only are capital costs associated with parking high, parking facilities encourage driving to campus rather than carpooling, walking, or biking. In addition, parking facilities generate storm runoff and increase contaminant loading (e.g., oil, grease, fuel, heavy metals, solid waste) into freshwater systems (e.g., Davis, Pijanowski, Robinson, & Engel, 2010; Jakle & Sculle, 2005). Lastly, new parking facilities often consume green space. Therefore, it is possible that as the environmental costs of parking are more widely recognized on campus that it will be perceived less as a public good and more as an environmental cost; this, in turn, will impact the policies of the PMU.

## LIMITATIONS

Although multiple pretests of each of the four conjoint surveys was conducted to assess, in part, whether the range of prices used in the study were considered reasonable, there is a possibility that the range exceeded the expectations of a number of study participants. Study participants may have anchored the first price presented in the study, which may have been perceived as unreasonable, and adjusted their future evaluations based on this price (Epley & Gilovich, 2001). Thus, prices exceeding the range of what one would expect may have led some study participants to express excessive price premium estimates, thereby increasing the price elasticity of demand.

In addition, in order to make the study more tractable, study participants were limited to evaluating a pricing situation for the permit that they had most recently purchased. For instance, red permit holders were guided to complete a conjoint survey focused on red permits. This limitation may have led to overestimated price premiums for reserved gold and red permits, as purchasers of gold and red permits have much greater flexibility in "buying down" to the next permit type (i.e., gold to red; red to blue) relative to the other permits. Future research, using conjoint analysis, could evaluate substitutability across permit types.

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## REFERENCES

- Anderson, B. (2006). The parking puzzle. *Stanford Magazine*, 24, 82-85.
- Anderson, S. P., & de Palma, A. 2004. The economics of pricing parking. *Journal of Urban Economics*, 55, 1-20.
- Anonymous. (1958). Education: View from the bridge. *Time*, 72, 96.
- Anonymous. (2004). Parking in higher education – The pros speak out. *Parking Today*, 9, 12-14, 44.
- Arnott, R., & Rowse, J. (1999). Modeling parking. *Journal of Urban Economics*, 45, 97-124.
- Barata, E., Cruz, L., & Ferreira, J. 2011. Parking at the UC Campus: Problems and solutions. *Cities*, 28, 406-413.

- Batabyal, A. A., & Nijkamp, P. (2010). A probabilistic analysis of two university parking issues. *The Annals of Regional Science*, 44, 111-120.
- Bennett, W. (1956). University campus parking. *Traffic Quarterly*, 10, 89-105.
- Bennett, W. (1958). The car and college campus. *Traffic Quarterly*, 12, 602-610.
- Bridgelall, R. (2014). Campus parking supply impacts on transportation mode choice. *Transportation Planning and Technology*, 37, 711-737.
- Burr, D. W. (2011). Is university parking a common grievance? *Parking Today*, 16, 32-33.
- Campus Parking Management Associates. (1999). *The complete campus parking manual: A comprehensive resource guide for campus parking administrators, supervisors and managers*. Goshen, Kentucky: Campus Parking Management Associates.
- Chance, B. (2006). Higher ed parking funded by outdated procedures. *Parking Today*, 11, 35.
- Davis, A. Y., Pijanowski, B. C., Robinson, K., & Engel, B. (2010). The environmental and economic costs of sprawling parking lots in the United States. *Land Use Policy*, 27, 255-261.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2008). *Internet, mail, and mixed-mode surveys: The tailored design method*. Hoboken, New Jersey: John Wiley and Sons, Inc.
- Ehrenberg, R. G. 2000. *Tuition rising: Why college costs so much*. Cambridge, Massachusetts: Harvard University Press.
- Eikenberry, A., Maher, C., Grant, F., & Kim, J. (2015). *Enhancing transportation demand management options at the University of Nebraska at Omaha: The costs, benefits and challenges of implementation*. Omaha, Nebraska: University of Nebraska at Omaha Center for Urban Sustainability.
- Epley, N., & Gilovich, T. (2001). Putting adjustment back into the anchoring and adjustment heuristic: Differential processing of self-generated and experimenter-provided anchors. *Psychological Science*, 12, 391-396.
- Epstein, R. A. (2002). The allocation of the commons: Parking on public roads. *The Journal of Legal Studies*, 31, S515-S544.
- Farrell, S., Mahony, M., & Caulfield, B. (2005). Attitudes and behavioral responses to measures to deal with workplace parking. *Transportation Research Record*, No. 1932, 178-187.
- Filipovitch, A., & Frimpong, E. F. (2015). A systems model for achieving optimum parking efficiency on campus: The case of Minnesota State University. *Transportation Policy*, 45, 86-98.
- Forman, J. C. (1971). *Parking on college and university campuses: An annotated bibliography*. Albany, New York: New York State Education Department, Bureau of Occupational Education Research.
- Gadsby, E., Jaimes, S., Najarian, L., Sanchez, M., Sujlana, R., Donohue, G. L., & Coyne, M. (2003). George Mason University (GMU) Fairfax Campus Transportation System. In M. H. Jones, B. E. Tawney, and K. P. White (Eds.) *Proceedings of the 2003 Systems and Information Engineering Design Symposium* (pp. 77-82). Charlottesville, Virginia: Institute of Electrical & Electronics Engineers.
- Green, P. E., & Srinivasan, V. (1990). Conjoint analysis in marketing: New developments with implications for research and practice. *Journal of Marketing*, 54, 3-19.
- Grubb, M. D., & Oyer, P. (2008). *Who benefits from tax-advantaged employee benefits? Evidence from university parking*. NBER Working Paper No. 14062. Cambridge, Massachusetts: National Bureau of Economic Research.
- Guo, L., Huang, S., & Sadek, A. W. (2013). A novel agent-based transportation model of a university campus with application to quantifying the environmental cost of parking search. *Transportation Research Part A*, 50, 86-104.
- Gustafsson, A., Herrmann, A., & Huber, F. (2007). *Conjoint measurement: Methods and applications*. New York, New York: Springer.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Upper Saddle River, New Jersey: Pearson Education.
- Harmatuck, D. J. (2007). Revealed parking choices and the value of time. *Transportation Research Record*, 2010, 26-34.
- IBM Corporation. (2012). *IBM SPSS Conjoint 21*. Armonk, New York: IBM Corporation.
- Jackle, J. A., & Sculle, K. A. (2005). *Lots of parking: Land use in a car culture*. Charlottesville, Virginia: University of Virginia Press.
- Jeppesen, J., & Dorsett, J. (2014). Colleges and universities are taking a fresh look at campus parking. *Planning for Higher Education*, 42, 33-36.
- Kelly, G. T. (2016). *Bidding for parking: The impact of university affiliation on predicting bid values in Dutch auctions of on-campus permits*. Honors Thesis. Duke University, Durham, North Carolina.
- Kelly, S. (2015). Parking problems. *The Argonaut*, 116, 10.

- Kerr, C. (1966). *The uses of the university*. New York, New York: Harper and Row.
- Litman, T. (2010). *Parking pricing implementation guidelines: How more efficient pricing can help solve problems, increase revenue and achieve other planning objectives*. Victoria, British Columbia, Canada: Victoria Transport Policy Institute.
- Lyle, K. (2011). Parking changes could bring in \$375 million for Ohio State. *The Lantern*, 131, 1A and 3A.
- Meng, F., Du, Y., Li, Y. C., & Wong, S. C. (2018). Modeling heterogeneous parking choice behavior on university campuses. *Transportation Planning and Technology*, 2, 154-169.
- Millard-Ball, A., Siegman, P., Tumlin, J. (2004). Solving campus parking shortages: New solutions for an old problem. *Planning for Higher Education*, 33, 30-43.
- Mooney, C. J. (1993). Cultured murmur of academe threatens to be lost in the roar over parking: From shouting matches to fisticuffs, furious battles rage over a jealously guarded perk. *The Chronicle of Higher Education*, 39, A15-A16.
- Munzir, S., Ikhsan, M., & Amin, Z. (2010). Linear programming for parking slot optimization: A case study at Jl. T. Panglima Polem Banda Aceh. In *Proceedings of the 6th Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) Conference on Mathematics, Statistics and its Applications* (pp. 462-472). Kuala Lumpur, Malaysia: Universiti Tunku Abdul Rahman.
- Narragon, E. A., Dessouky, M. I., & DeVor, R. E. (1974). A probabilistic model for analyzing campus parking policies. *Operations Research*, 22, 1025-1039.
- Orme, B. K. (2006). *Getting started with conjoint analysis: Strategies for product design and pricing research*. Madison, Wisconsin: Research Publishers.
- Pendakur, V. S. (1968). Access, parking and cost criteria for urban universities. *Traffic Quarterly*, 22, 359-387.
- Pretty, R. L. (1994). The impact of parking policy measures on university commuters. *Transportation Planning and Technology*, 18, 155-162.
- Ross, M. H. (1958). Product differentiation in the parking market. *Land Economics*, 34, 245-254.
- Rye, T., Hunton, K., Ison, S., & Kocak, N. (2008). The role of market research and consultation in developing parking policy. *Transport Policy*, 15, 387-394.
- Sandland, S. (2006). The practical problems faced by the University of East London in meeting the parking restraints within PPG13. *World Review of Science, Technology and Sustainable Development*, 3, 152-173.
- Schmidt, B. H., & Westley, C. (2010). The university-as-monopolist: Why parking problems persist at university campuses. *Journal of Applied Business and Economics*, 10, 39-43.
- Scruggs, M., Epperson, D., Blevins, J., Mudd, C., & Franklin, K. (2010). Addressing University of Kentucky parking: Opportunities for growth without construction. In *Gatton Student Research Publication*, 2. Lexington, Kentucky: University of Kentucky, Gatton College of Business and Economics.
- Shaheen, J. A., & Khisty, C. J. (1990). Washington State University parking action plan – A campus parking case study. *Transportation Research Record*, No. 1287, 223-229.
- Shang, H., Lin, W., & Huang, H. (2007). Empirical study of parking problem on university campus. *Journal of Transportation Systems Engineering and Information Technology*, 7, 135-140.
- Shoup, D. (1997). The high cost of free parking. *Journal of Planning Education and Research*, 17, 3-20.
- Shoup, D. (2005a). Parking on a smart campus: Lessons for universities and cities. In *California Policy Options* (pp. 117-149). Los Angeles, California: Ralph and Goldy Lewis Center for Regional Policy Studies.
- Shoup, D. (2005b). *The high cost of free parking*. Chicago, Illinois: Planners Press, American Planning Association.
- Shoup, D. (2008). The politics and economics of parking on campus. In S. Ison and T. Rye (Eds.), *The implementation and effectiveness of transport demand measures: An international perspective* (pp. 121-149). Aldershot, United Kingdom: Ashgate Publishing.
- Smith, M. S. (2014). Will online learning significantly impact university parking? *Parking*, 53, 22-24.
- Stevens, M. (2007). Campus parking permit scandal leads to charges of race discrimination. *Parking*, 46, 7-10.
- Sultana, S. (2015). Factors associated with students' parking-pass purchase decisions: Evidence from an American university. *Transport Policy*, 44, 65-75.
- Tezcan, H. O., & Taniş, M. (2011). Does the academic rank matter? Study on the trip preferences of academicians from different ranks employed at Istanbul Technical University. *Journal of Urban Planning and Development*, 137, 272-280.
- Tezcan, H. O. (2012). Using parking pricing as a travel demand management tool at a university campus: An example for Istanbul Technical University. *Transportation Letters: The International Journal of Transportation Research*, 4, 181-192.
- Troop, D. (2011a). Nobel? Sure. Parking space? Maybe. *Chronicle of Higher Education*, 58, A1 and A10.
- Troop, D. (2011b). Taming the parking beast: The options for colleges. *Chronicle of Higher Education*, 58, A10.

- Tudela-Rivadeneira, A., Shirgaokar, M., Deakin, E., & Riggs, W. (2015). The cost versus price for parking spaces at major employment centers: Finding from UC Berkeley. In *TRB 94th Annual Meeting Compendium of Papers*. Washington, DC: Transportation Research Board of National Academies.
- van der Waerden, P., Borgers, A., & Timmermans, H. (2006). Attitudes and behavioral responses to parking measures. *European Journal of Transport and Infrastructure Research*, 6, 301-312.
- Wang, Z., & Zhou, W. (2010). Current situation and improvement strategy for campus parking in China. In L. O'Connor (Ed.), *International Conference on Intelligent Computation Technology and Automation, Volume 1* (pp. 1075-1078). Los Alamitos, California: IEEE Computer Society.
- Zhao, C., Li, S., Wang, W., Li, X., & Du, Y. (2018) Advanced parking space management strategy design: An agent-based simulation optimization approach. *Transportation Research Record*, 1-10.

# GIVING FOR A WORTHIER CAUSE? FACTORS INFLUENCING CHANGES TO CHARITABLE GIVING ALLOCATIONS

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## ABSTRACT

*Research has found that consumers can be heavily influenced by their social network when making a purchasing decision (Schmitt, Skiera, and Van den Bulte, 2011). Can this influence also change our mental accounting? To study this question more closely, we must examine this new media effect on mental accounting. It is not only important to expand the theoretical framework first proposed by Thaler (1985), but this question has real-world implications. As individuals have limited charitable budgets and charities are in desperate need of donations, it is important to understand which factors can contribute to changing a charitable givers mind.*

## INTRODUCTION

The purpose of this study is to understand under what conditions donors would change their mental accounting, or their “charitable giving account,” from one charity to another. The charitable giving literature (Burnett and Wood, 1988; Guy & Patton, 1989; Bendapudi et al., 1996; Fine, 2008) suggests that donors contribute to causes that they have a close personal relationship with, and have a wish to solve that specific problem, e.g., a donor might give to a charity seeking a cure for an illness that affected a loved one. Dietz and Keller’s (2016) Donor Loyalty Study also supported this proposition that donors give because they are “passionate about the cause.” Margolis (1984) suggests that “a better understanding of how donations interact with mental budgets might prove particularly useful since most people have limited funds and must consider their budgets when deciding how much to spend on charitable gifts.”

While several researchers in mental accounting have concluded that people separate their money into various mental accounts predicated on where the money came from and the reasons for that account, several mental accounting researchers have determined that individual mental accounts have separate purposes and are understood to be mutually exclusive (Thaler, 1985, 1991, 1999; Kahneman & Tversky, 1984; Heath & Soll, 1996; Cheema & Soman, 2006).

The extant research has found that consumers’ social networks can have a profound influence on their choices when making a purchase (Schmitt, Skiera, & Van den Bulte, 2011). Marketers have tried to use this fact to have customers share information with their friends via their social networks (Leskovec, Adamic & Huberman, 2007). By extension, it is reasonable to question how social media and specifically WOM may also affect the individual’s mental

accounting for charitable giving. One open question concerns the impact and influence of WOM on mental accounting.

Why would donors give to charities that seem to be contrary to their interests? For example, as we have seen from the Ice Bucket Challenge, social media can have a significant impact on charitable giving? Were these donations given to support the Amyotrophic Lateral Sclerosis (ALS) charity or were they given because of social pressure, or because a celebrity supported a specific charity?

There are only 6,000 people diagnosed with ALS each year in the United States ([www.als.org](http://www.als.org)) or less than 0.00001% of the USA population, yet there more than 17 million people posted their ALS Ice Bucket Challenge videos to Facebook, where these videos were seen by 440 million people a total 10 billion times ([als-ny.org](http://als-ny.org)). In contrast, approximately 39.6% of the USA population will be diagnosed with cancer during their lifetime ([www.cancer.gov](http://www.cancer.gov)). So, it's reasonable to assume that charitable donors would be more likely to have a connection with a person diagnosed with cancer, as opposed to someone suffering with ALS. Although contributions from any source are important to philanthropic causes, presently 70% of all contributions come from individuals. American donors gave an estimated \$373.3 billion to approximately 1.2 million charities in 2015 ([www.givingusa.org](http://www.givingusa.org)).

Consequently, this support is contradictory to the prevailing research (Burnett & Wood, 1988; Guy & Patton, 1989; Bendapudi et al., 1996; Fine, 2008) that donors support charitable causes because they have a personal relationship with that specific cause. In the case of the Ice Bucket Challenge, it appears that other factors influenced these donations. Therefore, the purpose of this research is to address the gap in the literature which does not explain how or why donors change their mental accounting from their original choice (which they believe strongly in) to another cause which they either know little about or have not contributed to in the past.

## LITERATURE REVIEW

We will review both the mental accounting and charitable giving literature, then consider some of the factors which may change a donors charitable mental account. While the mental accounting literature has considered how consumers use mental budgets for charitable causes, it has not yet examined why consumers might change their minds once they have decided on a specific charitable cause.

### Mental Accounting

Mental accounting was first proposed by Thaler (1985) where he suggested that “that people have separate budgets for different sources of income and/or expenditures.” Thaler (1999) proposes that people set up these mental accounts before they intend to use the account, they will also decide the limits of these accounts. Several researchers have concluded that we monitor our spending by a process of placing our funds in specific mental accounts, and this mental accounting can impact future purchasing decisions (Tversky & Kahneman, 1981; Kahneman & Tversky, 1984; Thaler, 1985, 1999).

These mental accounts are used as a self-control mechanism. Similarly, Cheema and Soman (2006) also defined mental accounts as “self-control devices which consumers employ to prevent excess spending and consumption.” Heath and Soll (1996) opine that people use mental budgets or accounts as a psychological process “to allocate and expend their monetary resources.” These mutually exclusive “mental accounts” are used to allocate funds that are budgeted to a specific expenditure, by restricting further expenditure when a specific mental account is expended, consumers can then regulate their spending in any given category (e.g., charitable giving, groceries, entertainment, etc.).

Since these mental accounts are meant to keep spending and expenditures in check, it is very important to our research question to understand how they impact decisions of charitable giving. Since these funds are limited, we question if these funds can be diverted to expenditure that it was not meant for. The charitable giving research opines that donors would donate to a charitable cause they believe strongly in.

### **Charitable Giving**

This research into charitable giving has gone a long way to extending our knowledge with respects to consumer behavior and how people’s values, reasons, and emotional responses can affect if and how much they give to charities. However, the literature on charitable giving still does not answer the fundamental question of if a person’s decision can be changed once they have allocated a budget to a specific mental account. According to LaBarge and Stinson (2014), individuals do keep a mental budget for their charitable giving, these researchers concluded that these mental accounts are in fact malleable, which means that charitable donors will use other non-charitable accounts for their charitable giving.

Several researchers have looked at the psychological drivers of charitable giving, the behaviors associated with giving and happiness, well-being and mood (Bendapudi, Singh, & Bendapudi, 1996; Mayo & Tinsley, 2008; Anik, Aknin, Norton, & Dunn, 2009; Oppenheimer & Olivola, 2011; Aknin et al., 2013). Researchers have also demonstrated the benefits which the donors derive as a result of their charitable giving (Andreoni, 1989, 1990; Glazer & Konrad, 1996; Griskevicius et al., 2007; Dunn, Aknin, & Norton, 2008; Strahilevitz, 2011). Moreover, the role which emotions play when a person is asked to donate has also been studied by Batson (1990); Dickert, Sagara and Slovic (2011); and Small (2011). However, we have yet to answer the fundamental question of under what conditions would a donor change their charitable mental account from one charity to another.

### **Word of Mouth**

Social media are all primarily about user-generated content (Pitt, 2012; Plangger, 2012). This user-generated content or electronic Word-of-Mouth (eWOM) is a social phenomenon and includes any statements consumers share via the internet, such as instant messages, reviews, posts, etc., about a product, person, or brand which also helps to shape other peoples’ perceptions (Koetzmam & Canhoto, 2013).

People share word-of-mouth because it makes them feel good about themselves, and it boosts their self-esteem (Packard & Wooten, 2012; Wojnicki & Godes, 2008). Berger and

Schwartz (2011) opine that sharing exciting material should make someone look better than sharing mundane or less exciting things.

### Social Media

The term “Social Media,” gained prominence in the early 2000s as the availability of high speed internet access provided access to fast user-friendly networking sites, where users could communicate with each other. The first social media site, Six Degrees, was launched in 1997. It was followed quickly by other sites, including Friendster (2002), LinkedIn (2003), Facebook (2003), Flickr (2004), Twitter (2006), etc. (Haenlein & Kaplan, 2009). The underlying platform for social media communications are computers, smartphones, and tablets, which are used to access these increasingly interactive social networking sites.

The growth of social media has had a profound effect on how marketers communicate with their customers. So, marketers must learn the tools of social media to communicate with and promote their businesses (Mangold & Faulds, 2009). Social media provides a new medium for brand marketing and consumers are sharing the marketers’ content. Chi (2011) suggests that marketers should try to regain control of their content. Leskovec, Adamic and Huberman (2007) suggest that viral marketing can be considered as the “diffusion of information about the product” and its “adoption over the network.” Therefore, marketers should create viral marketing campaigns so that they can capitalize on this new medium.

The explosive growth of social media has provided consumers with a useful new venue for sharing their eWoM. Allsop, Bassett, and Hoskins (2007) suggest that 59% of people regularly share content with their social network. Harris (2010) suggests that someone shares a *New York Times* article “once every four seconds.” Consumers often share content to create an expression of themselves, in the minds of others (Wojnicki & Godes, 2010). People also share positive information because it reflects positively on the sender (Berger & Schwartz, 2011). At the same time, consumers often rely on this eWoM for purchase guidance.

Consumers have become increasingly leery of traditional forms of advertising and marketing, and with the increased social media usage consumers are relying on each other to get unfettered independent truth about products and services via online reviews. The primary reason is that complete strangers would have no reason to lie to us, and therefore they provide a more reliable source of information, opposed to the advertiser (Rusticus, 2006; Edelman, 2008). Researchers have posited that consumers are looking for advice from their social networks when making a purchasing decision (Hill, Provost, & Volinsky, 2006; Iyengar, Van den Bulte, & Valente, 2011; Schmitt, Skiera, & Van den Bulte, 2011).

Taken together, this literature suggests that consumers are strongly influenced by their friends WOM when making a purchasing decision and are strongly influenced by the eWOM they receive through social media. Given that Mental Accounting reflects a form of consumer decision making, then it follows that:

*P1: As compared to WOM, eWOM will increase the likelihood of change in charitable giving allocations.*

## Millennials and Charitable Giving

One segment of particular interest to charitable organizations is millennials. Millennials are one of the largest age groups in the USA (US Census Bureau, 2015) and are rapidly moving into the stages of their life cycles when they will have the means to be significant donors. Millennials are already demonstrating a strong tendency to support charities. According to Blackbaud's *Next Generation of American Giving Report* (2013), millennials donate approximately \$481 per person annually. Millennials “prefer donating to children's charities more than any other cause, followed by places of worship and health-related causes.” Fine (2008) suggests that Millennials are immersed in the causes that they believe in and want to make a difference in the world.

An interesting dimension of millennials is their use of technology for learning about charities and making donations. Millennials were raised with a smartphone or tablet always in their hands; they are always connected. Millennials are technically savvy; using their wireless devices to connect to the internet and socialize is second nature to them (Pew Research Center, 2010). This technology is affecting many aspects of their lives, including their charitable activities. According to the Blackbaud report (2013), 62 percent of the Millennials surveyed said they donate through mobile platforms and learn about charities from their peers.

Millennials can also be influenced by their friends to donate to a cause based on its social media influence, like 2014's ALS Ice Bucket Challenge. The Millennial Impact Report (2014) suggests that “No one intended to give to ALS last year,” but millennials were influenced by their friend’s behavior.

Consequently, it is very important to better understand the change in behavior in this very important demographic. Thus, if millennials have a mental account for their charitable giving, and that mental account can be influenced by their friends’ word of mouth (WOM), As the WOM influence from a millennial’s social media network increases, the probability of a change to their charitable giving mental account also increases. Then, it follows that:

*P2: For Millennials, an increase in social media exposure leads to an increase in WOM type.*

## Empathy

When it comes to the topic of empathy, the universal consensus among researchers (Davis, 1983; Dovidio, 1991; Levenson & Ruef, 1992; Aronson, 1995; Batson et al., 2015) is that empathy is knowing how another person feels, sharing those feelings, and reacting with compassion. The empathy-altruism hypothesis posits that the empathic concern or “the perceived welfare of someone in need produces altruistic motivation” (Batson et al., 2015). Dovidio (1991) agrees with these findings and suggests that when we observe others struggling, this activates an emotional awakening in us, and this leads to altruistic motivation. Davis (1983) suggests that empathy is “the reactions of one individual to the observed experiences of another.” Aronson (1995) suggests that empathy is a person’s ability to experience the pain that another is feeling.

An example of this may have been the ALS Ice Bucket Challenge. While it is impossible to duplicate the feelings of an ALS sufferer, one can for an ephemeral moment, experience their suffering by the simple act of pouring a bucket of iced water over your head. The effect of the ice-

cold water shocks your body, and momentarily you experience what it feels like to lose all control of your muscles. Lonnqvist, Walkowitz, Verkasalo, and Wichardt (2011) research supports these findings and they concluded that empathy “is foundational for moral development and decision-making, both on an individual and a social level.” This was quite evident in the Ice Bucket Challenge, as individuals who may not have known anyone afflicted with ALS (Amyotrophic lateral sclerosis) still supported this endeavor.

Baron-Cohen (2011) suggests that “Empathy occurs when we suspend our single-minded focus of attention, and instead adopt a double-minded focus of attention.” Which means that when we are “single-minded” focused, we are only thinking about ourselves. However, when we are “double-minded” focused, we are thinking about others in addition to ourselves. Maner, Luce, Neuberg, Cialdini, Brown, and Sagarin (2002) agree that this empathy leads us to help others. Batson, O’Quinn, Fultz, Vanderplas, and Isen (1983) suggest that our ability to internalize our own suffering helps us to understand the suffering in another person, and this empathic concern leads to altruism,

Ultimately, empathic concern leads to an altruism that is selfless and focused more on reducing the distress of others than on reducing one’s own distress. Thus, if empathy increases altruism, and altruism can be reflected in one individual’s tendency to help another, then it follows that:

*P3: As empathy for people affected by a specific cause increases, the impact of cause-related WOM type on a donor’s charitable giving allocations also increases.*

### **Celebrities’ Endorsement**

A celebrity is a well-known personality such as actor, entertainer or athlete who is very recognizable for his or her success (Stella & Yip, 2009). These celebrities are attractive to marketers because of their huge following. Since marketers use many forms of advertising to target their intended market, with the mass appeal of social media, marketers are turning to celebrities to endorse their products. These celebrities use their fame and social status to promote a marketer’s product offerings. Celebrity endorsers are primarily used so that their positive image will be reflected on the brand they are representing (Lee & Thorson, 2008).

Celebrity endorsements are commonly used in social media marketing for several reasons: 1) celebrity endorsers who have large following can easily draw attention to the marketer’s advertising campaign (Keel & Natarajan, 2012), and 2) celebrities can be used to help shape a brand, including the image of the company (Abdussalam, 2014).

Several studies suggest a celebrity’s followers can be influenced by that celebrity (Lindenberg, Joly and Stapel, 2011). Celebrity followers will be more open to a celebrity’s endorsement because of the celebrity’s “recognition, prowess and credibility” (Abdussalam, 2014).

Some celebrities have a huge following of their social media persona, which can be a gateway for marketing or charitable opportunities. Singer Selena Gomez has 200 million followers between her Facebook, Twitter, and Instagram accounts. In China, where the Chinese government have blocked social media websites (Facebook, Twitter, Instagram, Snapchat and many others), Yao Chen, a Chinese actress has more than 79 million followers on Weibo—the Chinese social

media platform. Justin Bieber has more than 167 million followers across the various social media sites. Consequently, just these ten celebrities account for more than 500 million Twitter followers. So, when these celebrities share something on Twitter, it could reach their collective 500 million fans, who in turn may then share that information on their social media platform, which will then be seen by millions of their friends. Subsequently, if celebrities discuss a brand or deliver a message through social media, it could be seen by millions of people (Jin & Phua, 2014).

Thus, celebrity endorsements have the potential to gain recognition in social media, to be disseminated rapidly through the celebrities' own contacts, and to then be shared by their followers.

*P4: As celebrity endorsements for a given cause increases, the impact of cause-related WOM type on a potential donor's charitable giving allocations also increases.*

### **Bandwagon Effect**

The bandwagon effect is a psychological phenomenon in which people follow the actions (i.e., trends, fashion,) of others just because many other people are doing it. As the amount of people increases, others begin to "hop on the bandwagon" (Colman, 2003).

In communications and advertising the "bandwagon" psychology, is a type of consumer craze where consumers desire to get on the bandwagon (Cohan, 2001). Spurgin (2003), Maury, and Kleiner (2002) show that Internet access has enhanced the singularity of bandwagon effects and consumer crazes or social contagion towards specific products, or celebrities. Several researchers (McAllister & Studlar, 1991; Nadeau et al., 1994; Mehrabian, 1998) have done extensive studies on bandwagon effects, while several others have also investigated the properties of the bandwagon effect on political elections (Hodgson & Maloney, 2013) and the ratings of foreign films (Adilov & Martin, 2014; Xu & F, 2014).

The impact of marketing and advertising on consumer choice and the ethical issues surrounding the loss of consumer autonomy are tied to the indecisiveness that helps to create consumer trends and social contagion (Smith, 2001; Gaski, 2001). This younger generation is experiencing a combination of consumer crazes and bandwagon effects (Cohan, 2001).

The omnipresence of internet access and smartphones has created a culture that is more apt to share information, pictures, and stories with a push of a button. We follow a celebrity's every word on social media because we ourselves have become fixated with fame and celebrity.

This has interesting implications for viral marketing. It suggests that there may be a point at which the cascading dissemination of information may pass a tipping point and may continue to expand simply due to its own momentum and sheer volume of mentions and likes.

*P5: As the bandwagon effect of a charitable cause increases, the impact of cause-related WOM type on a potential donor's charitable giving allocations also increases.*

## **THEORETICAL IMPLICATIONS**

On the theoretical side, our paper would add to the existing charitable giving literature which concludes that a donor would donate to a charity which they have a strong connection with,

several researchers (Burnett & Wood; 1988, Guy & Patton; 1989, Bendapudi et al. 1996 and Fine; 2008) have concluded that donors support charitable causes because they have a personal relationship with that specific cause.

However, as we have shown, our paper would add to the literature in the following ways; First, our research suggests that donors can be persuaded to change their mental accounting, and with the increased social media usage consumers are relying on each other to get the independent unfettered truth about products and services via online reviews. The primary reason is that complete strangers will have no reason to lie to us, and therefore they provide a more reliable source of information, opposed to the advertiser (Rusticus; 2006, Edelman; 2008). Researchers have posited that consumers looking for advice from their social networks when making a purchasing decision (Hill, Provost, & Volinsky; 2006, Iyengar, Van den Bulte, & Valente; 2011, Schmitt, Skiera, & Van den Bulte; 2011). Taken together, this literature suggests that consumers are strongly influenced by their friends WOM when making a purchasing decision and are strongly influenced by the eWOM they receive through social media. Given that Mental Accounting reflects a form of consumer decision making, then it follows that: donors could be more likely be influenced to change their charitable giving based on their friends' WOM.

And secondly, our research also suggest that donors can be persuaded to donate to a different charity with which they have no previous connection. Millennials can be influenced by their friends to donate on a cause based on its social media influence, like 2014's ALS Ice Bucket Challenge. The Millennial Impact Report (2014) suggests that "No one intended to give to ALS last year," but millennials were influenced by their friend's behavior.

While many researchers have covered both mental accounting and charitable giving, no one has yet uncovered if our mental accounting could be changed with respects to our charitable giving. And, the further development of the conceptual ideas, which could add to both the charitable giving and the mental accounting literature is celebrity endorsements and the impact of which celebrities have on charitable donors. It is reasonable to assume that celebrities have a significant impact on their follows decision making based on the results of several social media events; The Ice Bucket Challenge (\$100M donated for ALS) Movember (\$730M donated for men's health programs), #BlackLivesMatter, #ParisAttacks, #BendTheKnee, Harlem Shake (1.2 Billion views), etc.

## **MANAGERIAL IMPLICATIONS**

Millennials are the fastest growing segment of the population and they are also the fastest growing population of charitable donors. Consequently, millennials can have a significant impact on any organization's charitable giving campaign. So, it's important to understand our millennial donor's values and how you can deliver that to them.

Millennials are also the biggest users of social media and a very competent with wireless devices, which make charitable giving much easier and more convenient. Our research suggests that millennials are inspired to give spontaneously, but can they be educated to give methodically? When these factors are combined and the fact that millennials are easily influenced by their friends to give to a cause that has social media momentum, like 2014's ALS Ice Bucket Challenge. The

Millennial Impact Report (2014) suggests that "No one intended to give to ALS last year," but millennials were influenced by their friend's behavior.

### **LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

Future research should examine the conceptual framework for charitable giving which we proposed. Our study is explanatory and as such is limited and would require further quantitative research in the field to validate our model, to accomplish this we would conduct a rigorous empirical analysis of our model.

This explanatory study has laid the groundwork for future studies which give us the opportunity to improve and validate some of the propositions which were developed by our paper. First, we would investigate if there are two separate mental accounts for charitable give; one for standard or customary charitable giving and a second for catastrophic occurrences, like hurricanes, ALS, earthquakes.

Second, we would study both the positive and the negative effects of celebrity endorsements. The literature suggests that celebrities' endorsements have a positive impact on a product or cause, in this #MeToo era would a negative attention have the opposite effect? And finally, we would like to further develop our proposition that millennials are influenced to donate to charitable causes based on their friends' charitable giving. Further research could elaborate on this phenomenon, providing valuable information to charitable organizations.

### **CONCLUSIONS**

The initially stated primary aim of this research was to identify the contextual factors and mechanisms that could change a donor's charitable mental account. While recognizing the limitations of our study, the primary goal of our paper was to set out a conceptual framework. It is also based on the assumption that with rigorous empirical testing we would validate our conceptual model. In this article, we have identified several factors which can have an impact, and also influence a donor's mental accounting with respects to their charitable giving allocations. This research has both practical and theoretical implications. On the practical side, research has shown that people give to charities because they are passionate about a cause, with over 1.2 million charities, and limited funds available for charitable donations, it is important to discover why a person would give to a charity which they have little or no affiliation with.

