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## THE GENDER PARADOX IN NEGOTIATIONS

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### ABSTRACT

This paper investigates the relationship between gender, negotiation outcomes and perceived behaviors of cooperation and competition. The study fills a gap in the negotiation literature on gender and helps better explain gender disparities in the realm of negotiations. Drawing on social role theory and status characteristics theory the authors conduct two negotiation experiments and use moderated regression to test the hypotheses that the relationship between negotiator outcomes and the counterpart's judgement of the negotiator's competitiveness is moderated by negotiator gender. The study finds that, in contrast to men, women who succeed in negotiation are viewed as acting in an uncooperative manner. When women act in a cooperative manner, they are more likely to have decreased negotiation outcomes. Thus, women who succeed are more likely to be perceived as overly competitive and women who act cooperatively are less likely to succeed in negotiations. The paper also discusses the implications for the role that gender has on perceptions of self-rated cooperativeness and other-rated cooperativeness as well as the relationship between self-rated competitiveness and other-rated competitiveness. This paper is unique in that it showcases the uphill battle women negotiators face on account of what the authors call the gender paradox. This study provides a deeper understanding of how gender influences the assessment of cooperation and competition in negotiations and how, in turn, such assessments impact negotiation outcomes.

**Keywords:** Negotiation, gender, social role theory, status characteristics theory

### The Gender Paradox in Negotiations

Negotiations is an arena in which the stereotypical view of the successful individual is more consistent with a male stereotype than with a female stereotype (Kray et al., 2001). A key focus in this stream of research is whether behaviors differ across genders and whether these differences influence the success of the negotiator (e.g., Heilman, 2001; Stuhlmacher and Walters, 1999; Walters et al., 1998; Bronstein et al., 2015).

Another focus of research is on whether the stereotype of a male advantage creates an additional roadblock to success for women that men do not face (e.g., Bowles et al., 2007; Heilman, 2001; Kray et al., 2001; Rudman and Glick, 1999; Kugler et al., 2018).

Because negotiation is viewed as an arena where men are more successful, one strategic option is for women to engage in behavior patterns more consistent with a male stereotype than with a female stereotype (e.g., more assertive, more confident, more dominant), which can result in better negotiation outcomes (Kray et al., 2004). However, Rudman and Glick (2001, p. 743) describe this as a “catch-22” for female managers who follow this advice. Such individuals are viewed as more competent, but also less likeable because they have violated a gender stereotype (Kulik and Olekalns, 2012). Because of reduced likeability, women can be met with more resistance and become less influential than men (Carli, 2001).

Negotiation is a context in which resistance (from the negotiation counterpart) is likely. Because of the common stereotype that men are better negotiators than women, it seems quite likely that there are negative effects that could be found in negotiation contexts. These studies challenge the assumption that negotiation is a gender-neutral playing field where negotiator skill is the lone variable that determines negotiator outcomes. We showcase the effects that negotiation outcomes have on the perceptions of a counterpart based on gender, and how gender typicality impacts negotiation outcomes.

## Theoretical Framework

### Social Role Theory

According to social role theory (Eagly, 1987), roles in society carry expectations regarding the appropriate behavior for those who occupy such roles. Specific to a focus on gender, gender roles carry expectations of behaviors consistent with the gender-stereotype roles of men and women (Eagly, 1987; Eagly and Karau, 2002). The female gender role is based in the traditional role of homemaker. This role is expected to demonstrate selflessness and concern for others. Expected behaviors are those that reflect nurturance, warmth, and sensitivity. This pattern is labeled as *communal* (Bakan, 1966).

By contrast, the basis for the male gender role is contained in the traditional role of breadwinner. This role is expected to demonstrate desire for achievement and is characterized by independence, dominance, and directiveness. This pattern is labeled as *agentic* (Bakan, 1966).

A key tenet of social role theory is that social roles are both descriptive and prescriptive (Rudman and Glick, 1999). Gender roles describe how occupants of

the roles *do behave*. However, they also are prescriptions of how individuals *should behave*. As such, role prescriptions are norms, and research has suggested that there are clear negative social consequences for violating norms (Bear and Babcock, 2017; Cialdini and Trost, 1998; Schneider and Bos, 2019), such as shame and guilt (Ersoy et al., 2011).

The communal role for women and the agentic role for men have specific implications in the negotiation context. There are expectations that women negotiators should be passive, cooperative, and relationship-oriented. In contrast, men are expected to be assertive, rational, and competitive (Kray and Thompson, 2005; Walters et al., 1998; Watson, 1994). As documented by Kray et al. (2001), such assertive male expectations are consistent with the image of the stereotypical effective negotiator while the nurturing female expectations are inconsistent with the stereotypical, effective negotiator.

In summary, social role theory suggests that women experience social pressure from two directions (Eagly and Johannesen-Schmidt, 2001), and these two are particularly applicable to the negotiation context. On the one hand, behavior consistent with the role of effective negotiator is consistent with the male gender role and violates the expectations of the female gender role. On the other hand, behavior consistent with the expectations of the female gender role is likely to result in less effective negotiation. Women will face social resistance if they engage in negotiation behaviors that are viewed as agentic and performance restrictions if they engage in behavior that is communal.

### **Status Characteristics Theory**

Status characteristics theory (Berger et al., 1966, 1972; Berger et al., 1977) states that, while a portion of an individual's status is derived from information unique to the individual, another significant portion of status is inferred from *diffuse status characteristics*. Diffuse characteristics are characteristics such as education, gender, occupation, or physical attractiveness that are broadly associated with status and perceived competence. Generally speaking, individuals have higher status if they are male rather than female, physically attractive rather than physically unattractive, and more educated rather than less educated (Carli, 1999; Ridgeway and Diekema, 1992). It is more acceptable in society for higher-status individuals to engage in status-asserting behavior, while the identical behavior from lower-status individuals is less acceptable (Ridgeway and Berger, 1986; Sampson, 1963, 1969).

Status-asserting behavior in the negotiation context primarily deals with issues of competitive behavior. At a basic level, negotiation requires a degree of cooperation and a degree of competition (Lax and Sebenius, 1986; Pruitt and Rubin, 1986). In order to reach a joint agreement, some degree of cooperation is necessary. However, to promote individual interests, competition is also necessary. Lax and Sebenius (1986, p. 29) describe these simultaneous demands of cooperation and competition as the "negotiator's dilemma." Negotiation is an ongoing series of decisions about balancing the strategies and tactics of competition and of cooperation.

In negotiation, status-asserting behaviors involve attempts at influence and an assertive, confident demeanor, which will be interpreted as competitive. Although this issue has not been explored directly in the negotiation arena, empirical evidence does exist coming from a group context (Ridgeway, 1982; Wahrman and Pugh, 1974). Lower status individuals cannot achieve the same amount of influence as can higher status individuals. Assertive behavior in attempts to influence others is more accepted from men than women as being legitimate (Carli and Eagly, 1999). It should be noted that in addition to gender's influence on status characteristics, there is also the interplay of given roles (e.g., a manager and an employee) and these often differ in legitimate power. Second, previous research has established that to understand the effects of gender, negotiation counterparts should have a similar BATNA (best alternative to a negotiated agreement), for if one negotiator has a comparatively stronger BATNA this can cause a status imbalance (Wong and Howard, 2017).

### **Unifying Social Role and Status Characteristics Theory**

Gender roles and status both point in a similar direction. According to the normative dimension of social role theory, women are expected to enact a communal style of behavior and will be judged negatively if they enact an agentic style of behavior. For negotiations, this implies that women who engage in assertive, competitive behavior will be judged more harshly than men who engage in the same behavior. There are negative social consequences to competitive behavior that men do not encounter (Bowel et al., 2007).

Because women are generally perceived to be lower status than men (Carli and Eagly, 1999; Ridgeway and Diekema, 1992), they are more constrained in behavior choices than higher status men (Miles and Clenney, 2010). Behaviors that are generally characterized as agentic—assertiveness, competitiveness, dominance, achievement-orientation—are more accepted and more successful when enacted by higher status individuals than lower status individuals.

In summary, agentic behavior is more acceptable from men than from women for two reasons. First, agentic behavior is inconsistent with the female gender role, and violators of gender roles are judged negatively in society. Second, agentic behavior is more legitimate from higher status individuals than from lower status individuals, and men are generally perceived as higher status than women.