The purpose of this paper was to identify and explore the factors which can influence a donor's mental accounting, with respects to their charitable giving. The factors identified; millennials, virality, celebrity endorsements, exclusivity and bandwagon effect all play a part in influencing our mental accounting and these influences needs to be investigated through rigorous empirical field analysis and testing.

### **REFERENCES**

Abdussalam, P.K. (2014). Celebrity advertisement: Key to marketing success. *Indian Journal of Commerce and Management Studies*, 5(1), 78-82.

- Adilov, N., and Martin, H. J. (2014). How Media Coverage Affects Employer Reputation, How Negative Cover Stories Increase Magazine Sales, and How Bandwagon Effects Drive Audience Selection of Foreign Movies. *Journal of Media Economics*, 27(4), 177-180. doi:10.1080/08997764.2014.969065
- Allsop, Dee T., Bryce R. Bassett, and James A. Hoskins (2007), "Word-of-Mouth Research: Principles and Applications," *Journal of Advertising Research*, 47 (4), 388-411.
- Alpizar, Carlsson, and Johansson-Stenman. (2008) "Anonymity, reciprocity, and conformity: Evidence from voluntary contributions to a national park in Costa Rica." *Journal of Public Economics* 92.5 (2008): 1047-1060.
- Andreoni, James, and B. Douglas Bernheim. 2009 "Social image and the 50-50 norm: A theoretical and experimental analysis of audience effects. *Econometrica* 77.5(2009): 1607-1636.
- Andreoni, James, and Ragan Petrie. 2004 "Public goods experiments without confidentiality: a glimpse into fund-raising." *Journal of Public Economics* 88.7 (2004): 1605-1623.
- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *The Economic Journal*, 100, 464-477.
- Ariely, D. Anat B. and Meier. "Doing good or doing well? Image motivation and monetary incentives in behaving pro socially." *American Economic Review* (2009): 544-555.
- Bandura, A. (2001), "Social Cognitive Theory: An Agentic Perspective," *Annual Review of Psychology*, 52, 1-26
- Batson, C. D. (1990). How social an animal? The human capacity for caring. *American Psychologist*, 45, 336-346.
- Batson, C. D., Dyck, J. L., Brandt, J. R., Batson, J. G., Powell, A. L., McMaster, M. R., and Griffitt, C. (1988). Five studies testing two new egoistic alternatives to the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, 55, 52-77. doi:10.1037/0022-3514.55.1.52
- Bendapudi, N., Singh, S. N., and Bendapudi, V. (1996). Enhancing helping behavior: An integrative framework for promotion planning. *Journal of Marketing*
- Berlyne, D. E. (1960), *Conflict, Arousal, and Curiosity*, New York: McGraw-Hill.
- Berger Jonah, Raghuram Iyengar (2013), *Communication Channels and Word of Mouth: How the Medium Shapes the Message*, *Journal of Consumer Research*
- Berger, Jonah and Katy Milkman (2011), "Social Transmission, Emotion, and the Virality of Online Content," (Accessed August 21, 2016) [Available at <http://marketing.whartonpenn.edu/documents/research/Virality.pdf>]
- Berger Jonah, and Eric M. Schwartz (2011), "What Drives Immediate and Ongoing Word of Mouth?" *Journal of Marketing Research*, 48 (5), 869-80.
- Broberg, T, T Ellingsen, and M Johannesson, (2007). "Is generosity involuntary?" *Economics Letters* 94.1 (2007): 32-37.
- Buhrmester, M., Kwang, T., and Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high quality, data? *Perspectives on Psychological Science*, 6, 3-5. doi:10.1177/1745691610393980
- Buttle, Francis A. (1998). "Word of Mouth: Understanding and Managing Referral Marketing," *Journal of Strategic Marketing*, 6, 241-254.
- Bureau, US Census. "Millennials Outnumber Baby Boomers and Are Far More Diverse." *The United States Census Bureau*, 25 June 2015, [www.census.gov/newsroom/press-releases/2015/cb15-113.html](http://www.census.gov/newsroom/press-releases/2015/cb15-113.html).
- Ceci, S. J., and Kain, E. L. (1982). Jumping on the bandwagon with the underdog: the impact of attitude polls on polling behaviour. *Public Opinion Quarterly*, 46(2), 228-242.
- Chen, Y, F. M Harper, J Konstan, and S Xin Li. (2010) "Social comparisons and contributions to online communities: A field experiment on movie lens." *American Economic Review* (2010): 1358-1398.
- Chi, (2011). "Interactive Digital Advertising VS. Virtual Brand Community: Exploratory Study of User Motivation and Social Media Marketing Responses in Taiwan." *Journal of Interactive Advertising* 12: 44-61.
- Colman, A (2003). *Oxford Dictionary of Psychology*. New York: Oxford University Press. p. 77. ISBN 0-19-280632-7.
- Cohan, J.: 2001, 'Towards a New Paradigm in the Ethics of Women's Advertising', *Journal of Business Ethics* 33(2), 323-337. doi:10.1023/A:1011862332426.
- Dana, J, D M. Cain, and R M. Dawes. (2006) "What you don't know won't hurt me: Costly (but quiet) exit in dictator games." *Organizational Behavior and Human Decision Processes* 100.2 (2006): 193-201.

- Danaher, P., Rust, R. (1996). Indirect Financial Benefits from Service Quality, *Quality Management Journal*, 3 (2), 63-75.
- Dickert, S., Sagara, N., and Slovic, P. (2011). Affective motivations to help others: A two-stage model of donation decisions. In D. M. Oppenheimer and C. Y. Olivola (Eds.), *The science of giving: Experimental approaches to the study of charity*. New York, NY: Psy Press.
- Dietz, R., and Keller, B. (2016). *Donor loyalty study*. Austin: Abila.
- Dovidio, J. F. (1991). The empathy-altruism hypothesis: Paradigm and promise. *Psychological Inquiry*, 2, 126–128. doi:10.1207/s15327965pli0202\_4
- Dunn, E. W., Aknin, L. B., and Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, 319, 1687–1688.
- Edelman. “Edelman Trust Barometer.” <http://www.edelman.com>
- Fine, (2008). It's time to focus on a new generation. *Chronicle of Philanthropy* 20 (21): 22-22.
- Fleitas, D.W. (1971). Bandwagon and underdog effects in minimal-information elections. *American Political Science Review*, 65(2), 434–438.
- Fong, C M., and Erzo FP Luttmer. (2009) “What determines giving to Hurricane Katrina victims? Experimental evidence on racial group loyalty.” *American Economic Journal: Applied Economics* 1.2 (2009): 64.
- Gaski, J.: 2001, ‘Normative Marketing Ethics Redux, Incorporating a Reply to Smith’, *Journal of Business Ethics* 32(1), 19–34. doi:10.1023/A:1010652607368.
- Giusti, K (2014). The Real Ice Bucket Challenge. <http://time.com/3204261/the-real-ice-bucket-challenge/> accessed August 22, 2016
- Glazer, A., and Konrad, K. K. (1996). A signaling explanation for charity. *The American Economic Review*, 86, 1019–1028
- Goldstein, D., and Lee, Y. (2005). The rise of right-time marketing. *Journal of Database Marketing and Customer Strategy Management*, 12(3), 212-225.
- Goot, M. (2009). Underdogs, bandwagons or incumbency? Party support at the beginning and end of Australian election campaigns, 1983–2007. *Australian Cultural History*
- Griskevicius, V., Tybur, J. M., Sundie, J. M., Cialdini, R. B., Miller, G. F., and Kenrick, D. T. (2007). Blatant benevolence and conspicuous consumption: When romantic motives elicit strategic costly signals. *Journal of Personality and Social Psychology*, 93, 85–102.
- Harris, Jacob (2010), “How Often Is the Times Tweeted,” *New York Times Open Blog*, (April 15), [available at <http://open.blogs.nytimes.com/2010/04/15/how-often-is-the-times-tweeted/>].
- Haenlein, M., and Kaplan, A. M. (2009) Users of the world, unite! The challenges and opportunities of Social Media, *Business Horizons* Volume 53, Issue 1, January–February 2010, Pages 59–68
- Haley, R. I. and P. B. Case (1979), "Testing Thirteen Attitude Scales for Agreement and Brand Discrimination *Journal of Marketing*, 43, 20-32.
- Heath, C., and Soll, J. (1996). Mental Budgeting and Consumer Decisions. *Journal of Consumer Research*, 23(1), 40-52. Retrieved from <http://www.jstor.org/stable/2489664>
- Hill, Provost, and Volinsky. (2006) “Network-Based Marketing: Identifying Likely Adopters via Consumer networks,” *Institute of Mathematical Statistics*, 2006, Vol. 21, 256-276
- Hinz, Oliver, Skiera, Bernd, Barrot, Christian and Becker, Jan U., Seeding Strategies for Viral Marketing: An Empirical Comparison (November 2011). *Journal of Marketing* 55-71.
- Kerby, J. (2016) “Here’s How Many People Are on Facebook, Instagram, Twitter and Other Big Social Networks” <http://www.adweek.com/socialtimes/heres-how-many-people-are-on-facebook-instagram-twitter-other-big-social-networks/637205>. April 4, 2016
- Iyengar, Raghuram, Christophe Van den Bulte and Thomas W. Valente (2011), “Opinion Leadership and Social Contagion in New Product Diffusion,” *Marketing Science* 30 (2),
- Jin, S., and Phua, J. (2014). Following celebrities’ tweets about brands: The impact of twitter-based electronic word-of-mouth on consumers’ source credibility perception, buying intention, and social identification with celebrities. *Journal of Advertising*, 43(2), 181-195. doi:10.1080/00913367.2013.827606
- Keel, A., and Natarajan, R. (2012). Celebrity endorsements and beyond: New avenues for celebrity branding. *Psychology and Marketing*, 29(9), 690-703. doi:10.1002/mar.20555

- Keller, E. 2012. "Social Media is Word of Mouth on Steroids, or is It? Part II." March 14. [http:// www.kellerfay.com/insights/social-media-is-word-of-mouth-on-steroids-or-is-it-part-ii/](http://www.kellerfay.com/insights/social-media-is-word-of-mouth-on-steroids-or-is-it-part-ii/)
- Kempe, Kleinberg and Tardos, 2003. Maximizing the Spread of Influence through a Social Network, ACM New York, NY 2003
- Kietzmann, J.H., Canhoto, A. (2013). "Bittersweet! Understanding and Managing Electronic Word of Mouth." *Journal of Public Affairs*. 13 (2): 146–159.doi:10.1002/pa.1470.
- LaBarge, M. C., and Stinson, J. L. (2014). The role of mental budgeting in philanthropic decision-making. *Nonprofit and Voluntary Sector Quarterly*, 43, 993–1013.
- Landry, Lange, List, Price, and Rupp (2006) "Toward an Understanding of the Economics of Charity: Evidence from a Field Experiment." *Quarterly Journal of Economics* (2006) 121 (2): 747-782.
- Lee, J., Thorson, E. (2008). "The impact of celebrity-product incongruence on the effectiveness of product endorsement." *Journal of Advertising Research*. vol. 48 no. 3 433-449 <https://doi.org/10.2501/S0021849908080446>
- Leskovec, Adamic and Huberman, 2008. The Dynamics of Viral Marketing, *ACM Transactions on the Web*, 1, 1 (May 2007) Article 5 (May 2007), 39 pages. DOI 10.1145/1232722.1232727
- Lindenberg, S., Joly, J. F., and Stapel, D. A. (2011). The norm-activating power of celebrity: The dynamics of success and influence. *Social Psychology Quarterly*, 74(1), 98-120.
- Loewenstein, Thompson, and Bazerman 1989. Social Utility and Decision Making in Interpersonal Contexts, *Journal of Personality and Social Psychology*, 1989, Vol. 57, No. 3, 426-441
- Mangold, and Faulds. 2009. "Social Media: The New Hybrid Element of the Promotion Mix." *Business Horizons* 52: 357-365.
- Margolis, (1984). *Selfishness, altruism, and rationality*. Chicago, IL: University of Chicago Press.
- McAllister, I., and Studlar, D. T. (1991). Bandwagon, underdog, or projection? Opinion polls and electoral choice in Britain, 1979–1987. *The Journal of Politics*, 53(3), 720–741.
- Meer, Jonathan. (2011) "Brother, can you spare a dime? Peer pressure in charitable solicitation." *Journal of Public Economics* 95.7 (2011): 926-941.
- Meer, J, and H S. Rosen. (2011) "The ABCs of charitable solicitation." *Journal of Public Economics* 95.5 (2011): 363-371.
- Mehrabian, A. (1998). Effects of poll reports on voter preferences. *Journal of Applied Social Psychology*, 28(1), 119–130.
- Nadeau, R., Niemi, R. G., and Amato, T. (1994). Expectations and preferences in British general elections. *American Political Science Review*, 88(2), 371–383.
- Nelson-Field, K., and J. Taylor. 2012. "Facebook Fans: A Fan for Life?" Ehrenberg-Bass Institute for Marketing Science. <http://www.warc.com>
- Oppenheimer, D. M., and Olivola, C. Y. (Eds.). (2011). *The science of giving: Experimental approaches to the study of charity*. New York, NY: Psychology Press.
- Packard, and Wooten (2012), "Compensatory Communication: Knowledge Discrepancies and knowledge Signaling in Word of Mouth Communications," University of Michigan Working Paper
- Reyniers, D, and R Bhalla. (2013) "Reluctant altruism and peer pressure in charitable giving." *Judgment and Decision Making* 8.1(2013): 7-15.
- Rusticus, S. 2006. "Creating Brand Advocates." In *Connected Marketing: The Viral, Buzz and Word of Mouth Revolution*, edited by J. Kirby, and P. Marsden, 47–58. Oxford: Butterworth Heinemann.
- Scharf, and Smith. (2014). "Relational Warm Glow and Giving in Social Groups." Working paper, University of Warwick (2014).
- Schmitt, Skiera, and Van den Bulte (2011), "Referral Programs and Customer Value," *Journal of Marketing*, 75 (January), 46-59.
- Shah and Oppenheimer (2008) Heuristics Made Easy: An Effort-Reduction Framework, *Psychological Bulletin*, Vol 134(2), Mar 2008, 207-222
- Southgate, Westoby and Page (2010). Creative determinants of viral video viewing. *International Journal of Advertising*, 29(3), pp. 349-368

- Silverman, G. 2001. *The Secrets of Word-of-Mouth Marketing: How to Trigger Exponential Sales Through Runaway Word of Mouth*. New York: AMACOM.
- Silvia, (2006), *Exploring the Psychology of Interest*, New York: Oxford University Press.
- Silvia, (2008), "Interest—the Curious Emotion," *Psychological Science*, 17 (1), 57–60.
- Small, D. (2011). Sympathy biases and sympathetic appeals: Reducing social distance to boost charitable contributions. In D. M. Oppenheimer and C. Y. Olivola (Eds.), *The science of giving: Experimental approaches to the study of charity*. New York, NY: Psychology Press.
- Smith, C. (2001). 'Ethical Guidelines for Marketing Practice', *Journal of Business Ethics* 32(2), 3–18. doi:10.1023/A:1010685524206.
- Spurgin, E. (2003). 'What's Wrong with Computer Generated Images of Perfection in Advertising', *Journal of Business Ethics* 45(3), 257–268. doi:10.1023/A:1024155629554.
- Stella, C. C., and Yip, L. P. (2009). Media, celebrities, and fans: An examination of adolescents' media usage and involvement with entertainment celebrities. *Journalism and Mass Communication Quarterly*, 86(1), 23-44.
- Strahilevitz, M. A. (2011). A model of the value of giving to others compared to the value of having more for oneself: Implications for fundraisers seeking to maximize donor satisfaction. In D. M. Oppenheimer and C. Y. Olivola (Eds.), *The science of giving: Experimental approaches to the study of charity* (pp. 15–34).
- Strang and Soule (1998). Diffusion in organizations and social movements: From Hybrid Corn to Poison Pills. *Annul. Rev. Social.* 1998. 24:265–90
- Thaler, (1985). Mental accounting and consumer choice. *Marketing Science*, 27, 15–25
- Thaler, (1999). "Mental Accounting Matters." *Journal of Behavioral Decision Making* 12 pp. 183–206.
- Trusov, Bodapati, Bucklin (2010). Determining Influential Users in Internet Social Networks. *Journal of Marketing Research*: August 2010, Vol. 47, No. 4, pp. 643–658.
- Van den Bulte and Joshi (2007), "New Product Diffusion with Influentials and Imitators," *Marketing Science*, 26 (3), 400–421
- Wetpaint/Altimeter Group. 2009. "The World's Most Valuable Brands: Who's Most Engaged?" <http://www.slideshare.net/charleneli/engagmentdb-report-july-2009>
- Wilson, W. R., and R. A. Peterson. 1989. Some limits on the potency of word-of-mouth information. *Advances in Consumer Research* 16 (1): 23–29
- Wojnicki, and Godes, (2008). Word-of-Mouth as Self-Enhancement. HBS Marketing Research Paper No. 06-01. Available at SSRN: <https://ssrn.com/abstract=908999>
- Xu, X., and Fu, W. W. (2014). Aggregate Bandwagon Effects of Popularity Information on Audiences' Movie Selections. *Journal of Media Economics*, 27(4), 215-233. doi:10.1080/08997764.2014.963229

# **RADICAL INNOVATION, AGENCY COSTS AND THE SMALL FIRM ADVANTAGE**

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## **ABSTRACT**

*Despite a number of disadvantages, small firms have been found to be effective developers of product innovations, including at times, radical innovations. This paper proposes an agency theory explanation for this phenomenon, arguing that small firms have lower agency costs in the new product development process when radical innovations are being developed. When a firm develops a radical innovation, the ability to monitor employees during the process may be limited, as will the cost effectiveness of monitoring. Similarly, it is proposed that performance metrics are likely to be imprecise and the firm will be inaccurate in providing rewards to employees. While this is arguably true regardless of firm size, it is also proposed that these monitoring difficulties will be more pronounced in large firms compared to smaller firms.*

## **INTRODUCTION**

Researchers have found that smaller firms are quite innovative, successfully developing and commercializing new products and technologies (Acs, & Audretsch, 1988; De Massis et al., 2015; Shah & Tripsas, 2007), with many world-changing radical innovations being developed by small firms (Battelle, 2005; Young & Simon, 2005). Although this pattern has been observed, this may be somewhat counterintuitive, since large firms have several advantages in developing new innovations. Large firms can gain economies of scale (Hambrick et al., 1982) and have the resources to gain a large market share, which has been associated with higher performance (Buzzell & Gale, 1987). Larger firms have the ability to marshal needed resources in a timely manner, since they often have the needed skills and abilities inside the firm or have capital to purchase them from external sources (Chen & Hambrick, 1995). Furthermore, large firms have more products in which findings from research and development can be applied, making research and development output more valuable to large firms (Cohen & Klepper, 1993). However, smaller firms do have several advantages over large firms, including a lack of inertia that can slow down the actions of large firms (Hannan & Freeman, 1984), and the ability to apply effectuation to the new product development process (Berends et al., 2014).

This paper takes an agency theory perspective, and develops a theoretical model proposing that the development of radical innovations is likely to lead to high agency costs within a firm. As the radicalness of an innovation increases, the ability of firms to monitor employees, the cost effectiveness of monitoring, the precision of performance metrics, and the accuracy of rewards are likely to decrease. While this is likely true regardless of firm size, the paper also proposes that the radicalness of the innovation being developed will lead to more monitoring difficulties in large firms compared to smaller ones. The presence of high agency costs may essentially serve as a theory of the firm, answering the question of why many small firms may exist instead of one large one. While high transaction costs have often been viewed as a reason that firms integrate (Williamson, 1975), high agency costs may serve as a theoretical reason for why small firms exist, and can be effective innovators in some contexts. Future

empirical research could test the validity of the proposed theoretical model and offer possible clarifications and extensions.

From a practical standpoint, if lower agency costs are a part of why smaller firms are successful in the development of radical innovations, large firms may need to think about how they can reduce their agency costs to be more comparable to small firms. In fact, some common strategies in developing new innovations, like the use of skunk works projects, may serve to better align the behavior of employees involved in the new product development (NPD) process with that of owners. It is important to note that although the theoretical model developed in this paper provides an explanation to why small firms may face lower agency costs when developing radical innovations, it does not imply that small firms are better overall at developing radical innovations. Much evidence suggest that large firms are quite competent at developing such innovations (Ahuja & Morris Lampert, 2001), and likely have certain advantages over smaller firms (Chen & Hambrick, 1995).

This paper proceeds as follows. First, the research regarding technological development and commercialization in small and large firms is examined. Secondly, the monitoring problem that arises in the NPD process for radical innovations is examined, as well as how this problem leads to difficulty in finding metrics and measuring performance accurately. Also, the role of signaling is discussed, and how high quality employees involved in the NPD process are unlikely to be able to use signals effectively. Propositions are developed for how the development of radical innovations in a firm increases agency costs. Next, it is discussed why the problem of effectively monitoring the NPD process for radical innovations may be less challenging for smaller firms. Finally, the implications are discussed and directions for future research are suggested.

## **INNOVATION AND NEW PRODUCT DEVELOPMENT**

Firms of all sizes have been successful at developing and commercializing innovations; however, the ability of small firms to engage in this task has been most surprising. Many exemplars of small firms can be seen that were particularly successful in commercializing innovations of a radical nature. For example, Google was originally started in 1996 by Larry Page and Sergey Brin while they were doctoral students at Stanford, making use of the school's computer system to run their software. Over two decades later, Google not only dominates with its search engine technology, but has expanded into related domains such as self-driving cars (Birdsall, 2014). Likewise, Apple was founded in a garage by Steve Jobs and Steve Wozniak in 1976, and is known for its successful commercialization of the personal computer (Young & Simon, 2005). While many large firms failed to be successful in this market, Apple was able to become a commanding player despite its humble beginnings. Although both Google and Apple ultimately became very large, this growth was a function of their success, and they both started out as very small operations. Furthermore, more rigorous research has supported the anecdotal evidence that small firms are effective at developing and commercializing technological innovations (Audretsch, 2002; Brouwer & Kleinknecht, 1995; Link & Bozeman, 1991).

Some research has even suggested that small firms are more innovative than their larger counterparts. Wagner and Hansen (2005) looked at the wood products industry in the United States, and found that although large firms tended to outperform smaller firms when it came to process innovations, smaller firms tended to be more innovative when it came to product and business innovations. Likewise, Audretsch (2002) found that smaller firms were more innovative

and had a faster growth rate, when measured by new employees, than large firms. Furthermore, large firms have often been noted for their difficulty in developing innovations, and therefore often obtain technology from other channels (Brockhoff, 1998). The ability of small, often new firms to commercialize technology successfully is the cause of what Schumpeter (1942) terms creative destruction. As small, new firms introduce revolutionary technology to the marketplace, they drastically change the shape of the industry that they enter, displacing large incumbent firms and making themselves dominant players in the industry. Anecdotal firms such as Amazon, Apple, Google, and Netflix are firms that seem to have been effective at creative destruction, starting when they were quite small firms. Some empirical research has supported the idea of creative destruction, demonstrated by the fact that there is a substantial change in the firms making up the Fortune 500 over time (Kirchhoff, 1989; Perry, 2015).

Nevertheless, some of the research concerning the innovativeness of large and small firms has been more nuanced. Large firms have been found to be more innovative in capital-intensive industries that are highly unionized, while small firms have been found to be more innovative in industries that are very innovative and that use a significant amount of highly skilled labor (Acs & Audretsch, 1987). Findings that show large firms more innovative when large amounts of capital are required makes sense, because they are likely to be able to obtain needed resources more quickly, and are sometimes able to share needed assets among many different product lines, generating economies of scope (Panzar & Willig, 1981; Teece, 1997) that are not available to smaller, single-product firms. Even Schumpeter (1942) who popularized the phrase “creative destruction” argued that large firms would eventually come to dominate the new product development and commercialization processes. As this occurred, there would simply be no room left for the small new firm as an effective introducer of new technologies to the marketplace. However, Schumpeter’s prediction has yet to come to pass.

## **AGENCY PROBLEMS IN NEW PRODUCT DEVELOPMENT**

### **Agency Theory**

The distinction between ownership and control has long been recognized and examined by researchers (Berle & Means, 1932; Classens, Djankov, & Lang, 2000; Fama & Jensen, 1983; Jensen & Meckling, 1976; Krause & Bruton, 2014). Just because an individual or group of individuals own the assets used in a process, this does not mean that the owner(s) will have unilateral control over the use of the resource. Individuals who are hired to use the resource may use it in a way that is different from how the owner wants it to be used. For example, managers of a firm may use funds to buy a corporate jet or company cars that are not necessary for the operation of the firm, but benefit the individual managers greatly. This problem is known as the principle-agent problem (Jensen & Meckling, 1976). One of the reasons that agents are able to pursue their own self-interest instead of those of the principal is the presence of informational asymmetries (Eisenhardt, 1989). Agency relationships become more uncertain when the principle cannot clearly see the relationship between effort and outcome on the part of the agent, and when there is no agreement on the effort and outcome between the principle and the agent. However, by spending money to monitor the agent, the principal can have a better understanding of what the agent is doing, which will likely lead to the agent acting in a way that is more consistent with the interests of the principal (Jensen & Meckling, 1976).

The principle-agent problem has been examined in a number of contexts, including the venture capitalist-entrepreneur relationship as well as the CEO-shareholder relationship (Gompers, 1995; Kaplan & Stromberg, 2003; Zona, 2016). Researchers have also argued that high agency costs may be a relevant barrier that can limit a firm's ability to innovate and can influence what types of innovations a firm develops (Francis & Smith, 1995; Holmstrom, 1989; Yin, 2009).

### **New Product Development for Radical Innovations**

The new product development (NPD) process has been described in detail in past research (Cooper, 2016; Griffin, 1997; Page, 1993; Veryzer, 1998). When a firm attempts to develop a new innovative product, there is substantial uncertainty about what the final product will look like (Griffin & Page, 1996). Even when specifications are explicitly stated a priori, the firm knows that there is a substantial possibility that technological barriers may prevent them from accomplishing their goal. Furthermore, it is not known exactly how to get to the specified product. Although the firm may have a development process, such a process likely has much room for individual discretion. The NPD process also raises the problem of joint production. When a principle assigns a single agent to a task, it is much easier to evaluate the individual's performance than to judge the performance of individual team members that have been assigned to complete a task (Alchian & Demsetz, 1972). Therefore, monitoring the NPD process and those individuals participating in it can be very difficult, and can only be monitored imperfectly (Fuente & Marin, 1996).

The monitoring problem seems to be particularly problematic when a firm is developing a radical innovation. A *radical innovation* is an "innovation that contains a high degree of new knowledge" (Dewar & Dutton, 1986, p. 1442). More specifically, Leifer et al. (2000, p. 5) stated that radical innovation "concerns the development of new businesses or product lines-- based upon new ideas, technologies or substantial cost reductions that transform the economics of a business." In a case study of the development of discontinuous/radical innovations, Veryzer (1998) classifies the NPD process as an eight-step process, summarized in Table 1.

While uncertainty can be seen throughout the NPD process for radical innovations, several of the phases in particular may contain high levels of uncertainty. The dynamic drift stage consists of exploration and "playing in the lab," and therefore the outcome of this process is particularly uncertain (Veryzer, 1998). It cannot be predicted with accuracy what the outcome of this phase will be, and it would be difficult to monitor employees taking part in the process. An employee who is supposed to be working hard at exploring possible new technologies that might eventually be useful to the firm, might simply be tinkering around with a contraption that is of personal interest. Likewise, the convergence phase is uncertain in the sense that it requires people involved in the process stepping forward and putting the pieces together in order to find an applied use for a technology. Due to the uncertainty and nature of the process, even if the managers of the firm were to watch every action taken by the individuals working on the NPD project, they would have a difficult time distinguishing between those who are productive and those who are not. Therefore, the possibility of moral hazard is likely to be high in these situations.

<b>Table 1</b>	
<b>RADICAL INNOVATIONS AND THE NEW PRODUCT DEVELOPMENT PROCESS</b>	
<b>PHASE</b>	<b>DESCRIPTION</b>
Dynamic Drift	Various technologies are considered and explored. Effort is not guided by an existing problem.
Convergence Phase	Technology converges toward an applied use. Individual(s) find how technologies can fit together and be valued by the market.
Formulation Phase	It is decided how to use the technology in an actual product design.
Preliminary Design Phase	A preliminary design for the product is developed. Information is collected from customers concerning user requirements.
Evaluation Preparation Phase	Product is refined in preparation for formal review. A business case is made for commercialization.
Formative Prototype Phase	Prototype is developed. This prototype is not necessarily identical to what will be produced; often available parts will simply be used.
Testing and Modification Phases	Prototype is tested, evaluated, and modified.
Prototype and Commercialization Phases	Previous prototype is refined, and production aspects are considered. Customer trials are used and marketing plans are developed.
<i>Summarized from Veryzer (1998)</i>	

Conversely, the development of incremental innovations is likely to be much different. There will be less uncertainty associated with outcomes, because managers have a better idea of what the outcome will be (Dewar & Dutton, 1986). Furthermore, the process associated with incremental innovation may be more truncated than the radical innovation development process. For example, Veryzer (1998) describes the dynamic drift phase, as the first phase of the NPD process for radical innovation. This phase involves the consideration and exploration of various technologies, and contains a high level of uncertainty. However, this phase may be truncated, or even non-existent when incremental innovations are developed. Due to less uncertainty, development of incremental innovations should be easier to monitor than processes that are developing radical innovations.

*Proposition 1: The more radical the innovation being developed by a firm, the more difficult it will be to monitor the NPD process.*

According to agency theory, agency costs are a summation of (1) monitoring expenses by the principle, (2) bonding expenditures by the agent, and (3) the residual loss (Jensen & Meckling, 1976). Monitoring expenses include expenditures related to “watching, compensating, and evaluating the agent’s behavior” (Panda & Leepsa, 2017; p. 84). Bonding expenditures are restrictions bore by agents that limit their activity, such as a non-compete clause in an employment contract. Residual losses refer to inefficiencies that result from the divergent goals of the principle and the agent that is not eliminated through monitoring and bonding (Jensen & Meckling, 1976). Agency theory generally assumes that additional information concerning the behavior of the agent can be purchased by the principle for a price. (Eisenhardt, 1989; Nilakant & Rao, 1994). Therefore, by spending additional money on monitoring, the principal can decrease the potential residual loss. Increased monitoring is only undertaken if it leads to an even greater reduction in the residual loss, therefore minimizing total agency costs. The value that a firm obtains by increasing expenditures on monitoring, or the amount of the residual loss

reduction associated with purchasing one unit of monitoring, will vary based upon the activity being monitored. Some activities can be monitored more cheaply than others, and the principal might obtain a better value for every dollar spent on monitoring. In the NPD development process, spending a given amount on monitoring should be more effective when the NPD process is developing an incremental innovation than when a radical innovation is being developed. This will be largely due to the same reason it is difficult to monitor the NPD process for radical innovations in the first place, that is, the inherent uncertainty surrounding the process (Veryzer, 1998).

*Proposition 2: The more radical the innovation being developed by a firm, the more costly it will be to monitor the NPD process effectively.*

In addition to monitoring work effort and individual employee performance, it can be difficult to evaluate the eventual outcome of the NPD process. Project success can be determined on several dimensions, including: whether the product was popular with customers, the amount of internal learning and capabilities improvement that resulted from the project, whether it met the proper technical specifications, and whether it was a financial success for the organization (Awwad & Akroush, 2016; Griffin & Page, 1996). While a new product might be a technical success, it might fail to find a significant customer base and make a significant return for the firm. Measuring financial success itself might be difficult as the allocation of costs may be complicated if the firm has engaged in multiple NPD processes that make use of shared resources, such as the technical expertise of the engineering staff.

Measuring success may be even more problematic in the case of the development of a radical innovation. Since radical product innovations consist of a new product line (Leifer, 2000), the firm will not have a good historical benchmark on how to judge whether the product meets its standard for a success. This may be particularly true when looking at dimensions of success such as meeting technical specifications and obtaining a sufficient number of customers. The technical specifications may be somewhat fluid, particularly at the early stages of the NPD process (Veryzer, 1998). It may be difficult to hold people involved in the NPD process accountable for not meeting technical specifications, if such specifications are imprecise and evolve over time. Likewise, it may be difficult for firms to measure success by the number of customers who purchase the product, as there may not be a clear benchmark that the firm can use as a baseline. This is different from incremental innovations, where sales of previous iterations of the same product or similar products may serve as guidance for what level of sales constitutes a success or failure.

*Proposition 3: The more radical the innovation being developed by a firm, the more difficult it will be to judge the success of the NPD process.*

Despite the fact that monitoring the NPD process, especially when it involves the development of a radically new product, can be difficult, it is important for firms to do so. Collectively U.S. firms spent approximately \$375 billion on R&D in 2016 (National Science Foundation, 2018). Although some of this research is likely basic in nature and not tied directly to the development of new products, private firms typically have a propensity to spend much of their R&D resources on developing new products that can be commercialized. The future success of organizations is often highly linked to the successful development of new products (Artz et

al., 2010; Calantone et al., 1995; Chaney et al., 1991). Thus, firms are likely to monitor these projects as much as possible. Therefore, some monitoring will likely exist, even if it is not especially effective or all that cost efficient.<sup>1</sup> Furthermore, the monitoring process is likely to obtain noisy results. Even if monitoring leads to information concerning, for example, potential employee shirking, it is likely to be incomplete and inaccurate as well. Furthermore, the monitoring of employees involved in the NPD process will be a source of information for allocating rewards and punishments among employees. However, any incentive system used will be far from perfect, doling out rewards and punishments with a low degree of accuracy. Although short-term monitoring is likely to solve this problem, using it to measure the success of a NPD process for a radical innovation will have several problems. Measuring the success of the project on a short-term basis is likely to be even more difficult than doing so on a long-term basis, since certain milestones will not have had a chance to be met yet (Veryzer, 1980). Success will likely be equated with easy-to-obtain input measures, such as hours worked, how much of the project is completed, and the amount of money that has been spent. However, these types of measures are problematic. Measuring how successful a project is being managed before the process is completed is likely to be inaccurate and possibly even lead to unproductive behavior, such as spending on window dressing. Agency theorists often prescribe the use of outcome-based contracts in domains in which agency problems are significant (Eisenhardt, 1989; Jensen & Meckling, 1976; Jones & Butler, 1992). However as mentioned, the NPD process for radical innovations is uncertain with regards to outcomes, and measuring outcomes of the process is difficult (Griffin & Page, 1996). Most metrics used to gauge performance and hand out rewards and punishments are likely to be unreliable.

*Proposition 4: The more radical the innovation being developed by a firm, the less accuracy there will be in handing out rewards and punishments during the NPD process.*

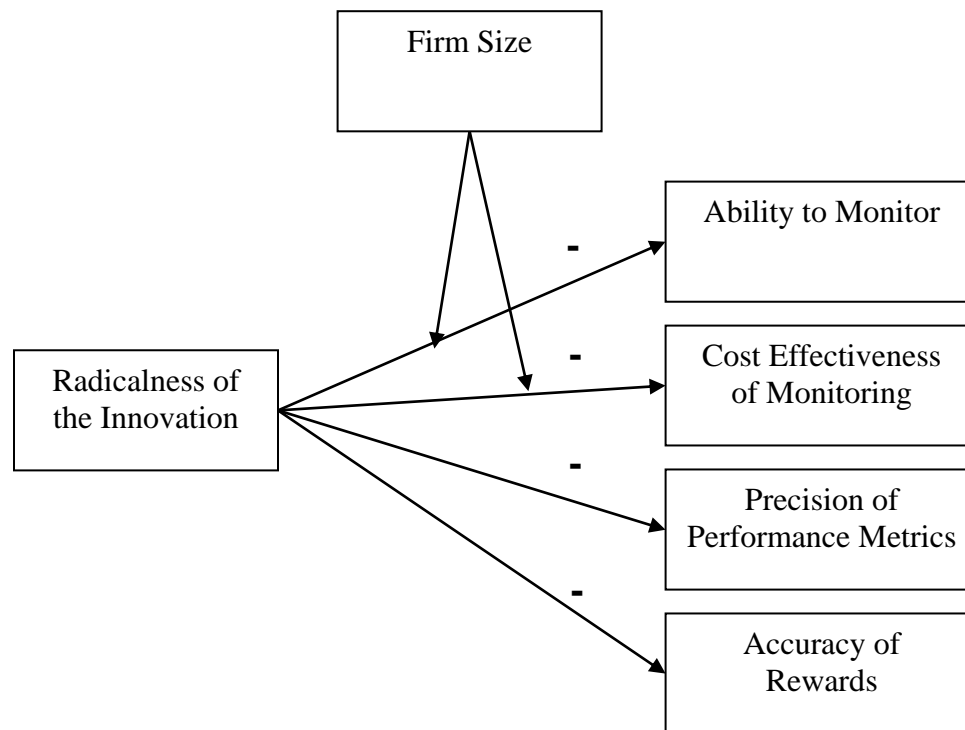
## **Signaling and False Signals**

This paper has proposed that employees involved in a NPD process developing a radical innovation are likely to have their success measured by less precise and less accurate measures. Therefore, this creates quite a problem for firms attempting to monitor the NPD process. However, it may be that signaling provides a means in which agency costs can be minimized, even when a firm is engaging in radical innovation. According to signaling theory, those in a market selling a high quality product who wish to inform buyers of their quality may do so by investing resources in a signal (Spence, 1973). In such a case, the seller would be the signaler who sends a signal to the buyer (receiver) about the quality of the product. A signal refers to the “information cues sent out by one party to another in order to influence desired outcomes” (Taj, 2016; p. 2). Since signals can be used to differentiate high-quality products or individuals from low-quality products or individuals, those that can effectively signal their high quality can earn a premium over those in the market who do not signal. Signaling theory has been applied to how managers inform stock market investors of their quality, and such events such as stock splits and stock buybacks are often viewed as signals that managers believe that the firm is in a position to be very successful in the future (Ikenberry et al., 1996; Fama et al., 1969). Likewise, product warranties have also been viewed as a way for a producer to signal their quality to the consumer

<sup>1</sup> Unless monitoring costs are so high that they exceed the cost of the residual loss, in which the firm will not pay for additional monitoring and will simply accept the residual loss.

(Boulding & Kirmani, 1993). Job applicants can indicate their quality by both indices, which are observable and unalterable attributes such as age, and signals, which consist of observable attributes that the applicant can manipulate (Spence, 1973). Although an individual seeking a job would like to signal to potential employers that they are high-quality employees, they must often engage in costly activities such as obtaining a high level of education in order to do so. The costs associated with these activities are known as signaling costs (Autor, 2001; Spence, 1976). If a signal is known by the receiver to be costly for the signaler to obtain, than the signal is likely to be viewed as more reliable (McAndrew, 2018).

**Figure 1**



Since monitoring the NPD process for developing radical innovations is so difficult, signals are a possible way that individuals working on an NPD project can make the quality of their work known. Individuals taking part in the NPD process can signal their quality in various ways. Obviously, they can signal their overall quality through their educational attainment and work experiences (Hussey, 2012; Ko and McKelvie, 2018; Spence, 1973). However, they can also signal the effort that they contribute to the NPD process. This can be done by performing well on visible performance metrics, as well as being helpful to managers and working many hours. Therefore, if such signaling is effective, a manager might have a way to judge the efforts and performance of employees. However, this assumes that workers who are performing poorly or putting in little effort are unable to use signals to their advantage because doing so is much more costly for them (Spence, 1973). However, some signals that may be relevant in the NPD process may not require a substantial investment, even from lower-quality workers. For example,

employees can make sure that they are seen looking busy by managers, which can be done at low cost to the employees. In some cases, employees may be able to manipulate performance numbers, especially subjective ones inherent to the process, in order to signal (falsely) their performance.

These false signals, may not only be low cost to obtain, but might also allow employees to reap significant rewards. However, using false signals can be costly to the party using them in the sense that (1) they may fail to work or (2) managers discover the false signal and subsequently punish the offender for engaging in these behaviors. Therefore, although using false signals may not be cost free, the risk of getting caught will be lower when the employee is engaging in an uncertain task. The use of false signals is likely to be very pronounced in the NPD process for radical innovations if managers rely on signals as a gauge of worker effort or quality. As with active monitoring, this is likely to be an inaccurate metric, meaning that managers will not be able to rely on signals to substitute for the inaccuracy associated with active monitoring. This creates a problem for firms attempting to develop radical innovations. Monitoring the NPD process for the development of radical innovations is likely to be difficult, costly, and inaccurate. However, they will likely be unable to take advantage of signaling by high-quality (high performing) employees due to the inaccuracy of any perceived signal.

### **Role of Firm Size**

Despite the high agency costs that are likely to arise when a firm is developing a radical innovation, the severity of these agency problems may vary depending on firm characteristics. The agency problems mentioned may help explain one of the reasons that small firms have often successfully developed and commercialized radically innovative products. Despite the fact that smaller firms often lack resources, they have been successful at this process (Audretsch, 2002; Brouwer & Kleinknecht, 1995; Link & Bozeman, 1991). Although agency costs are likely to be high if a firm engages in radical innovation, this relationship may be weaker for smaller firms than larger firms.

Consider a venture consisting of only the owner as an employee. Such a firm has no agency problems, since the owner retains all profits that the business earns (Jones & Butler, 1992). In such a firm, the manager is the owner, and there should be no misalignment in goals between the manager and the owner since they are the same person. As a firm grows and there becomes multiple owners, and there becomes some separation of ownership and control, agency problems may arise. However if an innovative firm is relatively small, the firm will likely have owners who will be involved directly in the NPD process. Such owners/managers will receive a direct benefit for seeing that the development of the new product is ultimately successful. Since these principles actually receive the residual income from the business, they have more incentive to monitor carefully. At the same time, the simplicity of the organization structure may make it easier to monitor the NPD process as well.

Although owners of a large corporation, who are true principles, have a similar incentive to monitor, the dilution of ownership among many shareholders also dilutes any incentive to monitor (Berle & Means, 1932). Even more importantly, it is simply not feasible for the shareholders of a large corporation to monitor every employee involved in the NPD process effectively. They may focus on monitoring the top managers, which serve as their agents, and making sure that they have sufficient incentives to in turn monitor those below them in the

organization. While all firms may have a difficult time monitoring the NPD process when radical innovations are being developed, smaller firms will likely be more effective at it than large firms.

*Proposition 5: The difficulty in monitoring the NPD process when radical innovations are being developed will be moderated by firm size. Smaller firms will be able to monitor the NPD process for radical innovations with less difficulty than large firms.*

This proposed moderation effect can be seen in Figure 1. The separation of ownership and control in large firms (Berle & Means, 1932) not only gives owners less incentive to monitor, but ultimately makes such monitoring more difficult. The monitoring process does not have to pass through layer after layer of agents in smaller firms, which will likely make additional spending on monitoring more effective in smaller firms than large firms.

*Proposition 6: The cost effectiveness in which the NPD process can be monitored when radical innovations are being developed will be moderated by firm size. Smaller firms will be able to monitor the NPD process for radical innovations in a more cost effective manner than large firms.*

## **DISCUSSION AND DIRECTIONS FOR FUTURE RESEARCH**

The primary theoretical contribution of this paper is that agency theory, like transaction cost economics, can be used as a theory of the firm. High agency costs provide a reason why the NPD process for radical innovations could possibly be more effectively completed by a number of small firms than by a single entity. This is because with small firms, fewer agents exist and thus fewer agency problems are likely to arise. The owners for the firm (principals) are more likely to be involved in the operations of the business, including the research and development function. With regards to firms that develop radically innovative products, agency theory can be used to explain why many firms exist instead of just a few. This also sheds light on an advantage that smaller firms are likely to have compared to large firms in developing radical innovations. While this paper specifically discusses the NPD process of a radical product innovation, it is likely that agency costs play a role in determining the optimal firm size in other situations as well, in which uncertainty is high and monitoring is difficult. Despite the argument presented here, many others can be made for why small firms are successful at developing new products, and why so many innovative products are developed by small firms. One alternative explanation for this comes from the embeddedness literature (Granovetter, 1985). It might be that relationships between owners and employees that can take the place of monitoring are more likely to develop in small firms. Therefore, employees might be motivated to perform well and to refrain from shirking as a function of their relationship with the owner, rather than for their own economic reasons. While they are unlikely to have any direct ties with the principals of a large firm, it is much more likely that employees will develop strong ties with the owner(s) of a smaller firm. Explanations of less inertia (Hannan & Freeman, 1984), and more flexibility (Berends et al., 2014) are likely advantages small firms have as well when developing radical innovations.

One of the major limitations of this paper is that the conceptual model developed is not empirically tested. Empirical testing of the model will require measuring some difficult to measure constructs, such as the radicalness of innovations, the cost effectiveness of monitoring

the NPD process, and the accuracy of rewards. In addition to developing such measures and testing the proposed model, there are several issues that can be addressed by future research. One issue is how the agency costs (due to monitoring difficulties) of the NPD process vary with firm size. While this paper argues that smaller firms will have lower agency cost, how much lower it will be is not addressed, due to the fact that this is essentially an empirical question. Another issue is what contextual factors are likely to affect the difficulty of monitoring (and therefore increase the agency costs) during the NPD process. Certain industries are likely able to monitor more effectively, and this will likely be demonstrated by the presence of large firms and their ability to generate radical innovations effectively. The idea that small firms may have an advantage in the NPD process when developing radical innovations may also apply to other types of firms. For example, family firms, at least in some cases, may have lower agency costs than non-family firms (Chrisman et al., 2004). However, others argue that family firms may just experience different types of agency costs (Songini & Gnan, 2015). The impact this has on their ability to develop radical innovations may be a fruitful area for future research.

## CONCLUSION

Firms of all sizes develop radical innovations. Large firms have certain advantages in this area, such as access to resources (Buzzell & Gale, 1987; Chen & Hambrick, 1995) and the ability to take advantage of economies of scale (Hambrick et al., 1982). Smaller firms may have advantages such as a lack of inertia and more flexibility in their strategies (Berends et al., 2014; Hannan & Freeman, 1984). This paper proposes another reason why smaller firms may have an advantage in developing radical innovations: lower agency costs. The NPD process is full of uncertainty, which makes monitoring of employees difficult and costly. However, smaller firms have a distinct advantage over larger firms, in that the principals (owners) are closer to the NPD process, likely making monitoring more effective, and having more incentive to monitor the process as well. Therefore, smaller firms may incur lower agency costs when developing radical innovations, and this may provide an explanation for why smaller firms can be quite innovative (Battelle, 2005; De Massis et al., 2015).

## REFERENCES

- Acs, Z. J., & Audretsch, D. B. (1987). Innovation, market structure, and firm size. *The Review of Economics and Statistics*, 69, 567-574.
- Acs, Z. J., & Audretsch, D. B. (1988). Innovation in large and small firms: An empirical analysis. *The American Economic Review*, 78, 678-690.
- Ahuja, G., & Lampert, C. (2001). Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions. *Strategic Management Journal*, 22(6-7), 521-543.
- Alchian, A. A., & Demsetz, H. (1972). Production, information costs, and economic organization. *The American Economic Review*, 62(5), 777-795.
- Artz, K. W., Norman, P. M., Hatfield, D. E., & Cardinal, L. B. (2010). A longitudinal study of the impact of R&D, patents, and product innovation on firm performance. *Journal of Product Innovation Management*, 27(5), 725-740.
- Audretsch, D. B. (2002). The dynamic role of small firms: Evidence from the US. *Small Business Economics*, 18(1-3), 13-40.
- Autor, D. (2001). Wiring the labor market. *Journal of Economic Perspectives*, 15(1), 25-40.
- Awwad, A., & Akroush, D. M. N. (2016). New product development performance success measures: An exploratory research. *EuroMed Journal of Business*, 11(1), 2-29.
- Battelle, J. (2005). *The search: How Google and its rivals rewrote the rules of business and transformed our culture*. New York, NY: Penguin.

- Berends, H., Jelinek, M., Reymen, I., & Stultiëns, R. (2014). Product innovation processes in small firms: Combining entrepreneurial effectuation and managerial causation. *Journal of Product Innovation Management*, 31(3), 616-635.
- Berle, A., & Means, G. (1932). *Private property and the modern corporation*. New York, NY: Macmillan.
- Birdsall, M. (2014). Google and ITE: The road ahead for self-driving cars. *Institute of Transportation Engineers Journal*, 84(5), 36-39.
- Boulding, W., & Kirmani, A. (1993). A consumer-side experimental examination of signaling theory: do consumers perceive warranties as signals of quality?. *Journal of Consumer Research*, 20(1), 111-123.
- Brockhoff, K. (1998). Technology management as part of strategic planning—some empirical results. *R&D Management*, 28(3), 129-138.
- Brouwer, E., & Kleinknecht, A. (1996). Firm size, small business presence and sales of innovative products: a micro-econometric analysis. *Small Business Economics*, 8(3), 189-201.
- Buzzell, R. D., Gale, B. T., & Gale, B. T. (1987). *The PIMS principles: Linking strategy to performance*. New York, NY: Free Press.
- Calantone, R. J., Vickery, S. K., & Dröge, C. (1995). Business performance and strategic new product development activities: an empirical investigation. *Journal of Product Innovation Management*, 12(3), 214-223.
- Chaney, P. K., Devinney, T. M., & Winer, R. S. (1991). The impact of new product introductions on the market value of firms. *Journal of Business*, 64, 573-610.
- Chen, M. J., & Hambrick, D. C. (1995). Speed, stealth, and selective attack: How small firms differ from large firms in competitive behavior. *Academy of Management Journal*, 38(2), 453-482.
- Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory and Practice*, 28(4), 335-354.
- Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58(1-2), 81-112.
- Cohen, W. M., & Klepper, S. (1996). A reprise of size and R&D. *The Economic Journal*, 106, 925-951.
- Cooper, R. G. (2016). Agile-stage-gate hybrids: The next stage for product development blending agile and stage-gate methods can provide flexibility, speed, and improved communication in new-product development. *Research-Technology Management*, 59(1), 21-29.
- De la Fuente, A., & Marín, J. (1996). Innovation, bank monitoring, and endogenous financial development. *Journal of Monetary Economics*, 38(2), 269-301.
- De Massis, A., Frattini, F., Pizzurno, E., & Cassia, L. (2015). Product innovation in family versus nonfamily firms: An exploratory analysis. *Journal of Small Business Management*, 53, 1-36.
- De Massis, A., Kotlar, J., Mazzola, P., Minola, T., & Sciascia, S. (2018). Conflicting selves: Family owners' multiple goals and self-control agency problems in private firms. *Entrepreneurship Theory and Practice*, 42(3), 362-389.
- Dewar, R. D., & Dutton, J. E. (1986). The adoption of radical and incremental innovations: An empirical analysis. *Management Science*, 32(11), 1422-1433.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57-74.
- Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustment of stock prices to new information. *International Economic Review*, 10(1), 1-21.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, 26, 301-325.
- Francis, J., & Smith, A. (1995). Agency costs and innovation some empirical evidence. *Journal of Accounting and Economics*, 19, 383-409.
- Gompers, P. A. (1995). Optimal investment, monitoring, and the staging of venture capital. *The Journal of Finance*, 50, 1461-1489.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91, 481-510.
- Griffin, A. (1997). PDMA research on new product development practices: Updating trends and benchmarking best practices. *Journal of Product Innovation Management*, 14, 429-458.
- Griffin, A., & Page, A. L. (1996). PDMA success measurement project: recommended measures for product development success and failure. *Journal of Product Innovation Management*, 13, 478-496.
- Hambrick, D. C., MacMillan, I. C., & Day, D. L. (1982). Strategic attributes and performance in the BCG matrix—A PIMS-based analysis of industrial product businesses. *Academy of Management Journal*, 25, 510-531.

- Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review*, 49, 149-164.
- Holmstrom, B. (1989). Agency costs and innovation. *Journal of Economic Behavior & Organization*, 12, 305-327.
- Hussey, A. (2012). Human capital augmentation versus the signaling value of MBA education. *Economics of Education Review*, 31(4), 442-451.
- Ikenberry, D. L., Rankine, G., & Stice, E. K. (1996). What do stock splits really signal?. *Journal of Financial and Quantitative analysis*, 31, 357-375.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Jones, G. R., & Butler, J. E. (1992). Managing internal corporate entrepreneurship: An agency theory perspective. *Journal of Management*, 18, 733-749.
- Kaplan, S. N., & Strömberg, P. (2003). Financial contracting theory meets the real world: An empirical analysis of venture capital contracts. *The Review of Economic Studies*, 70(2), 281-315.
- Kirchhoff, B. A. (1989). Creative destruction among industrial firms in the United States. *Small Business Economics*, 1(3), 161-173.
- Ko, E. J., & McKelvie, A. (2018). Signaling for more money: The roles of founders' human capital and investor prominence in resource acquisition across different stages of firm development. *Journal of Business Venturing*, 33(4), 438-454.
- Krause, R., & Bruton, G. (2014). Agency and monitoring clarity on venture boards of directors. *Academy of Management Review*, 39(1), 111-114.
- Leifer, R., McDermott, C. M., O'Connor, G. C., Peters, L. S., Rice, M., & Veryzer, R. W. (2000). *Radical innovation*. Boston, MA: Harvard Business School Press.
- Link, A. N., & Bozeman, B. (1991). Innovative behavior in small-sized firms. *Small Business Economics*, 3(3), 179-184.
- Mayer, D., & Kenney, M. (2004). Economic action does not take place in a vacuum: Understanding Cisco's acquisition and development strategy. *Industry and Innovation*, 11(4), 299-325.
- McAndrew, F. T. (2018). Costly Signaling Theory. *Encyclopedia of Evolutionary Psychological Science*, 1-8.
- National Science Foundation (2018). *Businesses spent \$375 billion on R&D performance in the United States in 2016*. Retrieved from <https://www.nsf.gov/statistics/2018/nsf18312/>
- Nilakant, V., & Rao, H. (1994). Agency theory and uncertainty in organizations: An evaluation. *Organization Studies*, 15, 649-672.
- Page, A. L. (1993). Assessing new product development practices and performance: Establishing crucial norms. *Journal of Product Innovation Management*, 10, 273-290.
- Panda, B., & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*, 10(1), 74-95.
- Panzar, J. C., & Willig, R. D. (1981). Economies of scope. *The American Economic Review*, 71, 268-272.
- Perry, M. J. (2015). Fortune 500 firms in 1955 v. 2015; only 12% remain, thanks to the creative destruction that fuels economic prosperity. *AEIdeas*.
- Schumpeter, J. A. (1942). *Socialism, capitalism and democracy*. New York, NY: Harper and Brothers.
- Shah, S. K., & Tripsas, M. (2007). The accidental entrepreneur: The emergent and collective process of user entrepreneurship. *Strategic Entrepreneurship Journal*, 1(1-2), 123-140.
- Songini, L., & Gnan, L. (2015). Family involvement and agency cost control mechanisms in family small and medium-sized enterprises. *Journal of Small Business Management*, 53, 748-779.
- Spence, M. (1978). Job market signaling. In *Uncertainty in Economics* (pp. 281-306).
- Spence, M. (1976). Competition in salaries, credentials, and signaling prerequisites for jobs. *The Quarterly Journal of Economics*, 90(1), 51-74.
- Taj, S. A. (2016). Application of signaling theory in management research: Addressing major gaps in theory. *European Management Journal*, 34(4), 338-348.
- Teece, D. J. (1980). Economies of scope and the scope of the enterprise. *Journal of Economic Behavior & Organization*, 1, 223-247.
- Veryzer Jr, R. W. (1998). Discontinuous innovation and the new product development process. *Journal of Product Innovation Management*, 15, 304-321.
- Wagner, E. R., & Hansen, E. N. (2005). Innovation in large versus small companies: insights from the US wood products industry. *Management Decision*, 43, 837-850.
- Williamson, O. E. (1975). *Markets and hierarchies*. New York, NY: Free Press.

- Yin, W. (2009). R&D policy, agency costs and innovation in personalized medicine. *Journal of Health Economics*, 28, 950-962.
- Young, J. S., & Simon, W. L. (2005). *iCon Steve Jobs: The greatest second act in the history of business*. Hoboken, NJ: John Wiley & Sons.
- Zona, F. (2016). Agency models in different stages of CEO tenure: The effects of stock options and board independence on R&D investment. *Research Policy*, 45, 560-575.

# CHANGING DYNAMICS OF THE NEW YORK GENERAL HOSPITAL POPULATION: A CASE OF TOO MUCH GOVERNMENT INTERFERENCE?

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## ABSTRACT

*This paper explores the effect of government regulations on mortality of health care organizations. Specifically, we study the effects of two government regulations, the Emergency Medical Treatment and Active Labor Act and the Certificate of Need Regulation, on the growth and mortality rates of hospitals in New York State. The hospital system in New York has gone through dramatic ecological changes as a result of both federal and state mandates. However, these regulations have negatively affected hospitals' growth and their mortality. The current literature on organizational ecology does not adequately explain the potential unintended negative consequences of government regulation. We used a population ecology approach to organizations to investigate this phenomenon.*

## INTRODUCTION

The long-term success of hospitals is significantly influenced by factors that are often beyond the control of these organizations. Consequently, hospitals are often affected by their operating environment (Nyham, Ferrando, & Clare, 2001). A seemingly endless wave of acquisitions, closures, consolidations, mergers, and regulations has helped craft the landscape of hospitals in the United States today. These fundamental and often structural changes have important implications for hospital patients, employees, and the communities they serve.

Government-imposed hospital regulations have existed for nearly as long as hospitals have. Popular wisdom endorses the notion that the intentions behind such regulations are positive, aiming to rectify or at least mitigate perceived social problems (Morgan, 1980). Regulations targeted at controlling overall medical costs or promoting equal access to care regardless of the patients' financial well-being seem beneficial on the surface. However, despite the well-intentioned rationale behind hospital regulations, unintended negative consequences have emerged as a side effect.

This paper addresses two important government regulations in the hospital industry, specifically, the Emergency Medical Treatment and Active Labor Act (EMTALA) and Certificate of Need Regulation (CNR). In New York State, these two regulatory acts have contributed to a loss of hospital revenue as a result of uncompensated care, led to the closure of general hospitals, and served as a catalyst for the growth of specialty hospitals.

This study contributes to the literature by testing the organizational ecology theory on the general hospital industry. This is of vital importance from a policy-based standpoint; the continued mortality of general hospitals in New York will endanger the health care safety net and reduce hospitals' overall ability to provide care for vulnerable populations.

Additionally, this paper bridges the gap in the literature in terms of unconventional research in organizational scholarship (Bamberger & Pratt, 2010). While traditional for-profit firms have been studied extensively from an organizational perspective, organizations like hospitals have received little attention in the literature. The present research fills this gap in the literature by chronicling these underrepresented organizations.

In the first section, we present an overview of the literature on organizational ecology, EMTALA, and the CNR. In the second section, we document our hypotheses and data. The final section concludes with our directions for further research.

## LITERATURE REVIEW

Organizational ecology is a theoretical and empirical approach that examines the evolution of organizations. Of primary concern is assessing how the external environment affects organizational founding, growth, and mortality (Hannan & Freeman, 1987). New organizational forms maximize their exploitation of the environment to fill niches. General hospitals occupy wide niches, while specialist hospitals occupy unsatisfied and narrow niches (Carroll, 1985). Organizations with the same form depend on the same resources, and together, they form an organizational population (Lazzeretti, 2006).

Specialist hospitals serve as new entrants into a mature industry, and because of this status, they play an important role in the industry's renewal and growth (Abernathy & Clark, 1985). They have established a new organizational form that adds to the diversity of general hospitals (Hannan & Freeman, 1987). Specialist hospitals also compete with general hospitals for their patients and possess more focused organizational forms (Hannan & Freeman, 1984; Rao & Singh, 1999; 2001; Scott, 1995).

The existing literature on organizational ecology suggests that other industries have experienced a similar decline as that seen in the New York hospital industry. Carroll (1985), Freeman and Lomi (1994), and Powell (1985) offered detailed perspectives on organizational populations in the book publishing, newspaper publishing, and music recording industries. In these instances, market dynamics and not government regulations were the primary cause of declining growth.

In New York, the organizational form of hospitals is not driven by competition or expertise, but rather by regulations. Such regulations make general hospitals with emergency rooms less competitive. Specialists hospitals, which lack emergency rooms, have a competitive advantage since they do not fall under the jurisdiction of EMTALA.

EMTALA covers any hospital that receives compensation from the federal government through health care programs, such as Medicare or Medicaid, and has an emergency room. Additionally, this regulatory act also applies to on-call physicians (Bagley, 2015). These emergency rooms provide medical screening exams, stabilizing treatment if necessary, or a transfer to an appropriate health care facility for any patients who present themselves. The act mandates that services must be provided to individuals regardless of their financial status.

The goal of EMTALA was to prohibit the denial of patient care for purely economic reasons (Stricker, 1992). EMTALA "required hospitals to provide emergency care on credit and prohibited them from delaying treatment to inquire about insurance status or means of payment" (Mahoney, 2015, p. 713). The penalties for violating EMTALA are quite strict, including monetary fines (\$50,000 per violation); civil actions; negative influence on a hospital's Joint Commission

on Accreditation of Healthcare Organizations accreditation status; and suspension, revocation, or denial of a hospital's license by the state's department of health (Ringholz, 2005).

The CNR was first introduced in the early 1960s as a measure to help control health care costs in the United States. The primary motivation for this legislation was to create a mechanism that could be used to standardize the capital expenditures of American health care providers. As a result of the CNR, prior approval of health care investments over certain dollar limits became mandatory, although the threshold varies from state to state (Rivers, Myron, & Jemima, 2010).

Despite being created with good intentions, these two regulations have had their share of criticisms. While EMTALA was designed to protect the financially vulnerable from being denied treatment, the final act does not refer to patients who are destitute (Weiss & Martinez, 1999). The constitutionality of EMTALA has even been questioned on the basis of violating the Fifth Amendment's Takings clause by requiring hospitals to render emergency medical services without receiving just compensation (Morreim, 2015). Furthermore, while access to care may have expanded, there is little evidence to suggest that the CNR has improved the overall quality of patient care (Conover & Solan, 1998).

Hospitals and emergency physicians currently face a financial crisis from all sides, including cutbacks to Medicare, lower payments from health insurance plans, and medical liability exposure. These factors threaten emergency physicians' ability to continue to provide high quality care to their patients. Even more problematic is the inadequate coverage of the uninsured. Hospitals and physicians are left alone to carry the financial burden for the uninsured, incurring billions of dollars in uncompensated care each year. The American College of Emergency Physicians (2009) gave the following estimates:

Fifty-five percent of emergency care goes uncompensated, according to the Centers for Medicare & Medicaid Services. Health care costs for both the full-year and part-year uninsured will total \$176 billion dollars this year—\$86 billion of which will be incurred when they are uninsured.

In the past, hospitals shifted uncompensated care costs to insured patients to make up the difference. However, cost shifting no longer is a viable option because managed care and other health plans have instituted strict price controls, leaving little margin to shift costs. More than one-third of emergency physicians lose an average of \$138,300 each year from EMTALA-related bad debt, according to a May 2003 American Medical Association study. (p. 5)

The creation of specialist hospitals since the passage of EMTALA is a method of circumventing its regulations. These specialist hospitals compete more efficiently than general hospitals, as the latter are required to provide unreimbursed care to the uninsured and the underinsured who present at their emergency rooms. Specialist hospitals serve a specific market—patients who can afford to pay for their care. These facilities possess cost advantages, such as no loss in revenue due to uncompensated emergency care, that allow them to compete successfully against general hospitals (Herzlinger, 1997; Skinner, 1974). The emergence of specialized providers and uncoupling of these services from the general hospital may push general hospitals into a marginal role as providers of ever-diminishing acute inpatient services (Robinson, 1994).

The emergence of populations of specialist organizations in other industries has been previously studied in the literature. Such research has been based on three viewpoints: niche

formation, density dependence, and resource partitioning. These viewpoints have been used to explain the founding of new specialist organizations (Swaminathan, 1995).

### **Niche Formation**

An ecological niche is the space of N-dimensional resources in which a population of organizations can exist (Hutchinson, 1957). The width of a niche is determined by the “range of the environmental dimensions across which a population exists” (Carroll, 1985, p. 1266). Generalists, as is the case with general hospitals, have a wider fundamental niche because they operate in several fields simultaneously. Specialist hospitals function with a narrower range of environmental resources or conditions (Carroll, 1985).

Environmental uncertainty or changes can lead to the formation of a new niche (Abernathy & Clark, 1985; Swaminathan, 1998). The emergence of new niches can also occur as a result of forces that are exogenous to the industry (Delacroix & Solt, 1988), such as changes in technology or consumer taste (Tushman & Anderson, 1986). It becomes apparent when a niche market is more profitable than the general market. Firms have an incentive to discontinue services that are unprofitable or costing the organization money. In the New York health care market, the unprofitable services are emergency rooms.

Delacroix and Solt's (1988) explanation of the formation of niches holds for most industries; however, it does not characterize the hospital market in New York. These researchers argued that new niches may become available for a given type of organization with the advent of new technologies to perform old tasks or the emergence of new methods of obtaining resources from the environment.

### **Density Dependence**

The density dependence model was introduced in Hannan's (1986) study, in which he described the demographic regularities perceived in the expansion of different organizational populations. According to Aldrich (1990, p. 11), “Density dependence refers to the dependence of population processes on the size of the population itself.” If the maximum number of competitors remains constant over time, then the population growth of a new form of an organization is restricted when the density level is low. This is attributable to the novelty and rarity of that form. In the early stage of a population, increasing density can be seen as a sign of society's approval. This emboldens entrepreneurs to venture into the market, leading to an increase in the number of organizations being founded. Lomi (1991) postulated that as density varies over time (perhaps due to exogenous forces such as EMTALA and CNR), the way density is related to legitimation and competition may be too complicated to predict with the density dependence theory.

The density dependence model has received mixed support in the literature, primarily because the non-monotonic relationship between organizational founding and density has been supported in several organizational populations. Examples include industrial and craft unions (Hannan & Freeman, 1987; 1989), newspapers in Argentina (Carroll & Hannan, 1989), American life insurance (Lomi & Freeman, 1990), and breweries (Carroll, Preisendoerfer, & Swaminathan, 1989; Carroll & Wade, 1991). Studies that failed to support the density dependence model suggest that if the right control variables are introduced, the effect of density on the founding rate can be eliminated (Aldrich, 1990).

## Resource Partitioning

The resource partitioning model seeks to explain the birth and mortality rates of specialist organizations in environments with varying degrees of generalist concentrations (Carroll, 1985). The theory argues that specialist and generalist organizations occupy different resource spaces, and as such, they can coexist without negatively affecting one another. Resource partitioning theory distinguishes between organizations depending on their niche (Boone, Carroll, & Witteloostuijn, 2002).

Resource partitioning theory hypothesizes that a positive relationship exists between market concentration and specialist organizations' founding. In industries where scale advantages exist, organizations compete to increase their customer base (Carroll, 1985). In general, organizations will offer their products and services to the mass market. However, general hospitals are required to service all of their patients, including those who can pay for services and those who cannot. This is in contrast to specialist hospitals, such as New York's Hospital for Special Surgery, which offers services based on the organization's specialty (Hannan & Freeman, 1977). Policymakers have proposed that specialty hospitals' access to the market must be restricted (Berenson, Bazzoli, & Au, 2006; Iglehart, 2005; Mitchell, 2007; Shactman, 2005). However, supporters of specialty hospitals argue that they provide fiscal efficiency, superior quality of care, and services that are more patient-focused, making them able competitors for general hospitals (Casey, 2004; Dobson & Haught, 2005; Domrzalski, 2002; Herzlinger, 2004; Walker, 1998).

In other industries, generalists seek to dominate the market and occupy the center of the resource space. This market concentration leads to the founding of specialist organizations that benefit from this newly unoccupied peripheral space (Boone et al., 2002). However, the concept of generalists dominating a market does not hold in the New York hospital industry; specialist hospitals do not have to provide unprofitable emergency room services and thus can proliferate.