### **The Asymmetrical Effects of Competition and Cooperation**

Heilman and colleagues (Heilman et al., 1989; Heilman and Okimoto, 2007; Heilman et al., 2004) found that, for women managers, it is not necessary to behave in a pattern inconsistent with the prescribed female gender role to be judged negatively. Simply being provided information that the woman manager was successful—and no further detail—was enough for research participants to judge the woman as less communal. This less communal characterization included greater perceptions of being selfish, deceitful, devious, cold, and manipulative. “It thus appears to take little more than the knowledge that a woman is successful at male sex-typed work to instigate interpersonally negative reactions to her” (Heilman and Okimoto, 2007, p. 82). These findings are consistent with the

proposition that, for women negotiators, level of success in negotiation will be related to counterparts' judgments of her degree of competitiveness.

Drawing on the previously-described negotiator's dilemma (Lax and Sebenius, 1986), one might be tempted to conclude that the playing field is level, since men tend to behave in a competitive manner, in line with the agentic role, and women tend to act in a cooperative manner, in line with the communal role. While each gender might lean toward their respective tendencies, the corresponding advantages are not equal. Because of their higher status, men enjoy a broader array of acceptable possible behaviors than women. Behaviors of competition and cooperation are included in this array. In addition, in a distributive negotiation context, the advantage of competition is greater than that of cooperation (Mazei et al., 2015).

This effect has been specifically examined in the leadership literature. In reviewing the empirical evidence, Rudman and Glick (1999) conclude that an asymmetry exists in that the range of acceptable, and even counter-stereotypical behaviors is broader for men than it is for women. With leadership being a stereotypical male domain, men enjoy a higher status than do women in that domain (Carli and Eagly, 1999), thus imparting a privilege to men for increased latitude in how one operates within the domain.

Additionally, Eagly et al. (1992) suggest that the inferred motives of men as leaders when stepping outside the male gender expectations are different than the inferred motives of women for stepping outside the female gender expectations. Women acting in an agentic manner (competitive, dominant, and assertive) raises the issue of unacceptable motives from a status viewpoint (enhancing one's personal power and status) while men acting in the expected female communal manner (cooperative and relationship-oriented) is less likely to raise the issue of unacceptable motives.

We propose a parallel asymmetrical effect in negotiation. As with leadership, negotiation is viewed as a stereotypically male domain, and the status imparted by this "ownership" should provide men increased latitude in how they operate within the domain. Negotiation behavior inconsistent with gender expectations will be perceived more negatively for women than for men because negotiation is viewed as a male domain and because women are thought of as having lower status. For example, Amanatullah and Morris (2010) suggest that in negotiation, women who do not adhere to their gender roles experience a "backlash effect," in which self-promoting women are viewed as less likeable (Bowles et al., 2007). In response, women are more likely to engage in social cues that are in line with their gender roles, such as acting in an apologetic manner (Lee et al., 1999). Further, women who negotiate their salary are viewed as being less appealing employees than men who negotiate their salary (Bowles et al., 2007; Reif et al., 2019). Thus, in the domain of negotiation, agentic behavior is consistent with competing while communal behavior is consistent with cooperating. Men behaving cooperatively are less likely to be viewed as having questionable motives than women behaving competitively.

In summary, men have fewer constraints than women in balancing the elements of competition and cooperation. Higher status imparts more latitude of

action. Agentic behavior from men is expected while communal behavior is not particularly viewed as having suspect motives. For women, communal behavior is expected, but agentic behavior is simultaneously viewed as a rejection of the communal role and as a possible attempt to enhance status (Rudman and Glick, 1999). Men have the option of engaging in both cooperation and competition as they see fit. Women incur normative constraints in enacting competitive behavior.