## HYPOTHESES AND DATA

Specialist hospitals develop a competitive advantage over general hospitals because they do not have emergency rooms or the loss of revenue associated with uncompensated care from managing them. Thus, we posit the following hypothesis:

*H1: Specialist hospitals are more profitable than general hospitals.*

Ruef, Mendel, and Scott (1998) used an ecological perspective to describe specialist hospitals:

In a distinction applicable to the health care sector, ecologists distinguish between generalists and specialists. Specialist hospitals, relative to general hospitals, for example, usually employ a smaller range of occupational groups, offer a narrower range of products and services, and operate in fewer markets. (p. 779)

The purpose of specialist hospitals is to provide focused medical care to patients with specific needs. Such specialization allows each respective facility to offer expertise services; the end result is the delivery of important health care services in an efficient manner. Under this framework, cost-savings are not a primary goal. Consequently, specialist hospitals have an economic incentive to focus on high-margin services while eschewing low-profit services.

Specialist hospitals also have a financial incentive to avoid patients that are uninsured or underinsured, leaving fewer options for vulnerable members of society (Guterman, 2006). This sample-selection bias ultimately creates a two-class system of access to care; patients of means have the resources to seek treatment at specialist hospitals, while less fortunate individuals are relegated to obtaining medical services at general hospitals. As a result, general hospitals receive a disproportionate amount of uninsured or underinsured patients.

These dynamics impact the financial well-being of health care organizations, leaving general hospitals to shoulder the financial burden of uncompensated care. According to Rosko (2001, p. 353), “The viability of hospitals that continue to provide substantial amounts of uncompensated care may be compromised.” In the long run, general hospitals that provide substantial amounts of uncompensated care are at risk of closure. Conversely, the challenge of managing uncompensated care is not a predominant issue for specialist hospitals.

By their nature, specialist hospitals operate at an advantage compared to general hospitals. In New York, the advantage afforded to specialty hospitals has influenced the landscape of the industry. Facing financial and regulatory pressure, general hospitals have experienced attrition even as specialty hospitals have grown. Moreover, while EMTALA regulations disproportionately affect the operations of general hospitals, they do not pose as severe a burden on specialty hospitals. Therefore, we postulate the following hypotheses:

*H2: As the birth rate of specialty hospitals increases, the death rate of general hospitals also increases.*

*H3: The birth rate of specialty hospitals increases as government regulations increase.*

The Commission on Healthcare Facilities in the 21<sup>st</sup> Century was established to assess the state of health care in New York. In particular, this commission examined the availability of services and resources possessed by facilities during the 1983–2006 time period. Data collected by the commission is particularly useful as it encompasses a significant period of time since EMTALA regulations went into effect in 1986.

Examining the data from the standpoint of general hospital closures post-EMTALA yields interesting findings. Since the establishment of the EMTALA regulation, 59 hospitals in New York have closed (Commission on Healthcare Facilities in the 21<sup>st</sup> Century, 2006). All of these 59 hospitals were general hospitals providing emergency room services to patients. These hospital closures affected urban and rural areas alike.

To differentiate between geographical location types, we used the county population as a deciding metric. If a hospital was located in a county with a current population greater than 300,000, it was considered urban, while hospitals located in counties with a population of less than 300,000 residents were considered rural. The sizable number of hospital closures, irrespective of location type, during periods when EMTALA regulations were in effect indicates that the viability of general hospitals has been diminished. Between 1986–2006, 35 hospitals closed in urban areas, while 24 hospitals closed in rural areas.

We argue that the competitive advantage of specialist hospitals was a contributing factor to the mortality of these 59 general hospitals in New York between 1986 and 2006. The restrictions caused by EMTALA regulations can, in part, explain these closures. As the death rate of general

hospitals increased during this period, one cannot help but notice the proliferation of specialty hospitals.

There are currently 222 hospitals in New York. Of these, 189 are general hospitals that provide emergency room services, and 33 are specialty hospitals with no on-site emergency room (New York State Department of Health, 2019). These specialty hospitals are mostly concentrated in urban areas. Using the same location-based metrics, 21 specialty hospitals are located in urban areas, while specialty hospitals are located in rural areas.

Of the 33 specialty hospitals currently operational in New York, 12 have opened or merged into their current entity since EMTALA regulations took effect in 1986. Hospital openings and mergers are considerable; they require a tremendous amount of resources and directly affect patients' access to care. The birth rate of specialty hospitals stands in stark contrast to the death rate of general hospitals, 59 of which closed during the 20-year post-regulation time period. Support in the data gives credence to the argument that regulations were, in part, responsible for changes within the organizational population.

### **DIRECTIONS FOR FURTHER RESEARCH**

This paper has outlined how increasing growth in specialty hospitals in New York began after the implementation of EMTALA and CNR regulations. There is consistent evidence that the growth in specialty hospitals and decline in general hospitals are attributable to these regulations. Because of these regulations and the accompanying loss of revenue from uncompensated care, general hospitals are unable to modernize and afford other efficiencies.

Government regulations have contributed, in part, to the numerous specialist hospitals that are not required to provide emergency room services. The structure of specialist hospitals allows these organizations to circumvent the EMTALA regulations. Specialist hospitals are able to compete more efficiently than general hospitals are since they are not required to provide unreimbursed care to the uninsured and underinsured. Specialist hospitals often occupy different niches than general hospitals do. They serve a specific market, particularly patients who can afford to pay for their care, and have a more specialized organizational form (Hannan & Freeman, 1984; Rao & Singh, 1999; 2001; Scott, 1995).

Despite this comprehensive analysis, there remain several limitations to this paper. First, causality cannot be inferred from a simple interpretation of the data. A more extensive dataset spanning multiple states is required to prove that the discussed regulations were the cause of the general hospitals' closures. In addition, this paper did not consider the effect of demand-side variables, real income per capita, population, or the percentage of the population over 65 years of age.

### **REFERENCES**

- Abernathy, W. J., & Clark, K. B. (1985). Innovation: Mapping the winds of creative destruction. *Research Policy*, 14(1), 3–22.
- Aldrich, H. (1990). Using an ecological perspective to study organizational founding rate. *Entrepreneurship Theory and Practice* (spring): 724.
- American College of Emergency Physicians (2009). The uninsured: Access to medical care fact sheet. Retrieved from: <http://newsroom.acep.org/2009-01-04-the-uninsured-access-to-medical-care-fact-sheet>.
- Bagley, N. (2015). Medicine as a public calling. *Michigan Law Review*, 114(1), 57-106.
- Bamberger, P. A., & Pratt, M. G. (2010). Moving forward by looking back: Reclaiming unconventional research contexts and samples in organizational scholarship. *Academy of Management Journal*, 53(4), 665–671.

- Berenson, R. A., Bazzoli, G. J., & Au, M. (2006). Do specialty hospitals promote price competition? *Issue Brief Cent Stud Health Syst Change*, Jan (103), 1–4.
- Boone, C., Carroll, G. R., & Witteloostuijn, A. V. (2002). Resource distributions and market partitioning: Dutch daily newspapers, 1968 to 1994. *American Sociological Review*, 67 (3), 408–431.
- Carroll, G. R. (1985). Concentration and specialization: Dynamics of niche width in populations of organizations. *The American Journal of Sociology*, 90(6), 1262–1283.
- Carroll, G. R., & Hannan, M. (1989). Density dependence in the evolution of populations of newspaper organizations. *American Sociological Review*, 54, 524–541.
- Carroll, G. R., & Wade, J. B. (1991). Density dependence in the organizational evolution of the American brewing industry across different levels. *Social Science Research*, 20, 271–302.
- Carroll, G. R., Preisendoerfer, P., & Swaminathan, A. (1989). Brewery and braueri: The comparative organizational ecology of American and German brewing industries. *Organization Studies*, 14(2), 155–188.
- Casey, J. (2004). The case for specialty hospitals. *Modern Healthcare*, 34(47), 21–22.
- Conover, C. J., & Sloan, F. A. (1998). Does removing certificate-of-need regulations lead to a surge in health care spending? *Journal of Health Politics, Policy and Law*, 23(3), 455–481.
- Delacroix, J., & Solt, M. E. (1987). Niche formation and entrepreneurship in the California wine industry 1941–1984. *Academy of Management Proceedings*.
- Dobson, A., & Haught, R. (2005). The rise of the entrepreneurial physician. *Health Affairs Web Exclusive*, W5, 494–497.
- Domrzalski, D. (2002). Specialty hospitals are changing the face of U.S. health care. *New Mexico Business Weekly*.
- Freeman, J., & Lomi, A. (1994). Resource partitioning and founding of banking cooperatives in Italy. In J. A. C. Baum, & J. V. Singh (Eds.). *Evolutionary Dynamics of Organizations: VI*, 501 p. New York: Oxford University Press.
- Guterman, S. (2006). Specialty hospitals: A problem or a symptom? *Health Affairs*, 25(1), 95–105.
- Hannan, M. T. (1986). *A model of competitive and institutional processes in organizational ecology*. Technical Report 86-13, Sociology Department, Cornell University.
- Hannan, M. T., & Freeman, J. H. (1977). The population ecology of organizations. *American Journal of Sociology*, 82(5), 929–964.
- Hannan, M. T., & Freeman, J. H. (1984). Structural inertia and organizational change. *American Sociological Review*, 9(2), 149–164.
- Hannan, M. T., & Freeman, J. H. (1987). The ecology of organizational founding: American labor unions 1936–1985. *American Journal of Sociology*, 92, 910–943.
- Hannan, M. T., & Freeman, J. H. (1989). *Organizational Ecology*. Harvard Press, Cambridge, MA.
- Herzlinger, R. E. (1997). *Market-driven health care: Who wins, who loses in the transformation of America's largest service industry*. Reading, Mass.: Addison-Wesley Pub.
- Herzlinger, R. E. (2004). Specialization and its discontents: The pernicious impact of regulations against specialization and physician ownership on the US healthcare system. *Circulation*, 109, 2376–2378.
- Hutchinson, G. E. (1957). Concluding remarks. *Cold Spring Harbor Symposia on Quantitative Biology*, 22(2), 415–427.
- Iglehart, J. K. (2005). The emergence of physician-owned specialty hospitals. *New England Journal of Medicine*, 352, 78–84.
- Lazzeretti, L. (2006). Density dependence dynamics in the Arezzo jewellery district (1947–2001): Focus on foundings. *European Planning Studies*, 14(4), 431–458.
- Lomi, A. (1991). *The ecology of organizational founding in regulated industries: Founding rates of Italian cooperatives banks, 1948-1988*. (Unpublished dissertation). Cornell University.
- Lomi A., & Freeman, J. H. (1990). *An ecological study of founding of cooperative organizations in Italy from 1963 to 1987: Some preliminary results*. Working Paper 90-06, Johnson Graduate School of Management, Cornell University.
- Mahoney, N. (2015). Bankruptcy as Implicit Health Insurance. *The American Economic Review*, 105(2), 710-746.
- Mitchell, J. M. (2007). Utilization changes following market entry by physician-owned specialty hospitals. *Medical Care Research and Review*, 64, 395–415.
- Morgan, J. A. (1980). Regulating health care: The struggle for control. *Proceedings of the Academy of Political Science*, 33(4), 21–31.
- Morreim, E. H. (2015). EMTALA turns 30: Unconstitutional from birth. *Health Lawyer*, 28(2), 32–42.
- New York State Department of Health (n.d.) NYS Health Profiles. Directory of 222 Hospitals. Retrieved from: <https://profiles.health.ny.gov/directory/hospitals>.

- Nyhan, R., Ferrando M. B., & Clare, D. (2001). A population ecology study of hospital closures in Florida between 1965 and 1995. *Journal of Health and Human Services Administration*, 24(3), 295–319.
- Park, D., & Podolny, D. P. (2000). The competitive dynamics of status and niche width: US investment banking, 1920–1950. *Industrial and Corporate Change*, 9(3), 377–414.
- Powell, W. W. (1985). *Getting into print: The decision-making process in scholarly publishing*. Chicago: University of Chicago Press.
- Rao, H., & Singh, J. V. (1999). The construction of new paths: Institution-building activity in the early automobile and biotechnology industries. In J. A. C. Baum, & B. McKelvey (Eds.), *Variations in organization science: In honor of Donald T. Campbell*, 452 p. Thousand Oaks, Calif.: Sage Publications.
- Rao, H. & Singh, J. V. (2001). Types of variation in organizational populations. In R. Garud & P. Karnøe (Eds.), *Path dependence and creation*, 417 p. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Ringholz, J. (2005). An outline of the basic requirements of EMTALA as it relates to compliance. *Journal of Health Care Compliance*, 7(1), 35–36.
- Rivers, P. A., Myron D. F., & Jemima A. F. (2010). The effects of certificate of need regulation on hospital costs. *Journal of Health Care Finance*, 36(4), 1–16.
- Robinson, J. C. (1994). The changing boundaries of the American hospital. *Milbank Quarterly*, 72(2), 259–275.
- Ruef, M., Mendel, P., & Scott, W. R. (1998). An organizational field approach to resource environments in healthcare: Comparing entries of hospitals and home health agencies in the San Francisco Bay Region. *Health Services Research*, 32(6), 775–803.
- Scott, W. R. (1995). *Organizations and institutions*. Thousand Oaks, CA: Sage.
- Shactman, D. (2005). Specialty hospitals, ambulatory surgery centers, and general hospitals: Charting a wise public policy course. *Health Affairs*, 24, 868–873.
- Skinner, W. (1974). The focused factory. *Harvard Business Review*, 52(3), 113–121.
- Stricker, T. L. (1992). Note: The Emergency Medical Treatment & Active Labor Act: Denial of emergency medical care because of improper economic motives, *Notre Dame Law Review*, 67, 121.
- Swaminathan, A. (1995). The proliferation of specialist organizations in the American wine industry, 1941–1990. *Administrative Science Quarterly*, 40, 653–680.
- Swaminathan, A. (1998). Entry into Necaw market segments in mature industries: Endogenous and exogenous segmentation in the U.S. brewing industry. *Strategic Management Journal*, 19(4), 389–404.
- Tushman, M., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31, 439–465.
- Walker, T. (1998). Specialty care facilities make a case by improving outcomes and costs. *Managed Healthcare*, 8(6), 51–54.
- Weiss, L. D., & Martinez, J. A. (1999). Fixing EMTALA: What's wrong with the patient transfer act. *Journal of Public Health Policy*, 20(3), 335–347.

# MASTERY-AVOIDANCE AND SALESPERSON COMPETENCE MOTIVATION: AN EXPLANATION OF PLATEAUIING

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## ABSTRACT

*This study revisits the concepts of achievement motivation and goal orientation in light of recent substantive changes including the use of the concept competence motivation in lieu of achievement motivation and the addition of a mastery-avoidance construct to the mastery and performance goal orientation model. The addition of the mastery-avoidance construct may explain some competence and performance outcomes that have not previously been understood. Guided by formative studies in achievement motivation theory and goal orientation, this paper highlights a gap in current research and examines the re-conceptualization of the sales literature by addressing competence rather than achievement and proposes a model of salesperson competence that attempts to explain salesperson plateauing. The conclusions suggest that competence motivation can be defined more precisely than achievement motivation, allowing for a clearer set of parameters that move toward better theoretical models and operation of constructs.*

**Keywords:** achievement motivation, competence motivation, goal orientation, mastery-approach, mastery-avoidance

## INTRODUCTION

Achievement motivation theory has been an important element in attempting to predict performance in a variety of competence settings such as classrooms (Ames 1992; Ames & Archer 1988; Dweck & Leggett 1988), athletics (Sari, 2015; Schneider, Harrington & Tobar 2017) leadership (Butler, 2007; Hendricks & Payne 2007; Jansen & Van Yperen 2004), and in various aspects of business including sales (Brown, Cron & Slocum, 1997; Kohli, Shervani & Challagalla, 1998; Novell, Machleit & Sojka, 2016; Silver, Dwyer & Alford, 2006; Sujana, Weitz & Kumar, 1994; VandeWalle, Brown, Cron & Slocum 1999). Achievement motivation theory posits that the goal orientation a person adopts prior to engaging in an achievement task determines the mental framework of how that person will interpret, evaluate, and act in pursuing the achievement goal. Thus, the goal orientation the person adopts motivates behavior in that particular achievement setting (Dweck & Leggett, 1988). An achievement setting may be defined as any setting that requires a demonstration of competence (Dweck & Bempechat, 1983; Nicholls, 1984). Examples of achievement goal situations include classrooms, athletics, leadership, business, and, pertinent to this paper, sales performance.

Much of the above referenced research focused on two distinct goal orientations – mastery (learning goal) orientation and performance goal orientation. Particularly in the area of sales, the focus has been on two aspects of goal orientation (e.g., Novell, Machleit & Sojka, 2017); one study bifurcated the performance goal orientation into a performance approach orientation and a performance avoid orientation (Silver, et al., 2006). This study found that both

mastery and performance goal orientations were positively associated with salesperson performance while a performance-avoid goal orientation was negatively associated with performance. Novell, et al. (2016) treated goal orientation (learning and performance only) as a mid-level construct between implicit personality or lay theories and salesperson behavior patterns.

As valuable as these studies are, the concept of achievement motivation has undergone substantive changes in the past few years including the use of the concept *competence* motivation in lieu of *achievement* motivation (Elliot & Dweck, 2005) and the addition of a mastery-avoidance construct to the mastery and performance goal orientation model (Elliot, 2005; Elliot & McGregor 2001). The conceptual reasons for competence in lieu of motivation aid in a broader application of the theory in terms of culture and lifespan. The addition of the mastery-avoidance construct may explain some competence and performance outcomes that have not previously been understood.

There is some debate in the goal orientation literature as to whether goal orientation is a stable dispositional trait of an individual or a more of state, that is, specific to the task at hand. Researchers have characterized goal orientation as a dispositional trait (e.g., Fisher & Ford, 1998; VandeWalle & Cummings, 1997) and as a more dynamic state in response to situational influences (e.g., Dweck & Leggett, 1998; Button, Mathieu & Zajac, 1996).

In a meta-analysis of goal orientation research, Payne, Youngcourt, and Beaubien (2007), noted that goal orientation may be both a trait and a state. They describe state goal orientation as follows, "State goal orientation describes the goal one has for a given situation. It is conceptually similar to trait goal orientation as it represents one's goal preferences in an achievement situation, however, state goal orientation is specific to the task at hand" (p. 131).

Given this definition, Payne, et al. (2007) expected to find that trait goal orientation was more stable than state goal orientation. Yet, their research showed that the longer the time interval of the study, the weaker the coefficient of stability of trait goal orientation suggesting that possibly state and trait goal orientation are similar in stability.

Dragoni (2005) notes that early goal orientation research noted that leadership and environmental perceptions are possible antecedents to a particular goal orientation. Studies have shown that state goal orientation in students can be manipulated by teachers who expect and reward certain student behaviors (Ames & Archer, 1988; Dweck, 1986; Dweck & Leggett, 1988). Thus, Dragoni (2005) suggests that leaders (or sales managers) are able to influence employees' goal orientations by setting the psychological climate. This paper assumes Dragoni's (2005) assertion of goal orientation as a state, which can be influenced by sales managers.

The theory of life span control posits that throughout life adults tend to maximize gains and minimize losses. In order to do this, people adapt to changing physical, emotional, and cognitive states as well as changing contextual situations. This is often managed by modifying goals from growth oriented to maintenance oriented and/or loss prevention (Ebner, Freund & Baltes, 2006). Thus, we propose in this paper that the older, successful salesperson will shift from motivation of striving to achieve more sales to a motivation of striving to maintain or prevent the loss of current sales.

This issue is more important now than in the past. The 55+ age cohort is growing faster than any other and the 65+ cohort is the only group showing significant annual growth (Khabbaz & Perry, 2018). Many of these older people will stay in the workforce wither because they are financially unable to retire or because they enjoy working. Moreover, a large number of over age 50 workers are likely to be in sales (AARP, 2016). Thus while older workers contribute

emotional stability, nuanced thinking and institutional know-how to their employers (Irving, 2018), their motivation to set sales records and work long hours is in doubt.

Addressing these issues, this paper highlights a gap in current research and examines the re-conceptualization of the sales literature by addressing competence rather than achievement and proposes a model of salesperson competence that attempts to explain salesperson plateauing. The paper is organized as follows: First, there is an examination of the weaknesses of the concept of achievement motivation and how the term *competence* motivation answers these weaknesses. Next is an explanation of the evolution of goal orientation from a 1 X 1 to a 2 X 2 framework and the importance of the mastery-avoidance construct. Third, a set of research proposals are presented that replicate prior research and add the mastery-avoidance goal orientation. Finally, the conclusion offers a summary of main points and suggests directions for future research.

### Goal Orientation

Key to the concept of achievement is valence. That is, a person may be motivated toward a demonstration of competence or away from a demonstration of incompetence (Eliot, 2005). This construct of valence most often used in research is the achievement goal orientation construct. In this section, a brief review of the essential elements of achievement goal orientation are presented.

The achievement goal construct was developed in the late 1970s by a group of researchers working both independently and together at the University of Illinois (Elliot, 2005). One of the seminal works to emerge from this research was the social-cognitive model of motivation proposed by Carol Dweck and Ellen Leggett (Dweck & Leggett, 1988). Over a decade of work with school-age children had shown that children of equal ability responded differently to failure in an achievement setting. The research indicated that children adopted different goals in an achievement setting, and these different goals lead to different behavior patterns. Students who adopted a “learning” goal saw failure as feedback that was useful in mastering a task while students who adopted a “performance” goal had a response of helplessness in the face of future similar tasks. For example, a student with a learning goal would see failure on a math test as an indicator that the student needed to work harder to learn math. In contrast, a student with a performance goal would see failure as an indicator that they were not good at math and there was no use trying.

Dweck and Leggett (1988) concluded that goal orientation was a mid-level construct and was positioned between a student’s implicit theory of ability (a/k/a mindset) and the resultant behavior pattern. Thus, goal orientation, as the proximal construct, motivates behavior even if, in part, it is determined by the more distal construct of mindset (Dweck & Leggett, 1988; Sujan, Weitz & Kumar, 1994).

Using the example of salespeople, a salesperson with a learning goal orientation is intrinsically motivated to complete difficult sales and is generally unconcerned about normative standards of performance or comparison with other salespeople. This salesperson is characterized by enjoying the acquisition of new skills, taking on challenging tasks, and demonstrating persistence and enhanced effort in the face of failure (Kohli, Shervani, & Challgalla, 1998; Silver, et al, 2006). On the other hand, a salesperson with a performance goal orientation is more interested in demonstrating competence in relation to other salespeople and lacks intrinsic motivation to complete a task. This salesperson believes that if one has ability, one does not need

to exert effort to achieve success (Ames & Archer, 1988; Nichols, 1984). Thus, failure equals a lack of ability, and the performance-goal oriented salesperson will avoid challenging tasks.

It is important to note that learning (or mastery) and performance goal orientations are independent constructs and are not necessarily on opposing ends of a continuum. Thus, a salesperson may be interested in mastering a task, while at the same time, working to outperform other salespeople (Button, Mathier, & Zajac, 1996). However, one goal orientation is usually dominant over the other in an achievement setting (Dweck & Leggett, 1988; Kohli, Shervani, & Challagalla, 1998; Nicolls, 1984).

Several studies looked at the relationship between these two goal orientations and salesperson performance. Sujan, et al. (1994) found an indirect effect of mastery and performance goal orientation on salesperson performance while VandeWalle et al., (1999) found no direct or indirect effect of goal orientation on salesperson performance. Kohli, et al. (1998) found a direct effect of a performance goal orientation on salesperson performance, but failed to find any effect for a mastery goal orientation.

### **Bifurcation of the Performance Goal Orientation Construct**

Although the concept of approach and avoidance in achievement motivation was first introduced by Lewin, Dembo, Festinger, and Sears (1944) it was generally ignored until the late 1990s (Elliot, 2005). Work by Elliot and Harackiewicz (1996) and Elliot and Church (1997) found through factor analysis that there was a clear distinction between a performance-approach goal orientation and a performance-avoidance goal orientation. Elliot and Church (1997) found that, as expected, a mastery goal orientation was predictive of intrinsic motivation. A performance-approach goal focused on normative competence. In this case, students with a performance-approach goal did well on graded performance. Performance-avoidance was characterized by students who feared failure and saw negative feedback as a lack of ability.

Silver, et al. (2006) tested this trichotomous achievement goal framework in a national survey of life insurance salespeople. The findings of that study supported the approach and avoidance constructs and found a positive relationship between a mastery goal orientation and salesperson performance; a performance-approach goal orientation and salesperson performance; and a negative relationship between a performance-avoidance goal orientation and salesperson performance.

### **Bifurcation of the Mastery Goal Construct**

Continuing his work on goal orientation, Elliot (1999) proposed a 2 X 2 model of achievement motivation: mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance. Mastery-approach goals were the same as mastery goals. That is, someone who holds a mastery-approach goal is intrinsically motivated to develop skills and abilities and master a task. In contrast, mastery-avoidance is characterized by striving to avoid any appearance of losing one's skills, forgetting what they have learned and mastered, or demonstrating task- or self-referential incompetence. Elliot (2005) explains that mastery-avoidance goals are "characterized as mastery goals because of their focus on development and task mastery; they were characterized as avoidance goals because of their focus on a potential negative outcome (self- or task-referential incompetence)" (p. 61). Mastery-avoidance goals were hypothesized to produce less optimal results than mastery-approach goals but more than performance-avoidance goals. To date, no studies of salesperson performance has used the 2 X 2 framework.

### From Achievement to Competence

Despite numerous studies of achievement motivation across a broad array of disciplines, some weaknesses in the achievement motivation literature have been identified by two of the pioneer researchers in the field, Carol Dweck and Andrew Elliot (Elliot & Dweck, 2005). The weaknesses are discussed below:

First, there is a lack of a clear set of structural parameters in the concept of “achievement” (Elliot & Dweck, 2005). The authors note that if there is not a clear set of parameters for achievement, it is difficult to know what should and should not be included in achievement motivation. This, in turn leads to operational problems. Without a clear set of parameters, one researcher may operationalize constructs one way and a second researcher another way. While each study may stand on its own, it is difficult to interpret as a whole. Additionally, without a commonly understood conceptual foundation, it is virtually impossible to build valid theoretical models (Elliot & Dweck, 2005).

Another weakness of the concept of “achievement” according to Elliot and Dweck (2005) is that achievement is too narrow in terms of focus and scope. They note that the concept of achievement is assumed by many researchers to be a form of individualistic, self-defining accomplishment. For example, Ames and Archer (1988) define an achievement setting as one where individuals participate in and respond to achievement tasks. Yet, the potential for achievement and achievement motivation is much broader. Elliot and Dweck (2005) note that other achievement conceptualizations include interdependent achievement striving, cooperative achievement striving, and striving for learning and task mastery. These views of achievement go beyond the concepts of achievement developed by researchers who adopt a view of achievement that is based on Western, individualistic societies.

While achievement motivation theory is commonly applied to education, athletics, and business, a broader view would include such activities as avocations and hobbies, as well as social learning and self-improvement. Additionally, a broader view of achievement would also look at creativity, compassion, coping strategies, and autonomous learning. With these thoughts in mind, Elliot and Dweck (2005) offer the concept of competence in lieu of achievement.

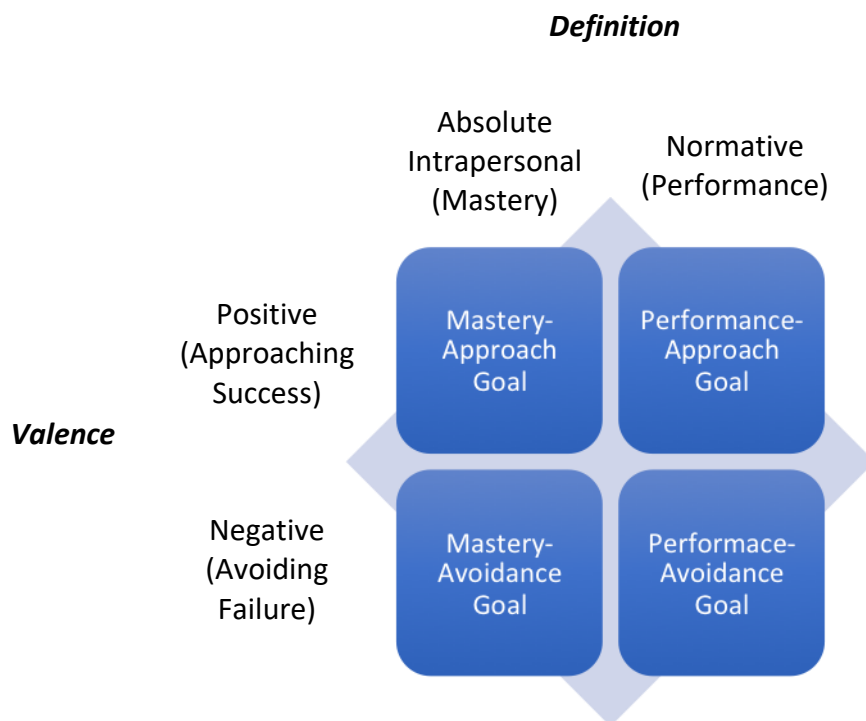
Elliot and Dweck (2005) note that competence is commonly defined as, “a condition or quality of effectiveness, ability, sufficiency or success” (p.5). One advantage of competence is that it is applicable to a broader range of levels than the concept of achievement. For example, competence can be applied to concrete actions, specific outcomes, patterns of skill demonstration, and all-encompassing characteristics such as intelligence. The basis for the concept of competence is that competence is a natural psychological need for human beings. This need for competence, then, directs the individual to develop concrete goals and strategies to satisfy the competence need (Elliot & Church, 2002). Interestingly, while individuals have a *positive* need to demonstrate competence, they may also have a *negative* need to avoid the appearance of incompetence. Indeed, a person may have a strong need to demonstrate competence as a salesperson, but over time, shift to a desire to avoid the demonstration of incompetence. Thus, in terms of the motivational literature, the definition of competence includes both the qualities of “ability, sufficiency, or success” and considerations of “ineffectiveness, inability, insufficiency and failure” (Elliot & Dweck, 2005, p. 6).

Elliot (2005) further notes that competence can be defined by the standard used to evaluate it. There are three standards to evaluate competence. One is the absolute standard which relates to the requirements of the task itself. Using life insurance salespeople as an example, one

absolute requirement to make the prestigious Million Dollar Round Table (MDRT, 2018) in 2018 is to earn \$94,000 or more in life insurance commissions (MDRT). A second standard is intrapersonal and relates to what the salesperson thinks of his or her past attainments and potential. Again, using the MDRT as an example, if the salesperson has qualified before and/or believes he or she has the talent and drive to qualify, then that is the standard against which they will measure their competence. Finally, there is the normative standard or the comparison with others. If a salesperson wants to compete and lead the company in sales, then comparison to others is the standard used to evaluate competence.

Competence also has valence (Elliot, 2005). One can construe competence in positive terms such as success or in negative terms like incompetence or failure. Additionally, one can focus on approaching the positive outcome or avoiding the negative outcome. This 2 X 2 framework is depicted in Figure 1.

**Figure 1. 2 X 2 Competence Goal Framework**



(Adapted from Elliot & McGregor, 2001)

### **Advantages of Competence Motivation over Achievement Motivation**

There are several advantages of the concept of competence rather than achievement. One is that competence is part of daily life. Much of one's activities as humans is motivated or energized by the possibility of competence or incompetence. Examples include everything from improving one's nutrition, to improving a yoga pose, to doing a better job at work, or improving

our social skills. A second advantage is the measureable psychological effect of competence oriented actions. A positive demonstration of competence (approach-oriented) results in joy and pride. Avoiding a negative demonstration of competence (avoidance-oriented) produces relief, while demonstration of incompetence (also avoidance-oriented) produces disappointment and stress (Carver & Scheier, 1998; Elliot & Dweck, 2005).

A third advantage is that competence motivation exists across an entire lifespan and manifests itself in different ways at different ages. The premise of the research proposition portion of this paper is that as a salesperson gets older and more established, their motivation moves from demonstrating sales competence to a competence-relevant motivation of avoiding incompetence (Elliot & McGregor, 2001). Finally, a competence motivation approach is not culturally bound. That is, it applies to cultures beyond Canada, the United States, and Western Europe.

### **Mastery-Avoidance and Sales Plateau**

Elliot and McGregor (2001) tested the 2 X 2 model on a group of undergraduate psychology students. Results of the study showed that fear of failure and classroom engagement were positive predictors of a mastery-avoidance goal orientation and self-determination was a negative predictor of mastery-avoidance. In other words, students who had a fear of failure but were engaged in the course were more likely to have a mastery-avoidance goal orientation than students who thought they determined their own destiny.

While Elliot and his colleagues are pioneers in the goal orientation research, almost all of their studies have been done on children, adolescents, and young adults. This may explain the sharp distinction between approach goals as adaptive and avoidance goals as maladaptive. Several researchers employing lifespan psychology have looked at competence goals across a wider range of age groups. Several seminal studies are discussed below.

Ogilvie, Rose, and Heppen (2000) studied the motivation of adolescent, middle-age, and older adults for the subjects' personal projects. In two cross-sectional studies they found that the motive to *acquire* was the most common motivation in all three age groups. To acquire means to undertake a project today in order to obtain positive outcomes in the future. However, this motive declined in importance from the adolescent to the middle-age group and again from the middle-age to the older age group. As the motive to acquire decreased, the motive to *keep* increased, especially in the older group. To keep is to "avoid losing an existing positive condition" (p. 207).

Ebner, et al. (2006) applied lifespan to goal orientation across adulthood. As they expected, older adults reported an orientation toward loss prevention and maintenance while younger adults were primarily interested in a growth orientation. Moreover, older adults reported that a loss prevention and/or maintenance orientation was possibly associated with feelings of well-being while younger adults reported a positive relationship between growth goals and well-being. At the same time, older adults continued to respond favorably to a growth goal orientation indicating that older adults may well perceive opportunities for progress and development.

Finally, Senko and Freund (2015) found that a major reason young adults prefer a master-approach goal orientation is because they feel it is more attainable and results in less pressure than a mastery-avoidance goal orientation. The exact opposite pattern was reported by older adults in terms of the mastery-avoidance goal orientation. These findings confirmed the work of de Lange et al. (2010) who found that master-avoidance goals were most widespread in workers in the late stages of their careers.

The above description is similar to one that may be applied to plateaued employees or salespeople. One problem in pursuing this line of investigation is the dearth of research on plateaued salespeople and the resulting lack of an acceptable definition of what it means to plateau. Slocum, et al. (1985) defined a plateau as the point in a person's career when the likelihood of promotion is very low. Slocum, Cron and Yows (1987) noted that plateauing occurs "when employees decide not to pursue further advancement in the corporation." (p. 31). Yet another definition of plateauing was offered by Feldman and Weitz (1988) and describes plateaued employees as those whose likelihood of receiving increased responsibility is low. The problem with these definitions is that they do not address the professional salesperson who never wanted to be promoted or take on more responsibility – he or she just wants to sell. Thus, the best definition that relates to salespeople is the one offered by *Management Review*. It states simply that a plateaued sales representative is one who has a level of sales that stays steady, but does not increase (*Management Review*, 1995). This is the definition adopted for this paper. The definition fits well with the following quote from Elliot (2005) on the mastery-avoidance goal construct, "Athletes, students, or employees who have sought to maximize their skills and abilities may at some point feel that they have fully exploited their potential ("reached their peak") and shift to a focus on "not doing worse than I have done in the past" (p.61).

Using the MDRT example, a salesperson may have qualified for the MDRT for many years and continued to strive to do better each year. However, the salesperson believes they have "reached their peak" and now want to focus on not doing worse than before, so the goal becomes to do the minimum to qualify for the MDRT. In this way, the salesperson avoids failure or the appearance of incompetence, but is not striving to achieve ever higher levels of sales. This is the plateaued salesperson.

## RESEARCH PROPOSALS

With the above explanation of achievement goals as competence goals and the introduction of the 2 X 2 goal orientation construct, the following research propositions are offered in terms of the goal's definition and valence.

The mastery-approach goal orientation is one where a person evaluates his or her competence against some absolute standard and/or his or her past experience and perceived potential. The valence is positive and approaches success. Therefore,

P<sub>1</sub>: A mastery-approach goal orientation is positively associated with an endeavor to increase sales performance.

P<sub>1a</sub>: A mastery-approach goal orientation will result in an absolute and interpersonal evaluation of competence.

The person with a mastery-avoidance goal orientation also evaluates their competence based on an absolute standard and past performance and potential. However, the valence is negative and the primary motive is to avoid the appearance of incompetence and/or the fear of failure. This goal orientation is proposed to be positively associated with sales performance because it is likely a high achiever who has plateaued – that is, kept sales steady but not increasing.

P<sub>2</sub>: A mastery-avoidance goal orientation is negatively associated with an endeavor to increase sales performance.

P<sub>2a</sub>: A mastery-approach goal orientation will result in an absolute and interpersonal evaluation of competence.

Performance-approach goal orientation results in a normative evaluation of competence. That is, the salesperson evaluates his or her performance in terms of how well they compare with other salespeople in the firm or in the same industry. While this may lead to good sales performance, it often also leads to a lack of willingness to take on challenges that might risk failure. Thus, for salespeople

P<sub>3</sub>: A performance-approach goal orientation is positively associated with an endeavor to increase sales performance.

P<sub>3a</sub>: A performance-approach goal orientation will result in a normative evaluation of competence.

Finally, the performance-avoidance goal orientation involves a lack of sales performance and a focus on not looking foolish and avoiding failure, often by not trying. This is the salesperson who is going to start making calls as soon as they understand the product better than anyone else, get their desk organized, and fill out their calendar.

P<sub>4</sub>: A performance-avoidance goal orientation is negatively associated with an endeavor to increase sales performance.

P<sub>4a</sub>: A performance-avoidance goal orientation will result in a normative evaluation of competence.

## CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

This paper contributes to the salesperson motivation literature in both theoretical and practical ways. Theoretically, the arguments made in this paper move the concept of achievement to one of competence. Because competence motivation can be defined more precisely than achievement motivation, the advantages of this shift include a clearer set of parameters that allow for better theoretical models and operation of constructs. Another advantage of the competence concept is that it broadens the scope of the research to include such constructs as social competence, emotional competence, health competence, cultural competence, and moral competence (Elliot & Dweck, 2005). Finally, the shift to competence motivation allows for an analysis of behavior across cultures and an individual's lifespan.

Practically, the 2 X 2 model attempts to better explain salesperson motivation by examining both the definition and the valence of competence motivation. The addition of the mastery-avoidance construct in particular may explain the behavior of the plateaued salesperson. The identification of this construct will aid sales managers in addressing plateauing problems. Further, because sales managers are often providing the enabling conditions in which the plateaued salesperson motivates himself, the identification of this construct could better assist management's understanding of how to effectively motivate the plateaued salesperson.

Another practical application of the competence motivation concept is that competency expectations can exert influence on goal orientation (Elliot & Church, 1997). Manipulating salesperson competency expectations could help sales managers reduce or eliminate the performance-avoidance orientation.

There are actions managers make take to encourage a growth mindset for older workers. For example, PNC Financial uses what they term "multigenerational teams" where younger and older workers are paired in all phases of product and service innovation and design. This accomplishes two goals. One, each group learns from the other and has a better understanding of the firm's target market. Second, there is opportunity for professional growth across all age groups.

Numerous areas for further research are possible from the perspective taken in this paper. While there has been work on mastery, performance-approach, and performance-avoid achievement goal orientation (e.g., Silver et al., 2006), the development of a scale for salespeople that more accurately reflects competence is needed to test these propositions. Scale items from Elliot and McGregor (2001) are a starting point for this and the mastery-avoidance construct.

Additionally, other social-cognitive constructs may affect goal orientation across all age groups. While goal orientation is considered a proximal cause of behavior, it is possibly a mid-level construct with an antecedent. Thus, the sequence would be antecedent → goal orientation → behavior. One such construct that future researchers may want to consider is self-efficacy (Bandura, 1989). Goals increase self-regulation through their impact on motivation, learning, self-efficacy (one's belief about his or her likelihood of success in performing a specific task), and self-evaluations of progress (Bandura, 1997; Schunk & Zimmerman, 1997). The operation of goals in self-regulation to include the influence of goal orientation could provide sales managers a better understanding to be able to work with salespeople and help them effectively manage their careers.

Another construct worthy of investigation is implicit personality theory (a/k/a lay theory) as proposed by Dweck and Leggett (1988). Implicit personality theory is a personality construct and forms the way people see the world. It includes naïve (that is not easily understood or articulated by the individual) assumptions about the self and others. Thus, goal orientation may exist between implicit personality theory and behavior.

Additionally, with the competence motivation concept, researchers can examine the possible changes in competency valence over the lifespan of a salesperson. This may, as this paper suggests, better explain the plateaued salesperson and possibly other motivational changes. Further, understanding the causes of salespersons plateauing relative to goal orientation may help the sales manager identify the symptoms early on and provide various support and creative solutions. As previously stated, plateaued salespeople often have strong, successful records of past performance and are too valuable to dismiss without first attempting to find solutions to reestablish their enthusiasm and performance.

Further, as Ebner, et al. (2006) noted, older workers do not surrender their desire for improvement and skill development. Instead, they maximize their physical, emotional, and cognitive resources to obtain desired ends. Sales managers may be able to re-direct some of this growth orientation to more positive results for the firm.

From the list above the following can be researched to the benefit of sales managers: social competence (helpful in teaming); emotional competence (adaptive selling and customer orientation); health competence (controlling health care costs); moral competence (avoiding ethical problems); and cultural competence (important in an ever increasing globalized marketplace).

In summary, the concepts presented in this paper address a broad, new perspective with which to study the motivation of salespeople and other employees. The proposed 2 X 2 competence goal framework is ripe for future research and can provide an important contribution in salesforce management research.

## REFERENCES

- AARP (2016). AARP Annual Report. Retrieved from [https://www.aarp.org/content/dam/aarp/about\\_us/about\\_us/2017/2016-annual-report-aarp.pdf](https://www.aarp.org/content/dam/aarp/about_us/about_us/2017/2016-annual-report-aarp.pdf)

- Ames, C. (1992). Classrooms: Goals, Structures, and Student Motivation. *Journal of Educational Psychology*, 84(3), 261-271.
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*, 80(3), 260 - 267.
- Bandura, A. (1977). Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1989). Human Agency in Social Cognitive Theory. *American Psychologist*, 44, 1175-1184.
- Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.
- Brown, S. P., Cron, W. L., & Slocum, J. (1997). Effects of Goal-Directed Emotions of Salesperson Volitions, Behavior, and Performance: A Longitudinal Study. *Journal of Marketing*, 61(1), 39-50.
- Butler, R. (2007). Teachers' Achievement Goal Orientation and Associations With Teachers' Help Seeking: Examination of Novel Approach to Teacher Motivation. *Journal of Educational Psychology*, 99(2), 241-252.
- Button, S., Mathieu, J., & Zajac, D. (1996). Goal Orientation in Organizational Behavior Research; A conceptual and Empirical Foundation. *Organizational Behavior and Human Decision Processes*, 67(1), 26-48.
- Carver, C., & Scheier, M. (1998). *On the Self-Regulation of Behavior*. New York: Cambridge University Press.
- de Lange, A. H., Van Yperen, N. W., Van der Heijden, B. I., & Bal, P. M. (2010). Dominant Achievement Goals of Older Workers and Their Relationship With Motivation-Related Outcomes. *Journal of Vocational Behavior*, 77, 118-125.
- Dragoni, L. (2005). Understanding the Emergence of State Goal Orientation in Organizational Work Groups: The Role of Leadership and Multilevel Climate Perceptions. *Journal of Applied Psychology*, 90(6), 1084-1095.
- Dweck, C. S. (1986). Motivational Processes Affecting Learning. *American Psychologist*, 41, 1040-48.
- Dweck, C. S., & Bempechat, J. (1983). Children's Theory of Intelligence . In S. Paris, G. Olsen, & E. Stevenson E., *Learning and Motivation in the Classroom* (pp. 239-256). Hillsdale, NJ: Lawrence Erlbaum.
- Dweck, C. S., & Leggett, L. E. (1988). A Social-Cognitive Approach to Motivation and Personality. *Psychological Review*, 95, 256-273.
- Ebner, N. C., Freund, A. M., & Bates, P. B. (2006). Developmental changes in personal goal orientation from young to late adulthood: From striving for gains to maintenance and prevention of losses. *Psychology and Aging*, 21(4), 664-678.
- Ebner, Natalie, C., Freund, A. M., & Bates, P. B. (2006). Developmental changes in Personal Goal Orientation From Young to Late Adulthood: From Striving for Gains to Maintenance and Prevention of Losses. *Psychology and Aging*, 21(4), 664-678.
- Editors. (1995, January). New Survey Focuses on Problem of "Plateaued" Sales Reps. *Management Review*, p. 6.
- Elliot, A. J., & Dweck, C. S. (2005). Competence and Motivation: Competence as the Core of Achievement Motivation. In A. J. Elliot, C. S. Dweck, & Eds, *Handbook of Competence and Motivation* (pp. 3-14). New York: Guilford Press.
- Elliot, A. J., & Harachkeiwicz, J. M. (1996). Approach and Avoidance Achievement Goals and Intrinsic Motivation: A Meditational Analysis. *Journal of Personality and Social Psychology*, 70(3), 461-475.
- Elliot, A. J., & McGregor, H. A. (2001). A 2 X 2 Achievement Goal Framework. *Journal of Personality and Social Psychology*, 80(3), 501-519.
- Elliott, A. J. (1999). Approach and Avoidance Motivation and Achievement Goals. *Educational Psychologist*, 14, 149-169.
- Elliott, A. J. (2005). A Conceptual History of the Achievement Goal Construct. In A. J. Elliot, C. S. Dweck, & Eds, *Handbook of Competence and Motivation* (pp. 57-72). New York: Guilford Press.
- Elliott, A. J., & Church, M. A. (1997). A Hierarchical Model of Approach and Avoidance Achievement Motivation. *Journal of Personality and Social Psychology*, 72(1), 281-292.
- Feldman, D. C., & Weitz, B. A. (1988). Career Plateaus in the Salesforce: Understanding and Removing Blockages to Employee Growth. *Journal of Personal Selling and Sales Management*, VIII, 23-32.
- Fisher, S.L., & Ford, J.K. (1998). Differential Effects of Leaner Effort and Goal Orientation on Two Learning Outcomes. *Personnel Psychology*, 51, 392-420.
- Hendrics, J. W., & Payne, S. C. (2007). Beyond the Big Five: Leader Goal Orientation as a Predictor of Leadership Effectiveness. *Human Performance*, 20(4), 317-343.
- Irving, P. (2018) When No One Retires. *Harvard Business Review*. Retrieved from <https://hbr.org/cover-story/2018/11/when-no-one-retires>
- Janssen, O., & Yperen, N. W. (2004). Employers' Goal Orientations, the Quality of Leader-Member Exchange, and the Outcomes of Job Performance and Job Satisfaction. *Academy of Management Journal*, 47(3), 368-384.

- Khabbaz, R., & Perry, M. (2018) Just How Old Are We Getting? Harvard Business Review. Retrieved from <https://hbr.org/2018/11/just-how-old-are-we-getting>
- Kohli, A. K., Shervani, T. A., & Challagalla, G. N. (1998). Learning and Performance Orientation of Salespeople: The Role of Supervisors. *Journal of Marketing Research*, 35(2), 263-274.
- Lewin, K., Dembo, T., Festinger, L., & Sears, R. (1944). Level of Aspiration. In J. M. Hunt, & Ed, *Personality and the Behavioral Disorders* (pp. 333-378). New York: Roland Press.
- Nichols, J. G. (1984). Achievement Motivation: Conception of Ability, Subjective Experience, Task Choice, and Performance . *Psychological Review*, 91(3), 328-346.
- Novell, C. A., & Machleit, K. A. (2015). Are Good Salespeople Born or Made? A new Perspective on an Age-Old Question: Implicit Theories of Selling Ability. *Journal of Personal Selling and Sales Management*, 36(4), 309-320.
- Olgivie, D. M., Rose, K. M., & Heppen, J. B. (2001). A comparison of personal project motives in three age groups. *Basic and Applied Psychology*, 23(3), 207-215.
- Payne, S. C., Youngcourt, S. S., & Beaubien, J. M. (2007). A Meta Analytical Examination of Goal Orientation Nomological Net. *The Journal of Applied Psychology*, 92(1), 128–150.
- Sari, I. (2015). Does Goal Orientation Matter for Trait Anxiety, Self-Efficacy and Performance? *Education*, 136(2), 169-178.
- Schneider, R. H., & Tobar, D. (2017). Goal Orientation and How a Task or Ego Mentality Can Affect the Enjoyment for College Hockey Players. *College Student Journal*, 51(1), 57-62.
- Schunk, D. H. (1997). Social origins of self-regulatory competence. *Educational Psychologist*, 32, 195-208.
- Senko, C., & Freund, A. M. (2015). Are mastery-avoidance achievement goals always detrimental? An adult development perspective. *Motivation and Emotion*, 39, 477-488.
- Silver, L., Dwyer, S., & Alford, B. (2006). Learning and Performance Goal Orientation of Salespeople Revisited: The Role of Performance-Approach and Performance-Avoidance Orientations. *Journal of Personal Selling and Sales Management*, XXVI(1), 27-38.
- Slocum, J. W., Cron, W. L., & Yows, L. C. (1987). Whose Career is Likely to Plateau? . *Business Horizons*, 31-38.
- Slocum, J. W., Cron, W. L., Hansen, R. W., & Rawlings, S. (1985). Business Strategy and the Management of Plateaued Employees. *Academy of Management Journal*, 28(1), 133-154.
- Sujan, H., Weitz, B. A., & Kumar, N. (1994). Learning Orientation, Working Smart, and Effective Selling. *Journal of Marketing*, 58, 39-52.
- VandeWalle, D., Brown, S. P., Cron, W. L., & Slocum, J. W. (1999). The Influence of Goal Orientation and Self-Regulation Tactics on Sales Performance: A Longitudinal Field Test. *Journal of Applied Psychology*, 84(2), 249-259.
- VandeWalle, D., & Cummings, L.L. (1997). A test of the Influence of Goal Orientation on the Feedback-seeking process. *Journal of Applied Psychology*, 82, 390-400.

# TOP MANAGEMENT TEAM DIVERSITY IN FINANCIAL SERVICES: THE INFLUENCE OF FUNCTIONAL AND DEMOGRAPHIC DIVERSITY ON FIRM FINANCIAL PERFORMANCE

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## ABSTRACT

*There has been exhaustive discussion on whether diversity in the TMT (Top Management Team) has an impact on the firm's financial performance. This research will analyze data from 59 Fortune 500 Financial Services firms' TMTs referencing Hambrick and Mason's Upper Echelon theory and review the TMT members' demographic composition as well as functional experience background attributes. We controlled for industry effects by focusing on the financial services sector, within which companies related to the banking sector are systemically essential to society. Another rationale for the focus on financial services is the degree with which this industry has been digitized, which we argue creates a more complex management environment. This research will compare the type of diversity within the TMT (functional vs. demographic) and the related impact on the firm's financial performance in terms of P/E (Price / Earnings) Ratio, ROA (Return on Assets) and ROE (Return on Equity). This is in the context of a dynamic digital marketplace that we hypothesize now rewards functional diversity in the TMT as this attribute in the team composition is critical to organizing the firm's competitive repertoires and strategy. The findings from the research suggest that functional diversity (TMT specialties such as marketing, finance, operations, etc.) is more significant than demographic diversity (gender, ethnicity, nationality). This study indicates that functional diversity had a positive correlation with financial performance in terms of the P/E Ratio and ROA, while demographic diversity had slightly negative correlation, not having a significant impact on the firm's financial performance.*

**Keywords:** Functional Diversity, Functional Experience Background, Demographic Diversity, Firm Financial Performance, TMT (Top Management Team), TMG (Top Management Group), Cognition, Cognitive Diversity

## INTRODUCTION

The literature over the past 40 years analyzing the benefit of diversity in the TMT (Top Management Team) in terms of organizational outcomes (one of which is financial performance) discussed in the Upper Echelons Theory (Hambrick & Mason, 1984) and Dominant Coalition (Cyert & March, 1963) has historically had mixed reviews. (Certo, Lester, Dalton, & Dalton, 2006) Even though it is commonly accepted that diversity enhances the breadth of perspective, cognitive resources, and overall problem-solving capacity of the group (Hambrick, Cho, & Chen, 1996; Hunt, Layton, & Prince, 2015), there are still questions about the value and which category of benefit diversity brings to the TMT (Mannix & Neale, 2005).

There have been many studies which focused on several different attributes (gender, ethnicity, age (Tanikawa, Kim, & Jung, 2017), marital status, tenure, team size (Díaz-Fernández,

González-Rodríguez, & Pawlak, 2014), and educational background (Díaz-Fernández et al., 2014)) diversity. It is thought-provoking, however, that none of these previous studies have focused on whether TMT composition attributes characterized as demographic elements (Beckman & Burton, 2011) have a different impact on firm performance than functional experience background.

Extant research has argued that diversity (stated generically without specifying particular attributes) in the TMT is good for managing task complexity (Simsek, Veiga, Lubatkin, & Dino, 2005) and generating productive debate (Boone & Hendriks, 2009). It is also productive in enhancing creativity (Barsade, Ward, Turner, & Sonnenfeld, 2000), providing a healthy culture (Stahl, Maznevski, Voigt, & Jonsen, 2009), processing large amounts of information (Hambrick & Cannella, 2004), and more thoughtful decision making (Wiersema & Bantel, 1992). Conversely, heterogeneity in the TMT has also been found to be negative (Miller, Burke, & Glick, 1998; Wang, Ma, & Wang, 2015) in terms of team cohesion (Harrison & Klein, 2007; Knight et al., 1999; Love, 2018), social divisions (Mannix & Neale, 2005), executive environmental perception (Waller, Huber, & Glick, 1995), decision speed (Pelled, 1996), and when there are dominant CEO's (Haleblian & Finkelstein, 1993).

The evolution to a digitized business environment since the 1980s (Yoo, Boland, Lyytinen, & Majchrzak, 2012) and required complex competitive repertoires (Ferrier & Lyon, 2004) to survive in the current marketplace has seen an unprecedented degree of change. In fact, complexity is driving such an increase in need for information processing, that we are witnessing the development of new roles in the TMT (Certo et al., 2006), such as Chief Digital Officer, Chief Customer Officer, as well as some specific roles, such as Chief Revenue Officer (Fleischer, 2018; Menz, 2011). Diversity is also reported to enable the ability to process large amounts of complex information (Haleblian & Finkelstein, 1993; Henderson & Fredrickson, 1996; Thomas & McDaniel, 1990) needed to manage evolving TMT business challenges. The aforementioned forces driving business environment change include demographic diversity (Donnelly, 2017; Jones, 2017), the advent of the Internet, and the implications of digital technology.

The impact of digital technology has led to a proliferation in the customer channels for interactions with companies (Liao & Wong, 2008) as well as capabilities in terms of ubiquitous social and commerce platforms (Eisenmann, Parker, & Alstyne, 2011). These capabilities enable companies to provide services to and interact with customers in innovative ways. In addition, big data analytics (Chen, Chiang, & Storey, 2012) coupled with artificial intelligence are disrupting the foundation of many industries. Each of the previous forces is increasing the amount of pressure (Hambrick, Finkelstein, & Mooney, 2005) on the TMT for establishing a strategy (Lant, Milliken, & Batra, 1992) for the competitive repertoire (Ferrier, 2001). There is an impact on the TMT in terms of decision making (Smith et al., 1994), decision speed (Li & Jones, 2018), information analysis, synthesis and processing (Haleblian & Finkelstein, 1993; Henderson & Fredrickson, 1996), as well as utilization of new technology (Henderson & Fredrickson, 1996) to aid in executive management of the complex new business models. As a result, it is very important that members of the TMT have a diverse background in terms of functional experience to better manage the speed, technology change, and information processing complexity of the business environment today (Marcel, 2009).

There are two observations that this paper will explore. First, existing research has not confirmed a clear consensus (Handika & Wibowo, 2018; Knight et al., 1999) on whether diversity within the TMT is beneficial for firm financial performance (Mannix & Neale, 2005; Miller et al., 1998). Second, in the research studies where diversity is deemed beneficial, it is unclear which

type of diversity is the most influential as most papers only measure certain attributes of diversity, lacking a direct comparison between demographic diversity and functional experience background diversity (Certo et al., 2006).

Many of the studies are also from the 1980s and 1990s before the Internet (Yoo et al., 2012) really began its significant disruption of the business environment. The current state of the marketplace adds an extreme amount of operational complexity to the strategy and decisions (Hambrick et al., 2005) that the TMT must manage as part of their roles in the firm. Research has suggested that diversity in the TMT will help in being better prepared for the evolving environment (Hambrick & Mason, 1984). We propose that it is not sufficient to only establish demographic diversity in the TMT, the impact of which is inconclusive (Certo et al., 2006; Mannix & Neale, 2005). Rather, we suggest that attention should be focused on adding functional experience background to the TMT. This focus on functional diversity will magnify results in terms of enhanced financial performance for firms in the digital era (Downes & Nunes, 2013; Yoo et al., 2012).

The extant research contains a gap specific to addressing the question of which attributes of diversity within the TMT composition are the most influential on performance considering such measures such as productivity (Díaz-Fernández, González-Rodríguez, & Simonetti, 2016), team cohesion (Love, 2018; Michel & Hambrick, 1992), consensus (Priem, 1990), decision speed (Smith et al., 1994), and effectiveness (Stahl et al., 2009). This leads us to the analysis of the impact of functional vs. demographic diversity on the firm's financial performance as measured by the metrics of this P/E Ratio, ROA, and ROE. Previous studies have analyzed related measures such as profitability (Boone & Hendriks, 2009; Bunderson & Sutcliffe, 2002; Pegels, Song, & Yang, 2000), market share (Kilduff, Angelmar, & Mehra, 2000), ROI (Return on Investment) (Norburn & Birley, 1988), and ROA (Return on Assets) (Cannella, Park, & Lee, 2008; Carpenter, 2002; Menz, 2011).

The aim and contribution of this paper is to distinguish the impact of two different categorical types of diversity, demographic diversity (Beckman & Burton, 2011; Pelled, 1996; Smith et al., 1994; Wiersema & Bantel, 1992) and functional background experience diversity (Boone & Hendriks, 2009; Bunderson, 2003; Bunderson & Sutcliffe, 2002; Cannella et al., 2008; Menz, 2011; Waller et al., 1995).

We suggest that both demographic and functional diversity are proxies for cognitive diversity (different ways of thinking about problems, etc. based on prior experience). We argue that cognitively diverse TMTs will be better equipped to analyze information and make decisions in today's rapidly changing and complex business environment in the digital age (Yoo et al., 2012). We assume that these two sources of cognitive diversity are conceptually distinct – since they arise from different sources. It is beyond the scope of this study to test this assumption, which is an interesting research question for future research. Given the inconclusive findings in the literature thus far about the relationship between diversity and firm performance, it is worth exploring whether these two sources of diversity have different effects on firm performance, as measured in terms of P/E Ratio, ROA, and ROE.

## LITERATURE REVIEW

There are several key terms that are used to describe TMT diversity or heterogeneity and the composition or characteristics of the TMT (Harrison & Klein, 2007; Mannix & Neale, 2005). Referencing back to some of the original research, this genre is the area of upper echelon theory (Hambrick & Mason, 1984), where Hambrick & Mason reference team heterogeneity as

managerial background characteristics. Another term from seminal research used to describe top leadership is the dominant coalition (Cyert & March, 1963). Each of these slightly different nuances on the definition and measurement of various types of diversity lead to many studies focused on various attributes (Stahl et al., 2009). In this category of research there are many references to the naming of demographic category such as TMT diversity (Díaz-Fernández et al., 2016), TMT demography (Smith et al., 1994; Wiersema & Bantel, 1992), demographic diversity (Pelled, 1996), demographic characteristics (Díaz-Fernández et al., 2014), or demographic heterogeneity (Haleblian & Finkelstein, 1993).

In addition, on the functional focus, some references are functional diversity (Bunderson & Sutcliffe, 2002), functional heterogeneity (Carpenter & Fredrickson, 2001), functional experience (Nath & Mahajan, 2008), or functional background (Boone & Hendriks, 2009; Bunderson, 2003; Krishnan, Miller, & Judge, 1997; Waller et al., 1995). Some papers have included educational diversity as well as functional diversity (in addition to the more commonly known attributes such as gender, age, ethnicity, nationality, tenure, team size) to the definition of demographic diversity (Bantel & Jackson, 1989). Interestingly, the seminal research on the topic combined various attributes of age, functional background, educational background, and tenure in the upper echelon theory (Hambrick & Mason, 1984), but left the discussion open about which attributes truly signify the largest impact. Interestingly, several studies include functional diversity within the demographic diversity category (Carpenter, 2002; Carpenter & Fredrickson, 2001; Smith et al., 1994; Stahl et al., 2009). In making a distinction between functional and demographic diversity, this paper will separate specific explanations of each below to clarify the terminology as well as measure the impact of each category of diversity.

### **Focus of studies on TMT diversity**

Many papers have focused on various angles of TMT diversity (generically), and to provide some context on the breadth of the literature, we summarize the highlights of a few of them. With the key independent variable of some flavor of TMT diversity, in our research we found that there are many dependent variables described, as well as various data sets focused on different industries. A few of the studies focus on the impact of diverse teams on strategy, which are the impact on strategic change (Díaz-Fernández et al., 2016; Wiersema & Bantel, 1992), the impact on strategic consensus (Carpenter, 2002; Knight et al., 1999; Priem, 1990), as well as debate (Simons, Pelled, & Smith, 1999), and the impact on strategic posture (Carpenter & Fredrickson, 2001). There is a group of papers that focus on the operational impacts to the TMT due to diversity, which are impact on cognitive diversity (Kilduff et al., 2000), impact on decision-making (Bunderson, 2003), and impact on decision speed (Hambrick et al., 1996).

Some other studies reviewed the impact on information processing and sharing ability (Haleblian & Finkelstein, 1993; Wang et al., 2015), the impact on innovation (Bantel & Jackson, 1989), and impact on creativity (Harrison & Klein, 2007; Stahl et al., 2009). Another group then focused on the impact on post-merger or acquisition relations (Krishnan et al., 1997), and impact on culture (Barsade et al., 2000; Stahl et al., 2009). There is also a focus on impact on leadership behaviors such as CEO dominance (Haleblian & Finkelstein, 1993) and locus-of-control (Boone & Hendriks, 2009).

We found one specific example of management during turbulent times where strategic action needed managed, and the result was that more failed companies had a TMG where the CEO was dominant (Haleblian & Finkelstein, 1993). Another study on various attributes of diversity provided insight into the concepts of task and emotional conflict. Task conflict associated with

functional background is deemed positive in TMT, and emotional conflict associated with demographics comprised of gender, race, tenure is perceived negatively (Pelled, Eisenhardt, & Xin, 1999). Good working relationships between and within the TMT are important so that decisions can be made with speed and decisiveness. Positive affect (personalities collaborating in meetings / tasking) has been shown to break down in diverse TMT environments, and thus has a negative effect on decision making and firm performance (Barsade et al., 2000).

### **Demographic diversity**

Within the diversity topic there are various attributes or characteristics that are discussed in the research including age (Tanikawa et al., 2017), gender, ethnicity, religion, nationality, tenure (Pelled et al., 1999), team size (Haleblian & Finkelstein, 1993; Simsek et al., 2005), educational background (Cannella et al., 2008; Wiersema & Bantel, 1992), and functional experience background (Bunderson, 2003; Bunderson & Sutcliffe, 2002; Menz, 2011). Some demographic attributes can be categorized in at least four different categories of variables: visible demographic attributes (such as gender, ethnicity); relational attributes (such as organizational tenure); status attributes (such as marital status); and personal attributes (such as religion, personal beliefs and perceptions) (Kilduff et al., 2000). Tenure is said to be a surrogate for the level of team cohesion (Hambrick et al., 1996), which affects performance (Pegels et al., 2000), as well as result in empowerment (Harrison & Klein, 2007).

There have also been suggestions that demographic data was not as influential and there should be a moratorium on studies focused on its impact on firm performance (Certo et al., 2006). As discussed above, for the purposes of this study, the categorization of demographic diversity (DD) is separated and limited to strictly inherent or visible/observable demographic attributes such as gender, ethnicity, nationality, age, which are more innate to a person. In the data set analyzed, we then only focused on gender, ethnicity, and nationality to create a demographic diversity score to compare in the regression analysis. We delve a bit deeper into functional diversity in the next section.

### **Functional diversity**

Functional diversity (FD) is typically defined as representing the functional expertise of team members within the TMT (Norburn & Birley, 1988). This corresponds to a background in a functional area such as accounting, marketing, operations, strategy, technology, finance, etc. Even within the category of functional diversity there is a specific distinction of intrapersonal functional (within-member functional breadth) and dominant functional (focusing on a specific expertise) (Bunderson & Sutcliffe, 2002; Cannella et al., 2008). One study even made a distinction between types of functional expertise based on operational throughput (operations, process engineering) versus output functions (marketing, sales, product R&D) (Norburn & Birley, 1988). In another study, the inclusion of a CMO (Chief Marketing Officer) increased performance in terms of brand image, innovation, and creativity in the TMT (Nath & Mahajan, 2008). As alluded to above in the demographic diversity section, functional diversity as a specific attribute is often given equal weight in various other studies along with age, gender, ethnicity, tenure, educational background, however, we characterize it as a different category.

The difference with functional diversity from the other types of diversity is that it has an experience component that is not innate to a person's inherent natural identity (Menz, 2011). There is an argument to be made on whether a TMT member possessing multiple functional roles in their background may be best suited for the CEO role in the future (Waller et al., 1995). Those with

diverse functional experience are more apt to have more finely attuned cognitive and attitudinal perspective to contribute to the TMT (Bantel & Jackson, 1989). Due to the level of competitiveness in today's marketplace, managers must be specialized, but also be able to work effectively in cross-functional teams, which supports the importance of functional diversity in the TMT (Mannix & Neale, 2005). In terms of functional diversity, we focused on the roles and background of the executives within the TMT to code for FD to compare in the regression analysis.

### **Business environment in the digital age**

Historically, in the 1900's a firm was run by the president or CEO (Chandler, 1992; Collis & Montgomery, 1991; Kaplan & Norton, 2006), who was typically a dominant CEO (Chatterjee & Hambrick, 2007; Halebian & Finkelstein, 1993) with staff that provided various inputs and carried out operational tasking. As the environment became more complex with technology, competition, internationalization, and customer demands, the firm and CEO needed a TMT that could provide additional significant support to the CEO. Companies driven by this market dynamic began to add members to the TMT in terms of a CFO to manage the finance function and COO to run the operational aspects (Marcel, 2009). Then with increasing demands a CIO was added to manage technology and information as well as a CMO (Nath & Mahajan, 2008) to manage Marketing and Sales. This evolution lands us at the beginning of the current generation (1980-1990s), in which the Internet was born, and the digital age (Yoo et al., 2012) began. The digital era sped business and innovation cycles up and raised expectations of the customers creating a winner take all environment (Downes & Nunes, 2013). This phenomenon then forced companies to have more complex competitive repertoires (Ferrier, 2001), which in turn required even more functional expertise and support in the TMT.

The digital age through the Internet and related capabilities has created a more complex environment for the TMT to manage. In the prior generation, there were only two main channels of communication, which were phone and postal (snail) mail. The customer interaction channels at present have proliferated to a level of complexity that is much more extensive and intensive for the TMT (Liao & Wong, 2008). The business models have also evolved at an equally fast pace with nearly every industry significantly impacted by technology, social platforms, big data analytics, and artificial intelligence (Chen et al., 2012). All the above changes have continued to raise the level of pressure on the TMT and require a different level of support and expertise in order to not only survive but have positive firm financial performance.

### **TMT diversity impact on firm performance**

Focusing strictly from a financial perspective on measuring outcomes from a diverse TMT, there are several studies that have researched this topic (Boone & Hendriks, 2009; Cannella et al., 2008; Carpenter, 2002; Certo et al., 2006; Díaz-Fernández et al., 2014; Díaz-Fernández et al., 2016; Goll, Sambharya, & Tucci, 2001; Halebian & Finkelstein, 1993; Kilduff et al., 2000; Norburn & Birley, 1988; Pegels et al., 2000; Pelled et al., 1999; Priem, 1990; Tanikawa et al., 2017; Wang et al., 2015). There is again some nuance on exact microfocus, but we will summarize the literature and context.