### **Judgments by Others**

When engaging in agentic behavior, women are judged more harshly than men (Carli and Eagly, 1999). Specific to negotiation, typical agentic behaviors employed by negotiators include those characterized by assertiveness, serving one's own interests, and dominance. One of the key dimensions of "harsh judgment" is the degree to which the negotiator is viewed as competitive. Tinsley and colleagues (2002) found that negotiators who are viewed more competitively by their counterparts face a number of disadvantages. Their empirical findings show that the counterpart is more likely to form negative impressions of the focal negotiator's intentions (e.g., more stubborn, more deceptive, less trustworthy, less reasonable, less willing to compromise). Therefore, the counterpart is less willing to share information about preferences, interests, and priorities. Consequently, in negotiations with integrative potential, belief that the focal negotiator is overly competitive results in suboptimal dyad outcomes.

When women engage in agentic behavior that is status-asserting, self-promoting, and dominant, they violate the female gender role and are judged negatively (Carli and Eagly, 1999). Because of this effect, women are judged as less likeable by interaction partners when they disagree than when they agree. However, evidence shows that men are equally likeable regardless of whether they agree or disagree with their counterparts (Rudman and Glick, 1999). This effect occurs because disagreement is agentic (violating the female gender role) and because disagreement is interpreted as status-asserting. This contrast regarding likeability suggests that agentic behavior from women is more salient in the judgments of interaction partners than the same behavior from men. According to Rudman and Glick (1999, p. 1004), "Because women are held to a higher standard of niceness than men, they may be more likely to be punished for perceived violations of these standards."

Because of its increased salience for women, we propose that more successful (as judged by objective negotiated outcomes) women negotiators will be judged as more competitive than less successful women negotiators, while men's level of success will be less related to the judgments of competitiveness from their negotiation counterparts.

*Hypothesis 1: The association between the negotiator's outcomes and the negotiation counterpart's judgment of the negotiator's competitiveness will be moderated by negotiator gender, such that the level of negotiated outcomes will be more predictive of the counterpart's judgment for women than for men.*

### **Self and other-assessment of cooperativeness**

Gender identity is a central aspect of an individual's identity and concept of self. Gender identity is multidimensional in nature, but includes knowing which gender category one is a member of, the extent to which one perceives and feels compatibility with one's gender group (this encompasses self-perceptions of gender typicality and feeling content with one's gender), the extent to which one feels pressure to conform to gender roles, and the attitude toward the other gender group (Egan and Perry, 2001).

The literature on gender-oriented self-perceptions and gender typicality argues for the pressure for people to conform to gender schemas or the expression of traits common to their gender; expressive traits like cooperativeness are more typical for women, and instrumental traits such as assertiveness are more typical for men (e.g. see Boldizar, 1991; Hall and Halberstadt, 1980). In other words, people are motivated to adopt behaviors and attitudes that reflect their own sex role and to shun those behaviors that are associated with the opposite sex in order to fulfill the need to belong to their own group and to build and protect self-esteem. Other researchers (Knafo and Spinath, 2011) argue that gender typicality may not result from the pressure to conform, but rather, from other sources like gender-specific temperamental tendencies. In either case, however, behaving in accordance with what is expected of the gender one belongs to helps to improve adjustment and well-being. Thus, women are, as explained in social role theory and gender identity theory, more likely to see themselves as cooperative.

Also, according to social role theory and role congruity theory (e.g. see Biddle, 1979; Sarbin and Allen, 1968; Eagly, 1987; Eagly et al., 2000; Cialdini and Trost, 1998; Eagly and Karau, 2002), women are expected by others to have certain attributes and behave in a certain way which includes being cooperative and so are only expected by others to occupy roles and jobs that endorse these qualities.

Thus, we believe that others will view women negotiators as less cooperative than the level of cooperativeness that the female negotiators assess of themselves. Because status characteristics theory and social role theory point to the disconnect between the way in which others view women cooperativeness and women's actual level of cooperation, we therefore hypothesize:

*Hypothesis 2: Women negotiators will be judged as less cooperative than they judge themselves.*

### **Study 1**

#### **Method**

**Participants.** Study participants were 198 students entering a part-time MBA program at a university in the United States. The study took place as part of the new student orientation. Because of missing data, 4 participants were deleted, leaving a working sample of 194. The working sample was 43% female with an average age of 29.3.