The key performance indicators that are measured in some of the studies are profitability (Boone & Hendriks, 2009; Bunderson & Sutcliffe, 2002; Hambrick & Mason, 1984; Miller et al., 1998; Pegels et al., 2000; Priem, 1990; Simons et al., 1999; Wiersema & Bantel, 1992) and ROA (return on assets) (Boone & Hendriks, 2009; Cannella et al., 2008; Carpenter, 2002; Carpenter & Fredrickson, 2001; Menz, 2011; Nath & Mahajan, 2008).

The method of measurement is straight-forward; identify the firms from which the TMT is studied and then collect the associated financial measures for that time period. In the case of Boone & Hendricks, they substituted ROS (return on sales) as a proxy for ROA, but determined that they were nearly identical (Boone & Hendricks, 2009). Similarly, in the study that Cannella conducted, the ROA was again aligned with the year that the TMT diversity was measured and the correlation was assessed (Cannella et al., 2008). In another example, Carpenter (Carpenter, 2002) similarly leveraged ROA in the corresponding years to determine the financial performance (dependent variable) correlated with the diversity of the TMT. In this case, utilization of Blau's Index (Blau, 1977) was also present (Carpenter, 2002).

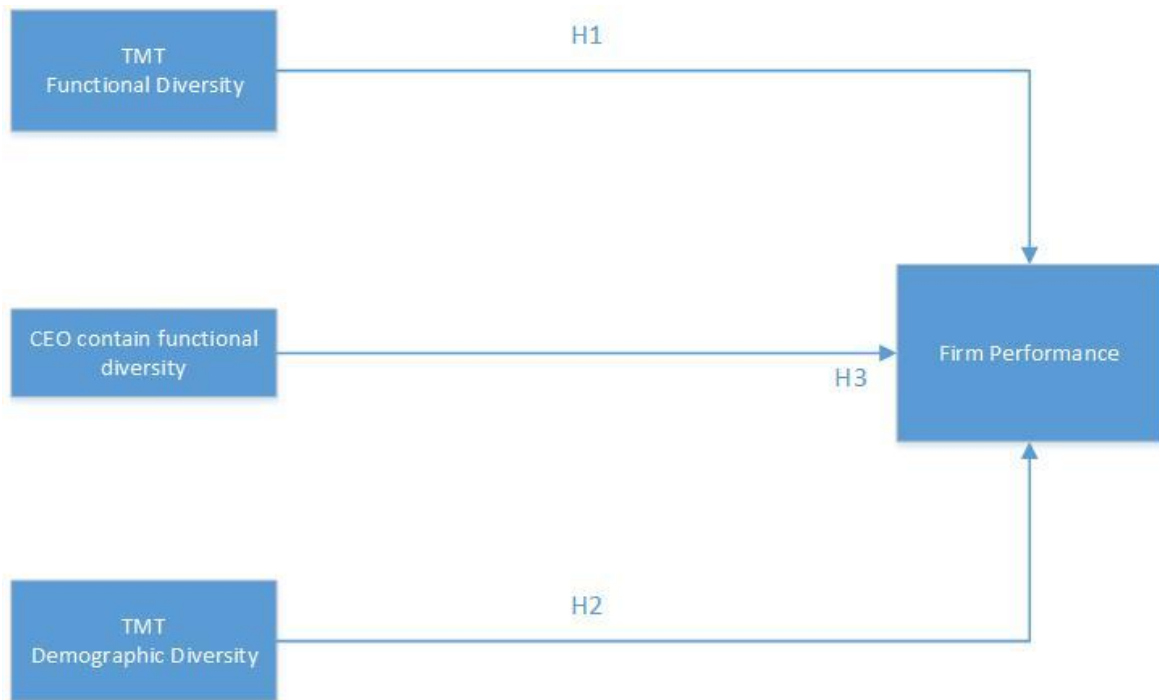
As the citations provide evidence for above, there is precedent to measure the financial performance of the firm as a dependent variable with a variety of TMT diversity attributes as independent variables. In this study, we will draw a distinction between functional and demographic diversity within the TMT and measure the strength of each as it relates to the financial performance of the firm in a similar manner to the ROA examples cited above, however, we will add ROE, and P/E Ratio as well.

## THEORETICAL FRAMEWORK

Research on the impact of diversity in the TMT has been inconclusive (Certo et al., 2006; Mannix & Neale, 2005) on confirming the benefit to firm financial performance. In fact, some research has suggested that TMTs containing heterogeneous characteristics may actually create emotional conflict (Pelled et al., 1999) and negatively affect team cohesion (Harrison & Klein, 2007). The hypothesis is that these analyses have largely focused on demographic diversity as well as dominant functional diversity (Boone & Hendricks, 2009; Bunderson & Sutcliffe, 2002; Cannella et al., 2008).

These studies seem to indicate that while there are some positive attributes, such as creativity (Barsade et al., 2000), overall they are largely negative for overall TMT effectiveness and firm financial performance (Certo et al., 2006; Mannix & Neale, 2005). We believe that these two aforementioned types of diversity are limited in terms of positive impact on financial firm performance. We, however, contend that intrapersonal functional diversity experience background (Bunderson & Sutcliffe, 2002; Cannella et al., 2008) will produce more positive interactions in the TMT due to the ability to manage increased and more complex information processing (Haleblian & Finkelstein, 1993; Marcel, 2009) and lead to superior firm financial performance in terms of financial metrics such as P/E Ratio, ROA, and ROE.

We propose to test a straightforward yet important question: Does TMT functional diversity have a more significant impact than TMT demographic diversity as a predictor of firm level financial performance? Our underlying argument is that diverse work-related experiences are crucial to the capacity of the TMT to manage a firm in today's complex, dynamic digital environment. We view functional diversity as a more direct measure of diverse work-related experience. This is not to say that the variance in perspectives derived from having a demographically diverse TMT is not important. There are numerous reasons why TMTs should be demographically diverse. However, we believe that it is important to disentangle the influence of demographic diversity from functional experience diversity. Our study is a first step in this direction, as we focus on a single industry and financial performance outcomes as our dependent variable of interest. Figure 1 shows the model we will be testing.

**Figure 1**

The hypotheses below focus on analyzing the impact of the type of diversity in the TMT on the financial performance of the firm and also compare the diversity types to distinguish which type of diversity is more important to include in the TMT. We argue that functional experience diversity, when measured separately from innate demographic diversity, will be positively related to firm financial performance. As articulated in the sections above, this is due to the need for diverse cognitive perspectives in the TMT in order to navigate today's complex and dynamic digital environment.

*H1: Functional diversity in the TMT will have a positive impact on firm financial performance.*

The extant research has found mixed results in whether generic innate diversity will impact the financial performance of a firm, and specifically if we tease out demographic diversity solely as innate attributes of a person, and not educational or functional background we believe that there will not be a significant positive relationship between demographic diversity and firm financial performance.

*H2: Demographic diversity in the TMT will have no impact or a negative impact on firm financial performance.*

There are several research studies that focus on the CEO as a special member of the TMT, often referred to as the TMG (Top Management Group) (Knight et al., 1999). Some studies consider the CEO a participant in the TMT, and some designate the CEO as the leader of the TMT (Haleblian & Finkelstein, 1993; Ling, Simsek, Lubatkin, & Veiga, 2008). This is important since we contend that as in H3, that the functional roles that a TMT member has experienced contribute to the positive impact on the TMT and firm financial performance.

With this positive contribution comes recognition and promotion, ultimately leading to a chance for this TMT member to become CEO (Hambrick & Cannella, 2004). This also creates a positive cycle in that when the CEO has significant diversity in terms of the functional experience background, it signifies that they have a common framework with the TMT members that they now effectively manage. This enables them to have more empathy and understanding in the ability to coach and motivate TMT members (Li & Jones, 2018), thus creating an environment for succession of that TMT member to become CEO in the future (Ou et al., 2014).

*H3: Functionally diverse CEO's in the TMG will have a positive impact on firm financial performance.*

## METHOD

The data for this study was collected from 59 Financial Services Fortune 500 companies present in the F500 report in 2018. This data set focused on 59 of the 90 FI (financial institutions) in the F500. The 59 were largely banks, and the remaining firms in FI (31 not included) were mostly insurance companies. To strengthen the significance of these findings, it is important to highlight that these 59 companies are not just a data sample, but the entire population of banking related firms in the F500. The other 410 companies in the F500 represent other industry sectors and thus could be compared with the financial services sector in a subsequent analysis. The data analyzed was of two primary components, which was first the independent variables of demographic and functional diversity metric and secondly the dependent variables of the financial performance metrics (P/E, ROE, ROA).

The criteria for individuals on the TMT to be included in the study was that the executives analyzed must have been in role in the TMT for at least 2 years of the analysis period from 2015 to 2018, which was the same period that comprised the financial metrics averages. The study specifically split out functional diversity from the more generic innate diversity category, and then compared a category of attributes defined as demographic against a category of attributes defined as functional.

Our focus for the data capture for demographic attributes was on gender, ethnicity, and nationality. We acknowledge that there are several attributes that other studies have canvassed, such as age (Díaz-Fernández et al., 2014), tenure (Harrison, Price, & Bell, 1998), education (Ferrier, 2001) that were intentionally excluded from our study. The functional diversity definition was based solely on the two previous role definitions, and intentionally did not include tenure, education, and/or other certifications. For example, if the executive was a COO, but had two other different CxO titles in their background, then they were coded for functional diversity. Lastly, we did not consider extra significance in the coding for those executives that had both a demographic diversity attribute as well as a functional diversity attribute, however, this could certainly be addressed in a future research study.

For each of the 59 companies, we captured 11 roles (See Table 1). The CEO, and 10 members of the TMT. Roles such as the Chief Customer Officer, or Chief Digital Officer that have been mentioned in this paper as well as are found in other studies (Menz, 2011; Yoo et al., 2012), and are present in some companies were not included, as these roles were not consistently present in the TMTs across the data sample. It is important to note that our study differs from others in that we found that within the financial services industry, the roles on the TMT tend to be similar across firms. Thus, we decided to have a fixed number of potential TMT roles (10), as listed below, and a separate measure for the CEO. Since the size of the TMT in our study was

fixed, as was the type of roles, it is not necessary to leverage the Blau's index formula that is a standard for measuring functional diversity (Blau, 1977). Rather, we use a straightforward proportion measure to indicate degree of diversity on the TMT, as described below.

**Table 1: TMT Role Definitions**

<b>TMT (Top Management Team) Role</b>
Chief Executive Officer (Not included in the TMT 10)
Chief Financial Officer (CFO)
Chief Operating Officer (COO)
Chief Marketing Officer (CMO)
Chief Information Officer (CIO)
General Counsel Office (GCO)
Chief Customer Social Responsibility (CCSR)
Chief Communications Officer (CCO)
Chief Human Resources Officer (CHRO)
Chief Risk Officer (CRO)
Primary Business Line Officer (PBLO)

### **Instrumentation - Diversity Measures**

The first independent variable is the demographic diversity mix of the TMT (Top Management Team) as described by three attributes (gender, ethnicity, nationality). Effectively, the executive was coded for demographic diversity (DD) if the attribute was non-white male originating in the US or any demographic not originating in the US, which indicates the under-represented grouping. The process to collect this metric was to review each of the executive biographies and evaluate if they were a member of the three DD attributes. If the executive met the criteria, then they were coded for DD. Then for each of the companies, we calculated the average of DD / 10 (since there were 10 TMT roles), and gave a DD% metric, for example, if there were 4 members of the TMT that met the criteria for demographic diversity, then they would have a DD metric of 40%. For the second independent variable of functional diversity (FD), we followed a similar process to evaluate the functional expertise background, which was defined as having 2 different roles from the current role definition that the executive held. For example, if the CFO had a role as the CIO in the previous job, and led a business line prior to that role, then that executive would be deemed functionally diverse and was coded for FD.

It is important to distinguish the key difference between DD and FD, in that with DD, the attributes are innate, wherein with FD, the attributes are a function of the experience one has accumulated in their career. I used the same calculation as the DD metric, respectively, and as such developed an FD % for each company in the data set.

We ran analyses with two control variables in order to account for high variance in firm size. The largest companies had revenue of over \$100B (billion), and the smaller companies, though still qualifying for the F500, were in the range of \$5B (billion). In order to alleviate such a wide discrepancy, we took the mathematical log of the revenue as a control variable (LogRev). The second control variable we used is the Tobin's Q, which is based on the ratio of market value over assets. This is again a control variable to bring the firm's total size into more of a direct comparison with the other companies. Because Tobin's Q is highly correlated with ROA, it is difficult to interpret the regression results for ROA as dependent variable.

### **Instrumentation - Financial Performance Measures**

The dependent variables are the pertinent financial measures averaged over the 3 collection years from 2015 to 2018 that are common in the extant research such as P/E Ratio (Price / Earnings Ratio), ROA (Return on Assets), ROE (Return on Equity).

### **ANALYSIS**

We tested hypotheses using OLS regression. H1 predicted that functional diversity would positively impact firm performance, while H2 predicted that demographic diversity would not. In models 1-3 respectively, we regressed independent variables demographic diversity and functional diversity against the three performance metrics, P/E Ratio, ROA, and ROE as the dependent variables, with RevLog (Log of Revenue) as a control. In models 4-6, the same analysis was run but with Tobin's Q as the control variable.

We found support for H1 that functional diversity positively and significantly influenced P/E Ratio (Model 1) and ROA (Model 2). The effect was positive but non-significant for ROE (Model 3). We also found support for H2, which was that demographic diversity would not have a significant contribution to the financial performance metrics. H2 was supported for all three performance metrics (P/E Ratio, ROA, ROE) with both control variables.

Lastly for H3 (analysis in Table 4), we are unable to conduct an independent analysis of the effect of CEO functional diversity on financial performance, because nearly all the CEOs in our sample qualified as being functionally diverse. In lieu of an independent test, we added the CEO to the TMT of each firm to then comprise the Top Management Group (TMG). The results followed the result pattern for Hypothesis 1; TMG functional diversity is positively related to the financial metrics (P/E Ratio, ROA, ROE) that we measured in this study.

### **RESULTS**

Table 2 presents the means, standard deviations, and correlations for all variables included in the models. Table 3 presents the regression results for models 1 thru 6. In model 1, the two diversity variables and the control variable accounted for a 12 percent ( $p < .05$ ) of the variance of the PE Ratio. In model 2, the two diversity variables and the control variable accounted for 8 percent ( $p < .10$ ) of the variance of the ROA. In the model 3, which focused on ROE, the two diversity variables and the control variable accounted for 2 percent ( $p > .10$ ), and there is not a significant relationship between these variables.

The analyses are repeated in models 4-6, with Tobin's Q as the control variable. In model 4, with PE Ratio as dependent variable, the pattern of results is similar to model 1; functional diversity is positively related to performance, and demographic diversity is not. In models 5 and 6, Tobin's Q is very highly correlated with ROA and ROE, resulting in no significant relationship between the independent variables and these dependent variables. Table 4 shows the results of Models 7-12, in which the CEO is included in the Top Management Group (TMG). Since all CEOs in our sample had functional diversity, the results, as hypothesized, were very similar to models 1-6, in which the CEO was not included. The addition of the CEO to the TMT to comprise the TMG resulted in slightly stronger results (12.6 percent vs. 12.2 percent) when compared with the TMT analysis.

**Table 2: Pearson's Correlation: Means, Standard Deviations, and Correlations<sup>a</sup>**

Variable	Mean	SD	1	2	3	4	5	6
PE	24.96	17.84						
ROA	2.87	3.85	.309*					
ROE	11.93	15.39	0.156	.530**				
TobinQ	0.60	1.13	0.243	.926**	.607**			
RevLog	4.13	0.36	-0.240	-0.206	0.022	-0.142		
FirmDD	4.44	1.55	-0.072	0.101	-0.182	0.029	0.023	
FirmFD	4.66	1.35	.328*	.292*	0.166	.311*	-0.052	0.106

<sup>a</sup>n = 59.

\* Correlation is significant at the .05 level (2-tailed).

\*\* Correlation is significant at the .01 level (2-tailed).

**Table 3: Results of regression analysis of the TMT (excluding the CEO) demographic and functional diversity variables, PE Ratio, ROA, and ROE<sup>a</sup>.**

	Independent Variables	Model 1: PE	Model 2: ROA	Model 3: ROE
<b>Controls</b>				
	RevLog	-0.221 t	-0.193	0.036
<b>Diversity Variables</b>				
	Functional Diversity	0.328*	.274*	0.189
	Demographic Diversity	-0.102	0.077	-0.203
<b>F</b>		3.698*	2.676 t	1.364
<b>R2</b>		0.168	0.127	0.069
<b>Adjusted R2</b>		0.122	0.080	0.018
<b>df</b>		3,55	3,55	3,55

	Independent Variables	Model 4: PE	Model 5: ROA	Model 6: ROE
<b>Controls</b>				
	TobinQ	.156	.925**	.614**
<b>Diversity Variables</b>				
	Functional Diversity	0.291*	-0.004	-0.004
	Demographic Diversity	-0.108	0.075	-0.200 t
<b>F</b>		3.106*	115.333**	12.681**
<b>R2</b>		0.141	0.863	0.409
<b>Adjusted R2</b>		0.094	0.855	0.377
<b>df</b>		3,55	3,55	3,55

<sup>a</sup> n = 59, <sup>t</sup> p < .10, \* p < .05, \*\* p < .01

**Table 4: Results of regression analysis of the TMG (with CEO inclusion) demographic and functional diversity variables, PE Ratio, ROA, and ROE<sup>a</sup>.**

	Independent Variables	Model 7: PE	Model 8: ROA	Model 9: ROE
<b>Controls</b>				
	RevLog	-0.223 t	-0.192	0.032
<b>Diversity Variables</b>				
	Functional Diversity	0.331*	.264*	0.189
	Demographic Diversity	-0.119	0.149	-0.176
<b>F</b>		3.795*	3.067*	1.153
<b>R2</b>		0.171	0.143	0.059
<b>Adjusted R2</b>		0.126	0.097	0.008
<b>df</b>		3,55	3,55	3,55

	Independent Variables	Model 10: PE	Model 11: ROA	Model 12: ROE
<b>Controls</b>				
	TobinQ	.166	.918**	.632**
<b>Diversity Variables</b>				
	Functional Diversity	0.292*	-0.004	-0.004
	Demographic Diversity	-0.132	0.083	-0.220*
<b>F</b>		3.795*	116.556	13.112**
<b>R2</b>		0.147	0.864	0.417
<b>Adjusted R2</b>		0.100	0.857	0.385
<b>df</b>		3,55	3,55	3,55

<sup>a</sup> n = 59, <sup>t</sup> p < .10, \* p < .05, \*\* p < .01

## DISCUSSION AND LIMITATIONS

Our objective for this study was to examine the relative impact of two sources of cognitive diversity (functional and demographic) in the TMT on the firm financial performance (P/E Ratio, ROA, ROE). Due to the increased complexity in the marketplace with the digital age (Yoo et al., 2012) and impact of big data (Chen et al., 2012), we suggest that cognitively diverse top management teams will be better equipped to analyze information and make decisions in today's rapidly changing and complex business environment. We have argued that functional diversity will be a more robust source of knowledge that will help top management teams lead the strategic design and manage the execution of their firms' competitive repertoires (Ferrier, 2001; Hambrick et al., 1996) in terms of market orientation (Jaworski & Kohli, 1993).

Our hypotheses were tested with a study of 59 F500 Financial Services firms' TMT data comparing the functional diversity with the demographic diversity in terms of impact of the financial performance of P/E ratio, ROA, and ROE. Our analysis suggests that functional diversity

was positively associated with financial performance while demographic was not. Specifically, functional diversity was positively associated with firms' PE ratio for all the permutations of analysis (using the log of revenue and Tobin's Q as control variables and including and excluding the CEO as a member of the TMG).

Functional diversity (both with and without CEO) was positively related to ROA when log of revenue was used as the control variable, but not when Tobin's Q was used. This appears to be due the extremely high correlation between Tobin's Q and ROA. Functional diversity did not have a significant impact on ROE in any of the analyses. Demographic diversity did not have a positive impact on performance in any of the analyses.

The findings in this study enhance the body of knowledge regarding diversity in the TMT, as there has been a lack of comparison between the nuances of the diversity attributes in previous studies. Our research disaggregates some of the attributes from the seminal research that initially focused on TMT composition (Hambrick & Mason, 1984) and provides a deeper analysis with a current data set from the Fortune 500 firms. The implications of the study should not be misconstrued as a conclusion that demographic diversity is not important. This would be an error in the understanding of the purpose of the study.

As discussed in the literature review, there are several studies that measure and have suggested positive correlation with different dependent variables associated with team performance including at the Board level, the TMT/TMG level, as well as at the worker team level. A number of these variables focus on different, more preliminary and intermediate outcomes, such as team cohesion (Harrison & Klein, 2007; Love, 2018), healthy debate (Simons et al., 1999), creativity (Barsade et al., 2000), and team productivity (Díaz-Fernández et al., 2016). Demographic diversity can yield a number of such outcomes.

The focus of our study was to study the impact of diversity on certain financial outcomes. We have argued that in today's dynamic business environment, the breadth of cognitive knowledge resources produced by functional diversity will be more important to financial performance. Our findings support this argument.

Conclusions drawn from our study should consider the limitations of our data and analysis. TMT diversity does not explain a large proportion of variance in performance. Thus, one could conclude that there is no reason to include diversity in the TMT, or one could conclude exactly the opposite, which is that there is no reason not to. One could also argue that there are simply too many variables and other factors involved in between the composition of the TMT and the actual financial outcomes of the company. This could certainly be a viable argument due to the intricacies of the marketplace, however, the data set analyzed in this study suggests that the increased level of functional diversity in the TMT will lead to superior financial performance.

This study focused on the TMT and TMG (Knight et al., 1999; Smith et al., 1994), however, there may be different dynamics both at the board (Certo et al., 2006) (above the TMT/TMG) level as well as teams (Stahl et al., 2009) below the TMT. It is certainly possible that there would be different dynamics for different functions within the company as well. Similar to the point above on teams, it is possible to study different dependent variables to measure in terms of impact on diversity. While this study only focused on the financial performance in terms of P/E, ROA, ROE, there are many other measures of the effects of diversity on team and company performance.

We chose to focus on a single industry, financial services, in order to reduce industry effects. This limits the generalizability of our analysis. It is certainly possible that other industries may experience different phenomena regarding the dynamics that occur between demographic and functional diversity. Even within the FS (Financial Services) industry, one could compare banking

against capital markets and insurance. Our measures of diversity are based on coding the biographies of management team members, which has the potential for introducing errors in measurement. In addition, there is the possibility of collinearity among different measures of diversity (Menz, 2011).

For this study, we were able to separate out the two independent variables and measure them separately to control for this issue, and the correlation between our two measures is not significant. Bunderson and Sutcliffe (Bunderson & Sutcliffe, 2002), highlighted the importance of recognizing the intrapersonal sources of functional diversity, as well as the interpersonal diversity of the TMT.

Our data captured both intrapersonal as well as interpersonal diversity. For instance, the CMO will naturally have marketing expertise (Nath & Mahajan, 2008), however, may also have functional diversity due to prior roles that have experience with. We did not distinguish between levels of intrapersonal functional diversity. This could be an area to delve further into in order to clarify the effect of intrapersonal and interpersonal dominant diversity.

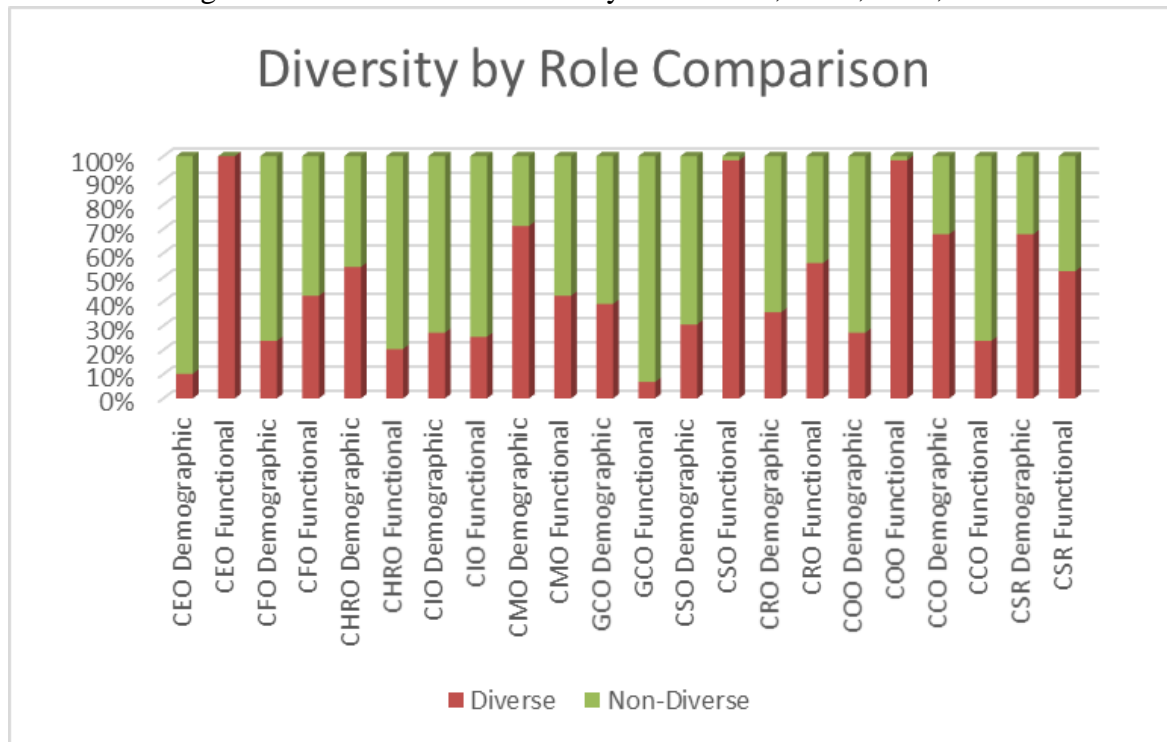
## **CONCLUSION AND FUTURE RESEARCH DIRECTIONS**

In conclusion, we hope to contribute to the literature on top management team diversity by differentiating the effects of functional and demographic diversity on firm financial performance. Our findings support the idea that the cognitive diversity produced by having diverse functional experience is a benefit to firms in today's dynamic, digital business environment. We believe this finding has the potential to encourage several avenues for future research.

From an empirical perspective, while this study only focused on diversity effects on the financial performance in terms of P/E, ROA, ROE in financial services, there are many other approaches to examining the effects of diversity on team and company performance that are worth exploring. From a theoretical perspective, the assumption upon which our conceptual argument is based should be tested. Specifically, we have suggested that diverse cognitive resources help the top management team to guide their firm to success. We argued that diverse functional experience is a source of these cognitive resources. Both assumptions should be examined in future research.

**Figure 2 - Diversity by role for the TMT Descriptive Statistics**

The data shows high levels of Functional Diversity in the CEO, COO, CSO, and CMO roles.

**REFERENCES**

- Bantel, K. A., & Jackson, S. E. (1989). Top Management and Innovations in Banking: Does the Composition of the Top Team Make a Difference? *Strategic Management Journal*, 10(1), 107-124.
- Barsade, S. G., Ward, A. J., Turner, J. D. F., & Sonnenfeld, J. A. (2000). To Your Heart's Content: A Model of Affective Diversity in Top Management Teams. *Administrative Science Quarterly*, 45(4), 802 - 836.
- Beckman, C. M., & Burton, M. D. (2011). Bringing Organizational Demography Back In: Time, Change and Structure in Top Management Team Research. ResearchGate.
- Blau, P. M. (1977). *Inequality and Heterogeneity - A primitive theory of social structure*. New York, NY: Free Press.
- Boone, C., & Hendriks, W. (2009). Top Management Team Diversity and Firm Performance: Moderators of Functional Background and Locus-of-Control Diversity. *Management Science*, 55(2), 165-180.
- Bunderson, J. S. (2003). Team Member Functional Background and Involvement in Management Teams: Direct Effects and the Moderating Role of Power Centralization. *The Academy of Management Journal*, 46(4), 458-474.
- Bunderson, J. S., & Sutcliffe, K. M. (2002). Comparing Alternative Conceptualizations of Functional Diversity in Management Teams. *The Academy of Management Journal*, 45(5), 875-893.
- Cannella, A. A., Park, J.-H., & Lee, H.-U. (2008). Top Management Team Functional Background Diversity and Firm Performance. *The Academy of Management Journal*, 51(4), 768-784.
- Carpenter, M. A. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. *Strategic Management Journal*, 23(3), 275-284. doi:10.1002/smj.226
- Carpenter, M. A., & Fredrickson, J. W. (2001). Top Management Teams, Global Strategic Posture, and the Moderating Role of Uncertainty. *Academy of Management*, 44(3), 533-545.
- Certo, S. T., Lester, R. H., Dalton, C. M., & Dalton, D. R. (2006). Top Management Teams, Strategy and Financial Performance: A Meta-Analytic Examination. *Journal of Management Studies*, 43(4), 813 - 838.

- Chandler, A. D. J. (1992). Corporate Strategy, Structure and Control Methods in the United States During the 20th Century. *Industrial and Corporate Change*, 1(2), 1-22.
- Chatterjee, A., & Hambrick, D. C. (2007). It's All about Me: Narcissistic Chief Executive Officers and Their Effects on Company Strategy and Performance. *Administrative Science Quarterly*, 52(3), 351-386.
- Chen, H., Chiang, R. H. L., & Storey, V. C. (2012). Business Intelligence and Analytics: From Big Data to Big Impact. *MIS Quarterly*, 36(4), 1165-1188.
- Collis, D., & Montgomery, C. (1991). Corporate Strategy: A Conceptual Framework. *Harvard Business Review*, 1(1), 1-9.
- Cyert, R. M., & March, J. G. (1963). *A Behavioral Theory of the Firm* (Vol. 1). Englewood Cliffs, NJ: Prentice Hall.
- Díaz-Fernández, M. C., González-Rodríguez, M. R., & Pawlak, M. (2014). Top management demographic characteristics and company performance. *Industrial Management & Data Systems*, 114(3), 365-386. doi:10.1108/IMDS-04-2013-0210
- Díaz-Fernández, M. C., González-Rodríguez, M. R., & Simonetti, B. (2016). The role played by job and non-job-related TMT diversity traits on firm performance and strategic change. *Management Decision*, 54(5), 1110-1139. doi:10.1108/md-10-2015-0464
- Donnelly, G. (2017). Fortune 500\_ Diversity by the Numbers \_ Fortune. *Fortune*, 2017(7), 1-2.
- Downes, L., & Nunes, P. F. (2013). Big-Bang Disruption: a new kind of innovator can wipe out incumbents in a flash. *Harvard Business Review*, 2013(3), 1-12.
- Eisenmann, T., Parker, G., & Alstyne, M. V. (2011). PLATFORM ENVELOPMENT. *Strategic Management Journal*, 32(12), 1270-1285.
- Ferrier, W. J. (2001). Navigating the Competitive Landscape: The Drivers and Consequences of Competitive Aggressiveness. *The Academy of Management Journal*, 44(4), 858-877.
- Ferrier, W. J., & Lyon, D. W. (2004). TMT - Competitive Repertoire Simplicity and Firm Performance -The Moderating Role of Top Management Team Heterogeneity. *Managerial and Decision Economics*, 25(6/7), 317-327. doi:10.1002/mde.1193
- Fleischer, R. (2018). Fast-Company - Your C-suite is way too crowded. *Fast Company*, 2018(4), 1-2.
- Goll, I., Sambharya, R. B., & Tucci, L. A. (2001). Top management team composition, corporate ideology, and firm performance. *Management International Review*, 41(1), 109-129.
- Haleblian, J., & Finkelstein, S. (1993). Top Management Team Size, CEO Dominance, and Firm Performance: The moderating roles of environmental turbulence and discretion. *Academy of Management Journal*, 36(4), 844 - 863.
- Hambrick, D. C., & Cannella, A. A. J. (2004). CEOs Who Have COOs: Contingency Analysis of an Unexplored Structural Form. *Strategic Management Journal*, 25(10), 959-979. doi:10.1002/smj.407
- Hambrick, D. C., Cho, T. S., & Chen, M.-J. (1996). The Influence of Top Management Team Heterogeneity on Firms' Competitive Moves. *Administrative Science Quarterly*, 41(4), 659-684.
- Hambrick, D. C., Finkelstein, S., & Mooney, A. C. (2005). Executive Job Demands: New Insights for Explaining Strategic Decisions and Leader Behaviors. *The Academy of Management Review*, 30(3), 472-491.
- Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons- The Organization as a Reflection of Its Top Managers. *The Academy of Management Review*, 9(2), 193-206.
- Handika, R. F., & Wibowo, A. (2018). Top Management Team Diversity - The Strategic Isomorphism and Firm's Performance: A Study in the Indonesian Banking Industry. *Academy of Strategic Management Journal*, 17(3), 1-11.
- Harrison, D. A., & Klein, K. J. (2007). What's the Difference? Diversity Constructs as Separation, Variety, or Disparity in Organizations. *The Academy of Management Review*, 32(4), 1199-1228.
- Harrison, D. A., Price, K. H., & Bell, M. P. (1998). Beyond Relational Demography - Time and the Effects Surface level and Deep level diversity. *Academy of Management Journal*, 41(1), 11.
- Henderson, A. D., & Fredrickson, J. W. (1996). Information-Processing Demands as a Determinant of CEO Compensation. *Academy of Management Journal*, 39(3), 575-606.
- Hunt, V., Layton, D., & Prince, S. (2015). Diversity Matters. *McKinsey&Company*, 1(1), 1-24.
- Jaworski, B. J., & Kohli, A. K. (1993). Market Orientation - Antecedents and Consequences. *Journal of Marketing*, 57(1), 53-70.
- Jones, S. (2017). Fortune 500\_ 7 in 10 Senior Executives Are White Men \_ Fortune. *Fortune*, 2017(6), 1-4.

- Kaplan, R. S., & Norton, D. P. (2006). Corporate Strategy and Structure: Historical Perspective. *Harvard Business Review*, 1(1).
- Kilduff, M., Angelmar, R., & Mehra, A. (2000). Top Management-Team Diversity and Firm Performance: Examining the Role of Cognitions. *Organization Science*, 11(1), 21-34.
- Knight, D., Pearce, C. L., Smith, K. G., Olian, J. D., Sims, H. P., Smith, K. A., & Flood, P. (1999). Top Management Team Diversity, Group Process, and Strategic Consensus. *Strategic Management Journal*, 20(5), 445 - 465.
- Krishnan, H. A., Miller, A., & Judge, W. Q. (1997). Diversification and Top Management Team Complementarity: Is Performance Improved by Merging Similar or Dissimilar Teams? *Strategic Management Journal*, 18(5), 361-374.
- Lant, T. K., Milliken, F. J., & Batra, B. (1992). The Role of Managerial Learning and Interpretation in Strategic Persistence and Reorientation: An Empirical Exploration. *Strategic Management Journal*, 13(8), 585-608.
- Li, M., & Jones, C. D. (2018). The Effects of TMT Faultlines and CEO - TMT Power Disparity on Competitive Behavior and Firm Performance. *Group & Organization Management*, 1(41), 1-41. doi:10.1177/1059601118813790
- Liao, Z., & Wong, W. K. (2008). The Determinants of Customer Interactions with Internet-Enabled e-Banking Services. *The Journal of the Operational Research Society*, 59(9), 1201-1210. doi:10.1057/palgrave.jors.2602429
- Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). Transformational Leadership's Role in Promoting Corporate Entrepreneurship: Examining the CEO-TMT Interface. *The Academy of Management Journal*, 51(3), 557-576.
- Love, L. R. (2018). Group Cohesion - The Effect of Diversity. *Global Journal of Management and Marketing*, 2(1), 1-10.
- Mannix, E., & Neale, M. A. (2005). What Differences Make a Difference? The Promise and Reality of Diverse Teams in Organizations. *Psychological Science in the Public Interest*, 6(2), 31-55.
- Marcel, J. J. (2009). Why Top Management Team Characteristics Matter When Employing a Chief Operating Officer: A Strategic Contingency Perspective. *Strategic Management Journal*, 30(6), 647-658.
- Menz, M. (2011). Functional Top Management Team Members. *Journal of Management*, 38(1), 45-80. doi:10.1177/0149206311421830
- Michel, J. G., & Hambrick, D. C. (1992). Diversification Posture and Top Management Team Characteristics. *The Academy of Management Journal*, 35(1), 9-37.
- Miller, C. C., Burke, L. M., & Glick, W. H. (1998). Cognitive Diversity among Upper-Echelon Executives: Implications for Strategic Decision Processes. *Strategic Management Journal*, 19(1), 39-58.
- Nath, P., & Mahajan, V. (2008). Chief Marketing Officers: A Study of Their Presence in Firms' Top Management Teams. *Journal of Marketing*, 72, 65-81.
- Norburn, D., & Birley, S. (1988). The Top Management Team and Corporate Performance. *Strategic Management Journal*, 9(3).
- Ou, A. Y., Tsui, A. S., Kinicki, A. J., Waldman, D. A., Xiao, Z., & Song, L. J. (2014). Humble Chief Executive Officers' Connections to Top Management Team Integration and Middle Managers' Responses. *Administrative Science Quarterly*, 59(1), 34-72. doi:10.1177/0001839213520131
- Pegels, C. C., Song, Y. I., & Yang, B. (2000). Management Heterogeneity, Competitive Interaction Groups, and Firm Performance. *Strategic Management Journal*, 21(9), 911-923.
- Pelled, L. H. (1996). Demographic Diversity, Conflict, and Work Group Outcomes: An Intervening Process Theory. *Organization Science*, 7(6), 615-631.
- Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the Black Box: An Analysis of Work Group Diversity, Conflict, and Performance. *Administrative Science Quarterly*, 44(1), 1-28.
- Priem, R. L. (1990). Top Management Team Group Factors, Consensus, and Firm Performance. *Strategic Management Journal*, 11(6), 469 - 478.
- Simons, T., Pelled, L. H., & Smith, K. A. (1999). Making Use of Difference: Diversity, Debate, and Decision Comprehensiveness in Top Management Teams. *The Academy of Management Journal*, 42(6), 662 - 673.
- Simsek, Z., Veiga, J. F., Lubatkin, M. H., & Dino, R. N. (2005). Modeling the Multilevel Determinants of Top Management Team Behavioral Integration. *The Academy of Management Journal*, 48(1), 69-84.

- Smith, K. G., Smith, K. A., Olian, J. D., Henry P. Sims, J., O'Bannon, D. P., & Scully, J. A. (1994). Top Management Team Demography and Process: The Role of Social Integration and Communication. *Administrative Science Quarterly*, 39(3), 412-438.
- Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. (2009). Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. *Journal of International Business Studies*, 41(4), 690-709. doi:10.1057/jibs.2009.85
- Tanikawa, T., Kim, S., & Jung, Y. (2017). Top management team diversity and firm performance: exploring a function of age. *Team Performance Management*, 23(3). doi:10.1108/TPM-06-2016-0027
- Thomas, J. B., & McDaniel, R. R. J. (1990). Interpreting Strategic Issues: Effects of Strategy and the Information-Processing Structure of Top Management Teams. *The Academy of Management Journal*, 33(2).
- Waller, M. J., Huber, G. P., & Glick, W. H. (1995). Functional Background as a Determinant of Executives' Selective Perception. *The Academy of Management Journal*, 38(4), 943 - 974.
- Wang, X., Ma, L., & Wang, Y. (2015). The impact of TMT functional background on firm performance: Evidence from listed companies in China's IT industry. *Nankai Business Review International*, 6(3), 281-311. doi:10.1108/NBRI-11-2013-0040
- Wiersema, M. F., & Bantel, K. A. (1992). Top Management Team Demography and Corporate Strategic Change. *Academy of Management*, 35(1), 91 - 121.
- Yoo, Y., Boland, R., Lyytinen, K., & Majchrzak, A. (2012). Organizing for Innovation in the Digitized World. *Organization Science*, 23(5), 1398-1408.

# RETAIL CUSTOMER SENTIMENT ANALYSIS: CUSTOMERS' REVIEWS OF TOP TEN U.S. RETAILERS' PERFORMANCE

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## ABSTRACT

*The retail industry is essential for the US economy as it generates jobs, revenues and creates about 10% of gross national product. The sales revenue forecast is around \$5.48 trillion (Statista, 2018) for retail for 2020. The health of retail operations depend on customers' confidence and satisfaction with retailers. The changes in technology and social media offer opportunities for customers to share their thoughts and comments of their retail experiences candidly and easily. Social platforms provide unique environments for researchers to mine these genuine comments for a better understanding of real-life customer-retailer interactions that may reveal attributes that are prone to service failures and successes.*

*In this exploratory study, the authors aim to analyze and understand the content customer sentiments collected from social media platforms about top ten US retailers, which generated billions of dollars in sales from more than 35,000 stores and through online interactions in 2017. This analysis includes identifying service attributes, retailers' perceived performances on these as well as the details of buying and consumption experiences that motivate customers to share their sentiments on social platforms. The recent state of the retail industry and important service attributes are reviewed. Then, content analysis of sentiments for each individual retailer are provided.*

*The results emphasized once more that relationship marketing required obtaining continuous feedback, both positive and negative, from customers, rewarding praises and compensating the complaining customers in a fair and timely manner. Customer expectations, experiences and consequences of these experiences were important in future retail store choices. Consumers voiced negative consequences in the form of complaints. Complaining customers were actually attempting to correct the imbalance in their relationship with the retailer. In fact, this research revealed that, many sentiments had both positive and negative aspects in their full narrative. The most common themes of praise and critique were about the state of the store, employee and customer service.*

**Keywords:** Retail Industry, Top 10 U.S. Retailers, Sentiment Analysis, Customer Perceptions, Customer Complaints

## INTRODUCTION

In the U.S., retail stores are abundant across the nation. The retail industry has an important role in the US society and economic community. According to the IRS (Internal Revenue Service),

the retail industry makes up about 10 percent of the gross national product. In 2013, customer spending was 70 percent of U.S. gross national product. The total amount of retail establishment is currently near 3.8 million in the United States, and overall sales revenue reached about \$2.6 trillion in 2016. In 2016, the retail industry has supported more than 42 million jobs in the United States. (SELECTUSA, 2017). According to the National Retail Federation's "Retail Means Jobs", retail employees take a huge part of U.S. jobs: the amount is about a quarter of every U.S. job, which has third highest number of employees in the U.S. (Maurer 2018). The total sales revenue in the U.S. retail industry have been increasing from \$4.35 trillion in 2012 to \$5.16 trillion in 2018. The total amount of sales revenue in 2020 is expected to be around \$5.48 trillion. The rate of growth from 2012 to 2018 is 15.70 percent and the rate from 2012 to 2020 is projected to be at 20.62 percent. This shows how much the retail industry has been impacting and developing the U.S. (Statista, 2018).

According to Graves (2017), customers want retailers to respect them. Customer sentiments are invaluable for retailers that want to understand customer needs and wants better to gain differentiation. Hence, retailers need to provide effective methods and outlets that allow customers to suggest, comment, and criticize about the products or services. A retailer that responds quickly, positively, efficiently, and effectively to customer critiques can build stronger relationships. Any solution that the retailer provides to its customer should be mutually beneficial. Communicating how the solution works for the customer is as important as the solution per se (Graves, 2013).

Recently, a ranking of the most important retail service attributes for grocery stores was published (Major 2018). Selection variety and quality of selections of different categories hold the majority of 21 attributes. (Table 1) When we examine top US retailers, majority of the retailers do grocery regardless of what they specialize. Apparently, this category attracts customers to their stores. Retailers design specific service attributes and experiences for customers based on their perceptions of customer expectations. Customers, on the other hand, may have different expectations based on their experiences and interpretations of retailer promises. Open communication channels among retailers and their customers help them to understand the impact of attribute designs on customer's day-to-day activities, and give retailers a chance to re-work on subpar offerings.

As the Table 1 shows above, staff of the customer service department is one of the most important service attributes, which is defined as "the assistance and advice provided by a company to people who buy or use its products or services" (google.com, 2018). According to McGovern (2013), 92 percent of customers responded that "customer service" is the most important part in the customer experience. The key to providing a consistent customer service experience is the interaction between the customers and retailers. Eighty five percent of customers responded that "service support" is also important in customer experience. In other words, customers want help with the service that the retailer provides as the consumer uses the product or service. Furthermore, 70 percent of customers responded that "product support" is also important and needed in the customer experience. Customers are also concerned about "product reliability and quality" (McGovern, 2013).

<b>TABLE 1: THE MOST IMPORTANT RETAIL SERVICE ATTRIBUTES FOR GROCERY STORES</b>	
<b>Rank</b>	<b>Attribute</b>
1	Prices
2	Overall value
3	Quality of fresh produce
4	Quality of fresh meat
5	Location
6	Ease of shopping
7	Staff customer service
8	Shopping environment/atmosphere
9	Quality of deli department
10	Quality of private label products
11	Quality of fresh seafood
12	Quality of fresh prepared meals
13	Information in the retail circular/flyer
14	Selection of household care products
15	Selection of personal care products
16	Selection of new products
17	Selection of specialty food products
18	Convenient digital/mobile offerings
19	Availability of in-store pharmacy
20	Access to in-store experts
21	Availability of curbside grocery pickup

Source: Major (2018)

Another attribute that customers are concerned about is “location”. Brick and mortar retail stores have to be in easily accessible locations for customers, for the distance between the stores and customers affects the sales amount. Ease of access concept is one of the enablers of online retail stores. For example, eMarketer estimates that online retail sales are likely to increase from \$2.290 trillion in 2017 to \$4.479 trillion by the end of 2021 (eMarketer, 2017); an estimated 16% increase shows that the online store trend is here to stay. As retailers realize this, many have increased the number of online stores since many customers are moving to online shopping. Online stores allow customers to not only purchase products, but also receive more information about the products and learn from other consumers who have previously used the products (Verma, Sharma, and Sheth, 2016).

Service quality issues would make customers dissatisfied (Brunot, 2017). A better understanding of complaints will help retailers to solve minor problems before they become major issues. For example, failed delivery on the promised day, unexplained fees, poor customer greetings, and unnecessary waiting may seem minor compared to other daily activities in a retailer’s operation, but they will make customer disappointed and dissatisfied.

Customers always want respect from retailers, but ignoring a customer’s opinion or a late response can lead to poor customer service. (Olga, 2014). When actual services do not meet customers’ expectations, customers tend to complain. Customer complaint is "an expression of dissatisfaction on a customer's behalf to a responsible party" (Landon, 1980, p.335). Customer

complaints should not be considered as only a negative review, but a report that is explaining the problem of service or products. Sometimes these complaints may have new product or service suggestions. Therefore, they are valuable and help the company to supplement their service or products.

One interesting fact is when a retailer offers an excellent recovery to a dissatisfied customer, customer's satisfaction with this retailer can be higher than other retailers that the customer did not have any issues with (Wen, Wu, and Wu, 2010). Harris states, the quality of service recovery has a positive impact on customer satisfaction level in future behavior (Harris, Grewal, Mohr, Bernhardt, Bernhardt, 2006). That means when a company has a dissatisfied customer whose problem was effectively resolved, the dissatisfied customers can turn to be a loyal customer. As a result, "Complaining customers should be regarded as an asset to the company" (Hansen, Wilke, Lynne, 2009, p. 16).

Proper complaint management is a difficult task. Many customers prefer not to complain because they may feel that it is a waste of their time or effort. In addition, the complaint process may be too complex. Instead as an easier solution, they may start negative word-of-mouth among their friends and families (Cheung, Anitsal, and Anitsal, 2007). Without any complaints from customers, the company managers delude themselves that the customers are fully satisfied with their service. (John Goodman and Steve Newman 2003).

On the other hand, unresolved complaints may be detrimental to a retailer's future profitability. Still, some companies ignore customer complaints. Many of U.S. retailers are using social media to establish a relationship with their customers. Even though customers complain through social media, 65 percent of them did not get an answer from the company (Dorfman, 2011). According to Hansen et.al (2009), the reason for the low response rate is that the managers or the employees are tired of endless complaints. Employees and managers believe these customers are complaining only about trivial matters, thus they do not try to recover the situation and instead ignore the complaints (Hansen, Wilke, Lynne, 2009).

The last problem is that the solution may not be satisfactory for the customers. A compensation may take a long time to arrive; it may not be enough to recover customer loss; or it may be too much effort for the customer. In those cases, customers may prefer to stop the process and start negative word-of-mouth on social media or other platforms. (Cheung, Anitsal, and Anitsal, 2007). Delayed response may be as bad as no response at all. The company eventually may lose its customers even though the managers thought that they tried to fix the problem.

According to Verma, Sharma, and Sheth, (2016) three outcomes are possible for customers: the expectation of continuity, Word of Mouth, and customer loyalty. In their study, an expectation of continuity is defined as "customer's intention to maintain the relationship in the future; the likelihood of continued purchases from the seller" (p. 209). They suggested that, the expectation of continuity is highly related to commitment, relationship satisfaction, and relationship quality. Commitment is the desire to continue with the valued relationship. Relationship satisfaction is the customer's satisfaction from the relationship with the company. Relationship quality is the strength of the relationship (Crosby, 1990). Word of mouth (WOM) is one method of communication between customers. Negative WOM may happen when customers are dissatisfied with the solution from the company or when the complaints are mishandled (Cheung, Anitsal, and Anitsal, 2007; Kendra, Lionel, and Jacqueline, 2013).

Wen, Wu, and Wu, (2010) found that the unsatisfied customers would have a negative image of institutional effectiveness that in turn would decrease their trust and future purchase intentions from that retailer. The researchers found that the negative Word of Mouth (WOM) has

more than two times of an effect on retailers than positive WOM. In other words, when customers are exposed to negative WOM, they have a negative perception and is hard to recover their perceptions with positive WOM (Arndt, 1967). Along with the importance of customer voices in the retail industry, the development of technology accelerates the spread of complaints and positive or negative WOM. Customers now have been able to voice their criticisms worldwide through the internet.

Customer loyalty is no less important than WOM. According to Verma, Sharma, and Sheth, customer loyalty is defined as “A deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future,” (2016, p. 213) despite situational influences and marketing efforts having the potential to cause switching behavior. As reported by Divakar, Ratchford, and Shankar (2005) promotions and loyalty programs can change customers' purchase behavior. (Divakar et al. 2005; Kopalle and Neslin, 2003). Customer satisfaction and loyalty are two essential concepts for building relationships with customers. One effective way to understand customer loyalty is analyzing the customer's evaluation of the service. (Gupta and Zeithaml, 2006). Furgison (2017) suggested several ways to increase customer loyalty. First, make customer service a priority. Employees should be kind and support customers when they need help. Second, provide unexpected rewards to customers such as special discounts or gift cards. Third, ask and listen to customers about their satisfaction with the service. Fourth, provide conveniences to customers to consume. Lastly, treat customers as a family, not just as people who pay.

### **Developments in the Retail Industry**

After briefly reviewing retailer-customer relationship concepts, let us look at the retail industry and top players. The National Retail Federation determine the ranking of top retail companies based on their sales revenue, this chart represents the changes of sales revenue ranks from 2014 to 2017.

As shown by the Table 2, the top three store's rankings have not fluctuated since 2014. Of the highest rank is Wal-Mart with a net income of \$9.9 billion. Becoming the most trustable retailer by providing easier and effective shopping experience to its customers is their mission (Wal-Mart Annual Report 2017). Kroger's net income is \$1.9 billion. Their goal is to leverage The Kroger Co. Foundation and company-wide community investment efforts by asking their partners to join their business – especially Feeding America and the World Wildlife Fund (Annual Report 2017). Costco's net income is \$2.7 billion. They visualize their key long run success factors as how they treat, engage, and include people: members, employees, and their suppliers. (Annual Report 2017). Those three companies have kept their respective ranks continuously from 2014 to 2017. Other company ranks have slightly changed, especially companies such as Walgreens, CVS, Amazon, Lowe's, Albertsons, and Target. In 2017, the net incomes of each company were Target: \$2.67 billion, Home Depot: \$8.6 billion, Walgreens: \$4.08 billion, CVS: \$6.6 billion, Amazon: \$3.0 billion, Albertsons: \$46.3 million, and Lowe's: \$3.44 billion.

It is interesting to note that Target is losing its position, going down from fourth to eighth, while Amazon and CVS are jumping up during the four years of investigation. There may be multiple variables causing this change, some internal for the specific retailer and some external stemming from the macro environment. We are interested in how customers of these top retailers feel about the service they got during this period. In this exploratory research, we want to mine customer sentiments of top ten retailers from social media platforms. Customers continuously monitor reviews of others before making any purchase decisions, hence they

influence others' purchase and consumption decisions, which in turn may change the sales revenue of retailers. The purpose of this study is to identify emerging categories of retailer attributes mentioned in customer sentiments and understand which attributes are related to which type of sentiments, negative, neutral or positive. In order to avoid bias, we started out identifying pre-defined categories. We expect the categories to reveal themselves as we analyze the data.

**TABLE 2:  
TOP 10 US RETAILERS BASED ON THEIR SALES REVENUES (2014-2017)**

Sales Rank	2014		2015		2016		2017	
1	Wal-Mart	-	Wal-Mart	-	Wal-Mart	-	Wal-Mart	-
2	Kroger	-	Kroger	-	Kroger	-	Kroger	-
3	Costco	-	Costco	-	Costco	-	Costco	-
4	Target	-	Home Depot	-	Home Depot	-	Home Depot	-
5	Home Depot	-	Walgreens	↑	Walgreens	-	CVS	↑
6	Walgreens	-	Target	↓	Target	-	Walgreens	↓
7	CVS	-	CVS	-	CVS	-	Amazon	↑
8	Lowe's	-	Lowe's	-	Amazon	↑	Target	↓
9	Amazon	-	Amazon	-	Albertsons	↑	Lowe's	↑
10	Safeway	-	Safeway	-	Lowe's	↓	Albertsons	↓

↓ : Rank decreased (compared to last year) ↑ : Increased rank — : The rank did not changed

## METHOD

This study collected customer's sentiments data from the top ten U.S. retailers: Wal-Mart, Kroger, Costco, Home Depot, CVS, Walgreens, Amazon, Target, Lowe's, Safeway (National Retail Federation, 2017) as explained by Kinard (2015). More specifically, this study collected customer reviews of the U.S. top ten retailers posted in consumeraffairs.com. The Web Scraper Extension was also used in this study to create the sitemap of the data (web scraper 2018). This data provides candid reviews and sentiments of customers as they describe the consumption experience. It does not contain the bias of socially correct responses to survey questions.

The sample size was a total of 4,863 of customer sentiments. After the data was collected, two programs were used to analyze the customer sentiments. First, the Excel based Sentiment Analysis tool was used to distinguish positive and negative attributes. This tool categorized customer sentiments on a scale of ten; -5 represented the most negative sentiment and +5 represented the most positive sentiment. Every strength is based on adjectives used in the statements. Each adjective has a various strength associated with them. For example, perfect, nice,

and good all are positive sentiments, but have different positive strengths. Some have a stronger positivity or negativity.

Then Semantria combined them to calculate the averages of negative, neutral and positive sentiments. The average sentiment scores have calculated these differences (Semantria 2015). The three categories are distinguished by different colors. The negative sentiments are represented by red, the neutral represented by yellow, and the positive represented by green (datapigtechnologies.com, 2015). Secondly, Semantria gives sentiment values, and it can also recognize categories and whether the categories are represented in a positive or negative tone. This program has visualization components and can cluster the data into meaningful ways (semantria.com, 2015).


## RESULTS AND DISCUSSION

The results of the sentiment analysis for top ten US. Retailers are summarized in the Table 3. The percentage of sentiment scores give the ratio of sentiments in each category to overall scores. For example, percent negative sentiments are responses coded between -5 and -1 to overall scores. Similarly, neutral scores coded between -1 and +1 to overall scores give percent neutral sentiments. Average negative sentiment (or neutral or positive) scores show negative (or neutral or positive) are the sentiments in each category. For example, 61.11 percent of all sentiments for CVS is negative. However, the average negative score for CVS is -1.38, which is close to neutral area. In other words, majority of customers of CVS were complaining, but their sentiments were not very negative towards CVS. Its average neutral sentiment was significantly higher than its competitors were, and was close to +1. Only few gave positive sentiments about CVS, but 3.67 was significantly higher than the rest of the retailers.


The sentiment scores of retailers give interesting insights. For example in Walmart's case, high percent of positive sentiments and low average of positive sentiments indicated that customers were mildly pleased but not delighted or excited about the retailer. In Target's case, percentage of positive sentiments were still high, but complaining customers were significantly upset about the service they were receiving. CVS is quickly rising in the top 10 rank. Even though CVS had fewer positive sentiments, those customers are significantly delighted with the retailer. Wal-Mart has the lowest negative sentiments percentage and the second highest positive sentiments between the ten retailers. CVS has the highest negative sentiments percentage and the lowest positive sentiments (Table 3). Even though CVS has the highest negative sentiments percentage, the average of negative sentiment is only -1.38. This is much lower compared to other companies' negative sentiment scores average. In other words, even though customers have negative sentiments towards CVS, they are not extremely angry at CVS. CVS also has the highest average of positive sentiment scores. This could be one reason why CVS's rank is not the lowest of the list, even though they have the highest negative sentiments and lowest positive sentiments percentage. In a similar case, Costco has the second lowest percentage of positive sentiments, but their average positive sentiments score is the highest between ten retailers. That is how Costco keeps their rank as the third highest ranked retailer.

**TABLE 3: TOP 10 US BASE RETAILERS**

Retailer Rankings		Sample Size	Negative Sentiments (%)	Neutral Sentiments (%)	Positive Sentiments (%)	Average of Negative Sentiment Scores	Average of Neutral Sentiment Scores	Average of Positive Sentiment Scores
1	Wal-Mart	510	11.18	67.65	21.00	-2.29	-0.44	1.31
2	Kroger	375	17.07	69.33	13.60	-2.24	-0.17	1.89
3	Costco	524	24.62	65.84	9.54	-1.85	-0.02	2.25
4	Home Depot	525	22.10	67.05	10.86	-1.84	-0.15	1.82
5	Walgreens	536	20.52	73.13	6.34	-2.05	-0.42	1.85
6	Target	586	12.29	65.53	22.18	-2.23	-0.44	1.51
7	CVS	540	61.11	38.33	0.56	-1.38	0.42	3.67
8	Lowe's	501	14.77	66.47	18.76	-2.07	-0.30	1.49
9	Amazon	464	19.83	72.63	7.54	-2.02	-0.17	1.99
10	Safeway	299	25.75	61.20	13.04	-1.82	-0.10	1.79

 : Extremely high compared to the average

 : Higher than the average

 : Lower than the average

In the next section, we analyze customer comments for each individual retailer. We identified multiple themes from these comments. We also include quotes to describe the customer's situation. These comments were selected as better representations of themes repeated until theoretical saturation is reached.

## Walmart

Sentiment scores analysis generated the emerging themes for each retailer. The red words represent negative sentiments and the green words represent positive sentiments. The font size represents how frequently the same category was mentioned in the database. As the color gets bolder the negativity of the sentiment increases.

The top three important emerging themes of Walmart are “store”, “employee”, and “cards” (Figure 1). The first theme, “store”, was the complaints about the store's environment such as the facilities, equipment, and system. Customers are disappointed with the poor equipment facility such as broken handicapped carts, terrible merchandise selection, and poorly stocked shelves. In a retail store, customers want to shop in clean and organized stores. Customers also appreciate the quality of products and dislike the lack of maintenance. Customers do not like when the conditions are not fulfilled to their expectations as pointed out in the following quote:



office, they would just send her an email and it's no big deal to them. How unprofessional and rude to scream at your customers..."

"...Store manager never available in Walmart. Anytime I ask for him, answer is "HE IS ON VACATION..."

"...No one is helpful with helping me find things. When I go to check out they are very rude also. The customer service people are always talking to another customer service person."

The last emerging theme is "cards", which includes debit cards, credit cards, and gift cards. The most common reason that customers comment about cards is because of the incorrect transaction or charge and the system not accepting the card. Other complaints are about the late refund process. Customers feel uneasy, while they are waiting for a financial issue to be resolved, and it causes huge dissatisfaction. Retailers may send gift cards to dissatisfied customers as compensation, however, some customers may think that gift cards are insincere and not enough to recover his/her damages as mentioned in the following quotes:

"...After being told the items had shipped and were on the way, I received an email from Walmart stating that unfortunately they were unable to ship the entire order and they sent me a \$10 gift card for my troubles. Every one of my friends and family who ordered this item were told the same thing. How can a company offer a product, tell the customers that it had shipped and then say, 'Oops, sorry, we couldn't ship the whole order'?"

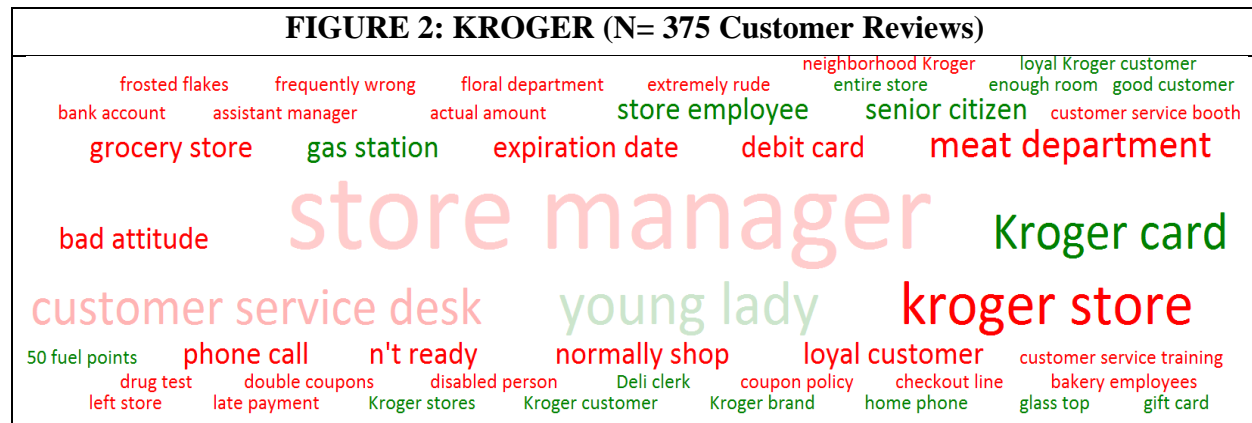
"Every time I try to place an order with Walmart, I am not getting through. Why are they not accepting my credit card?"

"I purchased approximately 40 items from Walmart Morgan Hill this evening. After getting home, I noticed that Walmart incorrectly charged me for two Mobil 1 motor oils at \$24.98/each, yet I only had one..."

"...When I purchased a Christmas present, I used my Debit Card. I had to return the item and the purchase price was credited back to my Debit Card. 2 days later it still has not shown back to my bank account. Upon calling the Manager of this Walmart I was informed it would take 2 weeks for it to show back up on my account..."

## **Kroger**

The top three important emerging themes of Kroger are "employee", "store", and "card" (Figure 2). The first emerging theme is "employee". Customers want to receive respectful service and a comfortable shopping experience. Rude employee attitudes and the lack of communication between customers and employees can easily turn into a horrible shopping experience such as these following quotes:



“...The assistant store manager and front end managers were not only ignorant regarding the policy, but they were extremely rude and disrespectful...”

“...The guy \*\* could not get the orders right. He lost our coupons and the manager Mr. \*\* had a bad attitude and wasn't able to assist. He was walking around like he didn't know what to do. The guy \*\* was trying to leave because his shift was over. It was just a horrible experience...”

“I went to customer service booth to pay my utility bill. The lady behind the counter walked away without saying a word. Another store employee told me that she had closed the booth for lunch. This aggravated me since it was only 11:00 am and had been open for one hour...”

The second emerging theme is “store” (Figure 2). Customers want a great selection and quality healthy foods from a well-arranged store. The following quotes criticize unorganized shelves and less than fresh produce. Kroger seems to be pushing U-Scan and reducing the number of cashiers during off hours. Customers are not happy with this change.

“I got an under ripe watermelon. This was a month ago, the melon and the rest of the spoiled or under ripe fruit. I took Italian sausage links back and an orange. I threw the other one away before I realized the second orange was bad too. I am shopping at Schnucks from now on. ... I have gotten a lot of bad meat, bread, and cheese...”

“...stocking of the shelves has become horrible. Items are not being ordered, the item next to it is simply moved over to the empty spot. Unfortunately, this is happening across the entire store, not just a single aisle...”

“...no cashiers and it's just the U-Scan that was available this morning. Then the scanners would not scan the items...”

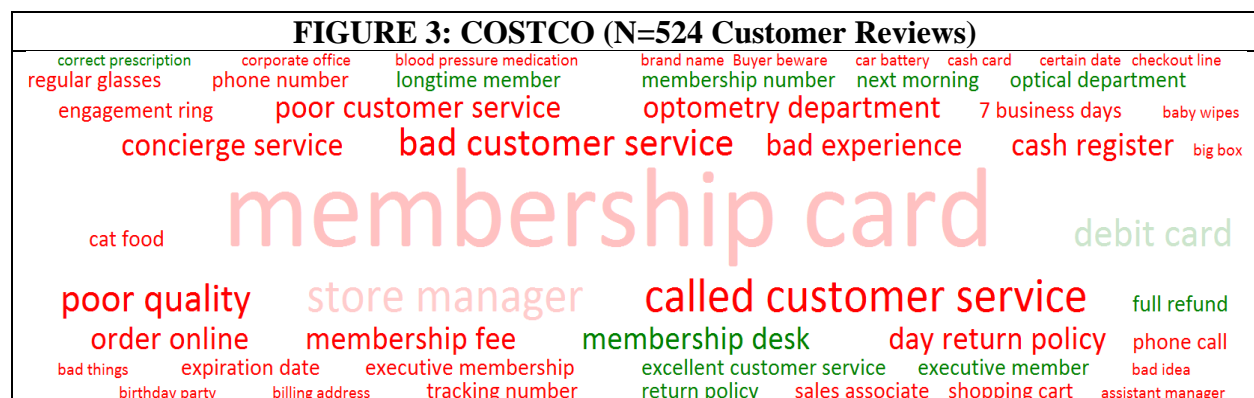
The last emerging theme is “card” (Figure 2). Kroger Card is one of the positive aspects of the experience, as the company introduced the rewards card a decade ago. However, they need to review the implementation from time to time. A customer who accumulated 5,000 points was a heavy user who Kroger should not dare to alienate.

“Plus card points: Again, problems. Yesterday I had 163 points; today, 9 points. Where did my 163 points disappear to? I had this problem several weeks ago and got a new number”

“Kroger limits my reward points to 1000. If I don't use them I won't accumulate any more points until I do. 5000 accrued points later I learn this. Kroger's method of legally ripping me off. What kind of card limits reward points?”

“I attempted to use my \$25 gift card for food purchase of \$24.00. American Express or Kroger only allowed \$12 of the charge to go through...”

## Costco



The first emerging theme of Costco is “card” (Figure 3). As a policy, Costco requires a membership card for a customer to shop in their stores. Customers complain that Costco checks their membership cards randomly, and they believe it does not apply equally to every customer. Costco seems to also have incorrect transaction problems. Customers complain that Costco double charges for one transaction. Here are some quotes that reflect those financial complaints:

“... The cashier demanded that my wife show her membership card in spite of the fact that I was paying for our purchase. The couple who checked out before us were not asked by the same cashier to show both of their membership cards, and the circumstances of our purchases were similar, they were making two separate purchases with separate payment methods as well. We were not given an explanation by the cashier except that this was "company policy", and the cashier proceeded to check out the order after seeing my wife's card, in spite of the fact that I was paying.”

“... His brother gave his Costco card to my father to buy some stuff for the shop. It is absolutely ridiculous! I know people going in with cards of their friends and shop for themselves. In fact, my father did go in few times with his brother's card and nobody said

it was forbidden when card was shown at the entrance or till. Argh! Your policies and acts don't match!"

"I purchased groceries from your store in Brossard that costs 448.47 CAD. However, during the payment process, there was a problem with your electronic payment machine, and the first transaction was cancelled, and I have to swipe my card again. When I checked my American express card, I realized that 448.47 was charged twice to me."

The second emerging theme for Costco is "customer service". This theme is about the customer's shopping experiences, follow-up services after purchase, employees' attitudes, and the other member services. Customers want high-quality service from employees. They complain to the employees because of their arrogant attitudes, and they become disappointed when they experience a lack of support services and proper employee training, such as situations below:

"I don't have a product complaint. I have a customer service complaint. I just went in to buy a ham for Easter and had the worst customer service ever in a while. ... She refused to look at me, didn't greet me at all, ... I don't know how Costco trains employees on customer service (or if they even do and judging by her attitude, I think not) but this lady should not be working with the public."

"...Employees are downright rude and or indifferent. Check-stand chatter is insulting. Managers are non-responsive to complaints. Employee of the Month wall? What a joke. Probably chosen by employees..."

"...the rudest clerk I have come across with. His attitude was racist from the beginning. Then he would not let three transactions for my stuff. Never going to shop there again."

"I ordered pizza and your employee, Velvet, told me to pay at the cashier and be back to pick up the pizza. I shopped and paid pizza, but she didn't make the pizza. I had to wait an additional 30 minutes. She was very rude and said I have to pay the pizza first and after that, to order."

"... The water is coming inside the watch. In the morning, I cannot look the time. This is stupid because the watch says in the back--water resistant 100m. The customer service says, "Sorry, we cannot change your timer." What a bad customer service. I will try in the future to talk bad about this company. They stole my money."

"Same problem as below with furniture ordered. Been waiting 2.5 months. Bill thru already paid for. No one can find location of the furniture. Terrible customer service. Do not order furniture from costco.com"

## Home Depot

The main emerging themes of Home Depot are "store", "employee", and "service" (Figure 4). The first emerging theme is "store." All customers want is to shop in clean stores, and purchase products without any sort of defect. If a store is not clean and the products are defective, the

customer may start to become dissatisfied. In the worst-case scenario, the customer may turn their backs to the retailers as mentioned in the following quotes:



“...Home Depot is a disgrace. It is dirty, messy, and confusing. This place is going downhill fast. The lady's room smells like a cesspool. The outside garden shop is a pigsty....”

“Self-serve check is a joke. No barcodes on products. ‘You wait and wait’....”

The second emerging theme is “employee” (Figure 4). The employee is one of the most important elements to represent the store. Ignorant and discourteous employees can cause customers to complain as pointed out in the following quotes:

“...I find I know more than the employees, and that's scary. Recently Home Depot advertised online for a free workshop on various tools. I signed up and got an e-mail confirmation for date and time. When I showed up for the workshop, no one knew what I was talking about and each employee called another one with the same result...”

“...You can see the people slowly working and talking with each other, but they don't want to help!! They are so rude and unpleasant. We asked one employee to cut the large sheets of wood and he said ok but never showed up!!!!...”

The last emerging theme is “customer service” (Figure 4). Providing excellent customer service is one of the keys to keeping loyal customers. When customers have a problem with the retailer's products, the retailer, in turn, needs to provide a solution. When the retailer does not provide solutions to the customer, the customer instead provides criticism like the individuals below:

“I received the wrong dishwasher and Home Depot will not return or exchange it. Beware of online orders. I think the man from the store put in the wrong model number, but the store will not talk about it and will not take returns”

“...We had a total of 8 items; 4 each, paying separately. The only registers open were self-serve, so this required the need for a cashier to help us. \*\*, the only cashier present proceeded to scan half of the items in the cart for the first order, completely ignored the

remaining order and proceeded to call another customer and literally rang their items up. We were stunned. Complete arrogance and ignorance as to what she did has caused me to write you. I am appalled at her very poor service and awareness of it.”

## Walgreens



The first emerging theme of Walgreens is “medicine”. A customer said Walgreens “taking advantage of” customers. Since Walgreens is a pharmacy, there are numerous customers with emergencies. Prescription management requires the up most care. Below are sentiments from Walgreens customers:

“... I take them as prescribed, so I am sure not to run out. For the month of March, I ran out three days early and was really confused as to why and just figure that the pharmacy made an error.”

“Most of the time the pharmacy doesn't have my pain medications and never keeps up with my auto refills and never contacts my doctor when my meds need to be refilled! ...”

“...I dropped the prescription off and the guy told me 45-minute wait. I returned an hour and 15 minutes later and the guy said it wasn't done and I needed to wait another 15-30 minutes.”

“I have four pain disorders, so my physicians play around with my pain meds because after a while they stop working. Walgreens pharmacy is making me to feel as though I am a drug addict seeking drugs. I hate that my body has to be rattled with pain constantly, and I don't take the meds as prescribed. When I drop off my prescription sometimes, I'm unable to pick it up for several days.... Why must you abuse your customers?”

Walgreens customers have experienced customer service problems, including bad experiences of waiting for medications. Walgreens’s online prescription services either does not work or is late in deliverance of customer’s prescriptions. In terms of customer service, employees should be

professional, kind, and knowledgeable of prescriptions. Below are some customer quotes about their expectations and experiences from Walgreens employees:

“I am in severe pain and all the guy would say is ‘we had 50-60 prescriptions in front of you, you need to wait.’ Most awful customer service I've ever received. I will never return to Walgreens.”

“Submitted prescription for pain meds Aug 29. PAIN Meds, as I am in PAIN! Yet it has been over 2 weeks now and the local boys sit on their hands saying, "We're checking the mail every day." Nothing more.”

“Becky \*\*, the Pharmacy Manager, is rude and unprofessional ... My wife takes two pain medications for chronic pain associated with Post-Polio. Becky \*\* threatened that if we didn't have all of our medications, about six different medications, she would not fill any our medications prescribed to treat other medical problems not associated with pain. She has been rude to us so many times.”

“I use the Walgreen's prescription mail-in service as well as their in-store prescription services. It is the exception that they provide service that is without a glitch or problem in filling prescriptions. In addition, their website is basically useless. I attempted to email them at the address they included in an email notification to me and their address came back as undeliverable with the explanation that it was an illegal host/domain found.”

“Rude, Unhelpful Manager (1745 East main St, Torrington CT) - I came to this store looking for an item and the female manager couldn't be bothered. All she did was walk to the isle and say they didn't have it. She didn't bother checking in the back, or their systems unlike all previous stores I had gone to.”

## Target

The main emerging themes of Target are “gift card” and “employee” (Figure 6). Gift cards are widely used as gifts for friends or family. There may be instances where customers are disappointed with the gift card transactions as mentioned in the following quotes below::

“...I called Target on December 2 to make a purchase, because the Target gift card wouldn't work online...”

“...I bought my mother gift cards for Applebee's at Target \$150 worth. My mother called me from the restaurant to inform me that they wouldn't accept the cards...”

The second emerging theme is “employee” (Figure 6), specifically store manager. Customers are not satisfied when employees are not friendly. Customers want a positive experience from employees, but when employees are discourteous, customers are dissatisfied as shown by the following customer reviews:



“...Most of the employees seem to be very unhappy with their jobs. Cashiers don't smile or greet the customer sometimes because they are too busy talking to their friends standing at the end of the check-out lane. Floor personnel are extremely hard to find and when you do find one and ask for help, the same answer is given every time, if it's not on the shelf, rack, display we are out of it. Very rarely will an employee say they will go check in the stockroom”

“...My wife had her purse in the back of the wheelchair and she felt someone take it. I went after the individual and found my wife's wallet in his cart. I confronted him and call for help immediately. About 10 Target employees came and no one did anything. They just let the guy go. I ask for the head of security and he said that he wasn't there, so he couldn't help...”

“...I was trying to ask an employee if they had any in back stock (they should, if it's an exclusive) and she was texting on her iPhone on the work floor and wouldn't help me!!!...”

**CVS**



As customers see it, CVS has issues with prescription management at local stores. Many customers order their prescription both as walk-in and as online mail order. In many instances, customers have had bad experiences with the mail order system. There have been instance of it charging the wrong price, sending the wrong quantity of medicine, preparing the wrong medication, or taking a long time to deliver, as follows:

“I had a prescription filled through mail order. I asked the doctor to write a 3-month prescription. When I received the order, I only received one bottle (month) and was charged \$92.”

“I asked my physician's office to send two of three prescriptions to Caremark Mail Order Pharmacy on 08/24/2011. I had already purchased one of the three prescriptions for \$7 at Walgreens. My physician e-prescribed (electronic prescription sent instantaneously to the pharmacy) all three prescriptions as generic prescriptions to Caremark Mail Order Pharmacy. I discovered a \$100 charge dated 08/29/2011 for one of the medications (the one I bought for \$7 at Walgreens). I checked the Caremark website and saw that the prescription was listed on [www.caremark.com](http://www.caremark.com) as a brand name medication with no generic.”

“CVS Caremark is the worst company to deal with. They deny medications my doctor writes and have to fight for it. WHO are they to play doctor and put people's health in danger? Their mail order is the worst. Mailing drugs without permission from the patient. When talking to them all I get is run around and LIES... The companies need to know how they treat people before giving it to their employees...”

“This is the second time that we've been with an employer contracted with Caremark for prescription services and we have experienced similar problems both times. Most recently when I tried to set up mail order for my husband's prescriptions we were once again faced with long hold times, unhelpful representatives, and meds that were not received in time despite calling in my order with weeks to spare. In the end we had to have emergency 14-day refills called in while they set about correcting their errors and I spent hours on the phone between Caremark, the doctor's office, and our local pharmacy. This has happened numerous times with Caremark over the years and is so frustrating.”

Customers may start to believe that CVS has inconsistencies with prescriptions. An error in a prescription needs a speedy recovery. When CVS does not react quickly to provide compensation, the situation escalates out of hand. CVS does not seem to focus on their customers in the examples shown below:

“I called CVS to refill a prescription without any problems, but I was unable to pick up the medication for a few days. When I finally got to CVS to pick up my prescription, I found out that my insurance was not covering the refill. When I called Caremark, I found out from the very rude and unhelpful customer service rep that my doctor's office had faxed in a prescription for a 90-day supply the day after I called in my refill; they had voided the refill at CVS, and had shipped out the medication in the mail two days later. Of course, they did not call me to inform me of the change or email me a shipping confirmation. I was

not even billed for the prescription. I told the rep that I couldn't wait for the mail; I needed to get this medication immediately and being without it for one night could land me in the ER or worse, to which she callously replied, 'Well, you're just going to have to wait for it to come in the mail.'"

"This company is evil and should not be in business. Health Net changed our drug plan to CVS/Caremark without any notification. It has taken over a month, several hours on the phone and I still do not have our prescriptions. When I first set up the account, there was a software problem and I was told it was fixed. When I called 2 weeks later, I was told there still was a problem plus my doctor had not sent in complete information. I was told the doctor denied the meds and that the fax number I gave Caremark was incorrect and then that the doctor had not returned phone calls. All this was false. I contacted my doctor again and again they faxed the info back."

"It is just a hassle every single month refilling the exact same prescription with the exact same doctor. It takes 4 phone calls and a month of delay every time. You never speak to the same person. You get conflicting information from them and the communication they say they have with your doctor. If my company didn't require me to use them, I would never deal with this again."

"It seems my prescription was completely forgotten about until my call lit a fire under Caremark's bottom."

## Lowe's



Emerging themes of Lowe's are "warranty" and "employee" (Figure 8). Regarding "warranty", when customers buy electronics, some of them also purchase warranties for repair services in the future. The following customers were not happy with warranties nor with Lowe's service performance:

"...I had a problem with a product that I bought a year and a half ago. After 90 days the returns department has no record. So, they give me the 1-800 Lowe's number. I call it and according to them I don't exist. I lost my receipt, I have a 2-year warranty, and they can't find me..."

“...Purchased my washer & dryer with extended warranty plan. After 1 year, the dryer died, they came out and fixed it. After the 2nd year, the washer & dryer break. Lowe's kept scheduling appointments for someone to fix the appliances but either a no show or person shows up for 5 mins with no solution to the problem...”

“...I purchased a 5-year warranty for my dryer. They have sent a technician out already 3 times to fix a loud buzzing noise. Nothing has changed. It still loudly buzzes through the whole cycle. I called back last week, had an appointment set up for Aug 24. No one ever called or showed up. I called back, reschedule for today. Sitting here waiting...”

The second emerging theme is “employee” (Figure 8). Customers expect helpful attitudes from Lowe’s employees. Most importantly, employees need to gain the customers’ trust. If trust is not gained, customers may think employees are lying to them, as in the customer sentiments shown below:

“Lowe's employees lie to get you to buy the warranty plans, when in fact they have no intention of ever paying for any repairs. Their customer service agents are rude, condescending and unethical. Do not buy a warranty plan through Lowe's”

“...The first day was an omen. An employee entered my home to get electricity without my permission, and I was not home, left pile of pulled shingles, debris and tools on my roof. The employee who sold this nightmare doesn't return calls or text. One assistant manager seems interested, but I find it hard to trust now...”

# Amazon



The first emerging theme of Amazon is “card”. Amazon seems to have problems with placing orders, refunds, and security. Many customers voiced that they had bad experiences with Amazon in terms of incorrect orders. Since customers receive incorrect orders, they naturally request a refund for them; however, Amazon’s refund process is not executed well. There have been cases of Amazon charging customer’s cards on file even if they never used their card. Due to

this financial problem, Amazon has a potential of losing credibility within their customer base. Here are some quotes from Amazon customers based on their financial problems:

“I was recently charged \$107 for Amazon prime membership. A service which I did not subscribe to. I really think it is unfair that Amazon charges one's debit card without the owner of the card's permission. My daughter was also charged the same amount and not only that, but she didn't have enough money on her debit card to cover the whole amount. Now she's going to be charged by the bank. Bottom line is that there has to be a protocol for this. It's irresponsibility!!! And it's not right!!”

“I am really dissatisfied by your fraudulent service at Amazon. Firstly, the ordered product was not delivered. The refund money was not credited back to my prepaid forex VISA card though an email was sent stating that the amount was refunded.... AMAZON.DE is really FRAUD.”

“However, I've never owned the type of card in my name or under the address to which I reside. I have contacted both of Amazon's customer service and chargeback department over and over again since I received their first email to me on March 22, 2015. Amazon is claiming that there are several orders that was charge to this specific card, I'm assuming using my name and billing address. What I'm not understanding is how can they have even ran a card in my name when the billing address of the card is specifically required when placing orders under your name using any card you use. This specific card to which they are referring to under my name, I have never seen, let alone use!!”

Amazon promotes “Prime Membership” for a fee to customers who are interested in this service. However, some customers have complained that Amazon charges them prime membership without any “knowledge” or “authorization”. Customers have the same problem with renewing their prime membership. Amazon renews the membership promotion without customers’ agreements as pointed out in the following quotes:

“On October 9th, 2014, this company charged my debit card for a Prime membership and it was \$99. I never authorized this. After investigating this with my card company, I had to go to the company website to cancel a membership that I never ordered and now it takes them 3-5 days to process a refund!”

“Amazon renewed my Prime membership without my knowledge or authorization. And when I contacted them about it they were rude about it. When I told them, I wanted my money back they finally told me it would be 2 to 3 days until I receive it. My problem is that I had no knowledge and did not give any authorization for them to renew my Amazon Prime account.”

“I was randomly charged over 100 dollars for Amazon Prime membership on my debit card at 1:00 in the morning without my immediate consent. I realize that the terms and conditions I agreed to probably justify this, but nobody reads over that stuff, and Amazon knows it. It's misleading and they know it is.”

Amazon “delivery” has created dissatisfaction in some cases. The products may be delivered to the wrong address the card may be charged but the product is never delivered, or the product is not delivered on the promised day. Customer sentiments below describe this scenario:

“Ordered an MP3 from Amazon. They emailed to give me a delivery date. Goods never arrived. They then said it was on its way. They then said it had never left their warehouse (never explained why). Then said new date for arrival. It never arrived. They then said out of stock. They then said they would credit goods. Credit never arrived. Then said tried to deliver but could not (never said any more). Then said, "Oops sorry." Worse so-called customer service I've ever experienced.”

“The delivery was to be done in 28th Aug to 2nd September. Still I am not getting any response from Amazon side. I complained there almost 4 times but still no response. Seriously I have ordered many things from other sites, but this was the worst shopping site I have ever used.”

“The purchase never was delivered to my shipping address. They state that they delivered the item to a freight forwarder, but my forwarder never received the package. They refused to provide the proof of delivery and even they close the purchase already, so I cannot submit a complaint in the page. Ever further, they deleted the rating that I gave to the purchase. I am really tired of trying to contact them. I also have sent fax and my forwarder too.

## Safeway



The first emerging theme of Safeway is “employee.” Customers complain that employees are not providing high quality service. They are “rude”, “sarcastic” and “racist” to customers according to the quotes below. Frequently such attitudes may stem from lack of knowledge or motivation to provide service to customers:

“I went to pick up my prescription and was told that it had been re-shelved because I had not picked it up in a timely manner. The wait would be 30-45 minutes. I asked to speak with the manager, which was Phong \*\*. He explained to me the laws regarding re-shelving items, and I asked why I had not been called and notified that it was ready. He explained

that it is the policy of the MD office that I, as a patient, should call. I told him that I thought it was inconsiderate, and Phong proceeded to yell and berate me in front of his staff and other customers when I asked him not to yell at me.”

“She stated that the tattooed manager made a racist and judgmental comment about her use of food stamps. When she presented her method of payment, the store manager said ‘figures!’ I know that Safeway does not allow their employees to treat any of their customers in such a manner; be they pay cash, credit, debit, or food stamp. This is no way for store manager or any employee working in any capacity to act in customer service driven business.”

“Asked one employee if they had a type of salad dressing. Another employee showed up. He makes a sarcastic remark then walks off with a \*\* eating grin. What is wrong with this company?”

The second emerging theme of Safeway is “stores.” Safeway’s customers are disappointed because of the empty shelves and dirty store. Customers are dissatisfied with the product quality, for example with groceries. One of customer said the store is “disgusting.” Below are more negative customer sentiments regarding Safeway:

“The store is always dirty, never has stocked shelves. The staff is always under staffed and sometimes rude. The store needs to be remodeled very very badly.”

“... On the shelves, soda aisle was half empty. Water aisle was empty of small bottles. Sugar aisle was in sad shape and the store was full of people...”

“...the lettuce is always old and brown! Disgusting salads! They claim their salads get packaged elsewhere and shipped to the stores. I don’t understand why they can’t package their own vegetables at their own store. Why? Hello, it is a grocery store with a vegetable section! I’ve complained and exchanged about 15 salads in the past 6 months. This is ridiculous. I am so done getting my salads there! I’m getting another cash refund today!”

“...A few months after the incident I had to pick up soda (I would only ever buy packaged brand items there because I do not trust anything there), I walked in the store and their entire meat section was empty with disinfectant bottles everywhere. DISGUSTING place....”

## CONCLUSION

The customers' reviews of the top ten retailers revealed that the most common emerging themes of almost every retailer are “store”, “employee”, and “customer service”. Apparently, retailers need to provide solutions to their customers based on the content of comments. In other words, retailers need to gratify the customers’ expectations. First, stores need to be clean and the customer support equipment, such as disability wheelchairs, should be provided in working conditions as promised. In addition, the shelves should be well stocked and organized for ease of access. Second, employees must be well trained and empowered in order to serve customers with the knowledge and skill set. Employees must be polite and friendly to make customers feel

welcomed and respected. When retailers have improved their technology, they need to help customers understand the new system and walk them through any new processes introduced from time to time. Retailers should never assume that customers are familiar with their procedures.

Between top ten U.S. retailers, customers of Walmart, Kroger, Home Depot, and Safeway are among the most dissatisfied with the store conditions. Customers do not accept excuses for stores with poorly maintained equipment or facility. Empty shelves, inadequate and unorganized selections are some of the reasons for complaint. Store problems also include the quality of selection, as customers relate the lack of product quality with inadequate management of the store.

All top ten of retailers (except Walgreens, CVS, and Amazon) seem to have the same problems with the attitudes of some of their employees. A customer expects friendly and respectful customer service from employees. Rudeness and arrogance were not accepted. Some customers perceived some employee comments as racist. When customers recognized that employees were lying to them, they cannot trust employees, and reflect this unethical behavior to retailer as well. Customers also become disappointed when the employees are not professional.

Walmart, Kroger, Costco, Target, and Amazon have problems with their cards or rewards programs. Sometimes, Walmart, and Amazon's transaction were not correct. Financial problems such as incorrect orders make customers worry about the security of their account. Many of Kroger and Target customers use reward cards or gift cards for their shopping. They may become embarrassed, when there is a trouble about the actual available amount on the gift card versus perceived one. Costco seems to check the membership card randomly, and customers become angry at their unequal and unfair customer treatment.

Home Depot, Walgreens, CVS, Lowe's, and Amazon have complaints based around their customer service. Low quality of service, long waiting time, and unacceptable solutions are some of the root causes of these complaints. For example, Lowe's customers, who had warranties, were disappointed because the warranty did not work as promised, or it took too long to fix defective products. Amazon customers complained about the delivery service being too late or the product sent to the wrong address. Many customers complain that Amazon charged them without any knowledge or authorization for their prime membership.

Walgreens and CVS customers complain about pharmacy problems due to lack of coordination among local stores and online ordering systems. Some of them received incorrect prescriptions or incorrect quantity of medicines. Sometimes customers had to wait long period because of stock outs.

This study revealed a curious phenomenon as customers' main complaints and praises are mostly about employee-customer interactions. The ranking of the most important attributes lists 19 tangible aspects of retailing from prices to quality and selection of items in various departments or categories. Only two of the listed attributes, namely "staff (of) customer service" and "access to in-store experts", are remotely related to employee-customer interaction. We do not deny that the tangible attributes of retail offerings are an important part of the core service. For example, a customer who wants to buy seafood will go to a retailer carrying fresh and varied selection of the item. However, many retailers have the similar offerings at similar prices. The only differentiation opportunities remain in the augmented services such as payment, delivery and refund options, and most importantly in the employee-customer interactions.

In fact, a recent study (Veloso et.al. 2018) revealed that reliability, assurance, and empathy dimensions of SERVQUAL has an important impact on retail store image, which in turn influence customer loyalty. Responsiveness and tangibles dimensions of service quality are secondary. This

empirical support to our above-mentioned observations provided a new research opportunity to analyze complaints further. There are about 300-590 comments for each retailer, that can be classified and content analyzed in terms of five dimensions of service quality, namely tangibles, responsiveness, reliability, assurance, and empathy.

## LIMITATIONS AND FUTURE RESEARCH

This research helped to realize possible research avenues. One research question is: How do retail service attributes relate to the relative ranking of to ten retailers? Which type of sentiments (positive, neutral, or negative) are critical in service design and delivery? Especially, thorough understanding of neutral content may help researchers to identify value perceptions in retailer-customer relationships.

Another research area may be about how the revealed sentiment themes relate to behavioral intentions as mentioned in the reviews, and the actual revenue changes in a longitudinal study. As one of our reviewers observed, Amazon raised its rank in revenue generations during the research period, and it had a large percentage of neutral sentiments. Content analysis of these scores, notifying the changes in the themes, and correlating them with revenues may reveal interesting pictures.

Retail attributes and customer value perceptions may be a new research project, since the retail environment and offerings keep on changing. For example, one of the significant negative sentiment theme for Target was the card. While, overall, Target was receiving significantly high proportion of positive sentiments. This observation led us to the question of how relative ranking of the most valuable attributes change in brick-and-mortar and on-line stores of the same retailer.

This exploratory research identified multiple research avenues, but also has limitations. One of the limitations of this research is its nature. Numerical analysis, testing theories, nor generalizations to all customers of top ten retailers were intended. So sample size was not calculated. Customer reviews accumulated on social platforms and created opportunities for these academic researchers. Therefore, we data mined for emerging themes in sentiments using available commercial software. Candid posts about customer sentiments revealed multiple aspects of their notable experiences with top ten retailers. It is important to remember that not every customer post comments, also they do not post for each shopping experience. In fact, majority of customers do not post anything at all. Even though the number of postings were substantial, this research cannot represent the vast number of customers of top ten retailers.

However, identifying major themes that motivate customers to post may give direction on how to fine-tune operations and processes for top ten retailers. From this perspective, this paper will help practitioners to realize that negative reviews as well as neutral ones may contain positive aspects of the service and suggestions for improvements.

## REFERENCES

- Arndt, Johan. (1967) "Role of Product-Related Conversations in the Diffusion of a New Product," *Journal of Marketing Research*, Vol. 4, 291-295.
- Brunot, Trudy (2017), "Top Ten Facts about Retail Store Businesses," *AZ centrals*, <https://yourbusiness.azcentral.com/top-ten-retail-store-businesses-16129.html>, Accessed on 09-23-2018.
- Champaign, Williams (2017), "6 Fast Facts about Retail That Dispel the Myth That the Sector is Struggling," *Forbes*, <https://www.forbes.com/sites/bisnow/2017/06/28/6-fast-facts-about-retail-that-dispel-the-myth-that-the-sector-is-struggling/#72347ee934e7>, Accessed on 09-23-2018.

- Cheung; Mee-Shew; Meral, Anitsal; Ismet, Anitsal (2007), "Revisiting Word-of-Mouth Communications: A Cross-National Exploration," *Journal of Marketing Theory and Practice*, Vol.15, No.3, 235-249.
- Consumer affairs.com, <https://www.consumeraffairs.com/>, Accessed on 11-07- 2015.
- Costco Annual Report 2017, <http://investor.costco.com/financial-information/annual-reports/>, Accessed on 11-02-2019.
- Crosby, Lawrence; Evans, Kenneth; and Cowles, Deborah (1990), "Relationship Quality in Service Selling: and interpersonal Influence Perspective." *Journal of Marketing*, Vol. 54, No. 3, 68-81.
- Divakar, Suresh; Ratchford, Brian; Shankar, Venkatesh (2005), "CHAN4CAST: A Multichannel, Multi-Region Sales Forecasting Model and Decision Support System for Consumer-Packaged Goods," *Marketing Science*, Vol. 24 No.3, 334-350.
- Dorfman, Brad (2011), "Stores Ignore Facebook Complaints; Study | Most Stores Don't Respond to Feedback Posted on Facebook Page," *Daily Gleaner*, Vol. 3, 1-2.
- EMarketer (2017), Global Ecommerce Platforms 2017: A Country-by-Country Review of the Top Retail Ecommerce Sites, eMarketer Report, July 13, 2017, <https://www.emarketer.com/Report/Global-Ecommerce-Platforms-2017-Country-by-Country-Review-of-Top-Retail-Ecommerce-Sites/2002047>, Accessed 11-02-2019.
- Furgison, Lisa (2017), "5 Ways to Increase Customer Loyalty," *Five stars Insights*, <https://blog.fivestars.com/5-ways-to-increase-customer-loyalty/>, Accessed on 09-23-2018.
- Goodman, John, and Newman, Steve (2003), "Understand Customer Behavior and Complaints," *Quality Progress*, Vol. 36, No. 1, 51-55.
- Google.com (2018), "Definition of Customer Service," [https://www.google.com/search?q=definition+of+customer+service&rlz=1C1NHXL\\_koUS689US689&oq=definition&aqs=chrome..69i57j69i60j69i59j0l3.5678j1j7&sourceid=c\\_hrome&ie=UTF-8](https://www.google.com/search?q=definition+of+customer+service&rlz=1C1NHXL_koUS689US689&oq=definition&aqs=chrome..69i57j69i60j69i59j0l3.5678j1j7&sourceid=c_hrome&ie=UTF-8), Accessed on 11-13-2018.
- Graves, Jeremy (2017), "Five Essential Customer Service Elements," *Pivot*, <https://askpivot.com/blog/2013/12/18/five-essential-customer-service-elements/>, Accessed on 09-23-2018.
- Gupta, Sunil, and Zeithaml, Valarie (2006), "Customer Metrics and Their Impact on Financial Performance," *Marketing Science*, Vol. 25, No. 6, 718-739.
- Harris, Katherine; Grewal, Dhruv; Mohr, Lois; Bernhardt, Mohr; Bernhardt, Kenneth (2006), "Consumer Responses to Service Recovery Strategies: The Moderating Role of Online Versus Offline Environment," *Journal of Business Research*, Vol. 59, No. 4, 425- 431.
- Hansen, Torben; Wilke, Ricky and Lynne, Judith (2009), "How Retailers Handle Complaint Management," *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, Vol. 22, 1-20.
- Hu, Mingyao; Elliot, Rabinovich; and Hanping, Hou (2015), "Customers Complaints in Online Shopping: The Role of Signal Credibility," *Journal of Electronic Commerce Research*, Vol. 16, No 2, 95-108.
- Kendra, Harris, Lionel Thomas, and Jacqueline, Williams (2013) "Justice for Consumers Complaining Online or Offline: Exploring Procedural, Distributive, and Interactional Justice, and the Issue of Anonymity," *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*. Vol. 26, 19-39.
- Kinard, Brian (2015), "Atlantic Marketing Association Workshop Video." *YouTube*, <https://www.youtube.com/watch?v=xjoh2feGn0s>, Accessed on 10-20-2015.
- Kopalle, Praveen; Neslin, Scott (2003), "The Economic Viability of Frequent Reward Programs in a Strategic Competitive Environment," *Review of Marketing Science*, Vol. 1, No. 1, 1-39.
- Kroger Annual Report 2017, <http://ir.kroger.com/reports-and-statements/Index?KeyGenPage=210301>, Accessed on 11-02-2019.
- Landon, Laird. (1980), "The Direction of Consumer Complaint Research," *Advances in Consumer Research*, 7, 335-338.
- "Lowe's Income Statement," <https://www.nasdaq.com/symbol/low/financials?query=income-statement>, Accessed on 09-23-2018.
- Major, Meg (2018), "Consumers Rate Top Retailers: In What Do They Trust?" *Winsight Grocery Business*, Winsight Grocery Business, <https://www.winsightgrocerybusiness.com/retailers/consumers-rate-top-retailers-what-do-they-trust>, Accessed on 09-23-2018.
- Maurer, Roy (2018), "Wages Grow at Stongest Pace Since 2009", HR Daily News Letter, November 2, Society of Human Resources Management, <https://www.shrm.org/hr-today/news/hr-news/Pages/default.aspx> Accessed on 12-10-2018.
- McCollough, Michael, Berry, Leonard, and Yadav, Manjit (2000), "An Empirical Investigation of Customer Satisfaction after Service Failure and Recovery." *Journal of Service Research*, Vol. 3, No. 2, 121-137.

- McGovern, Michele (2013), "6 Things Customers Care about Most – and How to Deliver on All Fronts," 1-3, *Customer Experience Insight*, <http://www.customerexperienceinsight.com/what-customers-care-about-how-to-deliver/>, Accessed on 09-23-2018.
- NRF (2014), "Top 100 Retailers 2014," *National Retail Federation*, 1 July 2014, <https://nrf.com/2014/top100-table>, Accessed on 09-23-2018.
- NRF (2015), "Top 100 Retailers 2015," *National Retail Federation*, <https://nrf.com/2015/top100-table>, Accessed on 09-23-2018.
- NRF (2016), "STORES Top Retailers 2016," *National Retail Federation*, <https://nrf.com/resources/annual-retailer-lists/top-100-retailers/stores-top-retailers-2016>, Accessed on 09-23-2018.
- NRF (2017), "STORES Top Retailers 2017," *STORES: NRF's Magazine*, <https://stores.org/stores-top-retailers-2017/>, Accessed on 09-23-2018.
- Olga (2017), "10 Reasons Why Our Customers Complain | Provide Support," *Provide Support*, <https://www.providesupport.com/blog/10-reasons-customers-complain/customers-complain/>, Accessed on 09-23-2018.
- Perkins, Debra (2012), "Future Directions in Consumer Satisfaction, Dissatisfaction and Complaining Behavior: So Much More to Come," *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*. Vol. 25, 7-23.
- Ray, Linda (2016), "Top Ten Facts about Retail Store Businesses," *Chron.com*, <https://smallbusiness.chron.com/top-ten-retail-store-businesses-20988.html>, Accessed on 09-23-2018.
- Redman, Russell (2018), "Albertsons Finishes 2017 Fiscal Year on a High Note," *Supermarket News*, <https://www.supermarketnews.com/retail-financial/albertsons-finishes-2017-fiscal-year-high-note>, Accessed on 09-23-2018.
- "Retail Services Spotlight," *SelectUSA*, <https://www.selectusa.gov/retail-services-industry-united-states>, Accessed on 09-23-2018.
- Semantria, <https://semantria.com/excel>, Accessed on 11-01-2015.
- Sentiment Analysis, <http://datapigtechnologies.com/blog/index.php/quantifying-subjective-text-with-sentiment-analysis/>, Accessed on 11-01-2015.
- "Total Retail Sales in the United States from 2012 to 2020 (in trillion U.S. dollars)," *Statista* <https://www.statista.com/statistics/443495/total-us-retail-sales/>, Accessed on 09-23-2018.
- Veloso, Claudia Miranda; Daniel Magueta; Humberto Ribeiro; Sandra Raquel Alves (2018), "The Links between Service Quality, Brand Image, Customer Satisfaction and Loyalty in the Retail Industry", 28<sup>th</sup> *International Scientific Conference on Economic and Social Development*- Paris, 19-20 April 2018, 497-511.
- Verma, Varsha; Sharma, Dheeraj; and Sheth, Jagdish (2016), "Does Relationship Marketing Matter in Online Retailing? A Meta-Analytic Approach," *Journal of the Academy of Marketing Science*. Vol. 44, 206-217.
- Walmart Annual Report 2017, <https://corporate.walmart.com/media-library/document/2017-annual-report>, Accessed on 11-02-2019.
- "WBA Annual Income Statement - Walgreens Boots Alliance Inc. Annual Financials," *Market Watch*, <https://www.marketwatch.com/investing/stock/wba/financials>, Accessed on 09-23-2018.
- Web Scraper Extension, <http://webscraper.io/>, Accessed on 11-01-2015.
- Wen, Fan-Yi; Wu, Cheng-Chieh; Wu, Wei-Ting (2010), "Online Retailing Service Failure Recovery and Consumer Loyalty," *The 2010 International Conference on Innovation and Management, Penang, Malaysia, July 10<sup>th</sup>, 1-120*.

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