**Negotiation Context and Procedure.** Participants negotiated the “Gator Gaucho in Stuttgart” simulation case. This case is a six-issue, scorable negotiation with integrative potential. The case is based on a format originated by Pruitt and

Lewis (1975). Each negotiator has a possible range of negotiated outcomes of 0 to 2,080 points. The actual range present in this study was 280 to 1,930. If all integrative opportunities are optimized, the maximum dyad total score is 2,960. The minimum possible is 1,200. The actual observed range in this study was 2,060 to 2,960.

Study participants received information for their role and were given time to read and prepare. After preparation, participants were given 30 minutes to negotiate. Participants were randomly assigned to negotiation role and to negotiation counterpart. This assignment method created 32 male-male dyads, 19 female-female dyads, and 46 male-female dyads. After the negotiation was complete, the two negotiators completed a common agreement form. Each negotiator individually completed a post-negotiation questionnaire that asked about judgments of competitiveness.

**Measures.** Individual negotiator outcomes (i.e., score) were measured by calculating the total points received by each negotiator based on the final agreement form. Gender was recorded by self-report.

The post-negotiation questionnaire contained two measures. The first was a judgment of the negotiators' perception of their own competitiveness. This was a question that asked the respondents to record their own competitiveness in the negotiation on a 100-point scale with 100 being "extremely competitive" and 0 being "not competitive at all." The second measure was identical in format. However, it asked the focal negotiators to assess perceived degree of competition exhibited by their counterparts.

**Level of Analysis.** Although the hypothesis is stated at the individual level, it may be inappropriate to analyze the data at the individual level. This issue arises because the individual respondents are embedded in dyads and the individual data may not be independent within dyad. Therefore, we employed the Actor-Partner Interdependence Model (APIM) of Kenny and colleagues (Campbell and Kashy, 2002; Kashy and Kenny, 2000; Kenny and Cook, 1999; Kenny et al., 2006) to test whether the data were independent within dyad. This procedure uses a Chi-square statistic to test a null hypothesis of independence for competitiveness as assessed by the counterpart. The Chi-square test was not significant ( $\chi^2 = 2.09$ ,  $df = 1$ ,  $p = .15$ ). Kenny et al. (2006) state that a non-significant test result indicates independence within dyad and recommend that researchers may appropriately conduct the analysis at the individual level.

The primary method of analysis was moderated regression analysis with negotiator gender and negotiator outcomes as the predictor variables and competitiveness as assessed by the counterpart (*Compete-Other-Assess*) as the criterion variable. Control variables included negotiator role, counterpart gender, and the negotiator's competitiveness as self-assessed (*Compete-Self-Assess*). (*Compete-Self-Assess* and *Compete-Other-Assess* were assessments by the focal negotiator and counterpart, respectively, of the competitiveness of the focal negotiator.)

## Results

Descriptive statistics for the continuous study variables appear in Table 1. Interestingly, Compete-Other-Assess only correlates with Compete-Self-Assess at  $r = .38$ .

Table 1  
Study 1: Descriptive statistics for study variables

Variable	<i>M</i>	<i>SD</i>	Intercorrelations	
			1	2
1. Negotiator Outcomes	1295.00	25.36		
2. Compete-Self-Assess	42.11	19.20	.04	
3. Compete-Other-Assess	43.68	19.45	.10	.38****

Notes: N=194. \*\*\*\*  $p < .0001$

Moderated regression results appear in Model 1 and Model 2 of Table 2. In Model 1, the control variables and the predictor variables are entered. Model 2 adds the interaction of gender x negotiated outcomes. All regression weights in Table 2 (and in Table 3) are standardized weights. As shown in Table 2, the interaction is statistically significant, indicating moderation.

Table 2  
Moderated regression analysis predicting Compete-Other-Assess

IV	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Control Variables</i>					
Negotiator Role	.01	.02	-.05	.05	.04
Counterpart Gender	-.03	-.03	-.06	.01	1.18**
Compete-Self-Assess	.38****	.37****	.28**	.44****	.36****
<i>Predictor Variables</i>					
Negotiator Gender	.00	.93*			.91**
Negotiator's Outcomes	.10	.29**	.30**	-.04	.45****
<i>Moderator Variables</i>					
Gender x Outcomes		-.94**			-.93**
Counterpart Gender x Outcomes					-1.27**
<i>R</i> <sup>2</sup>	.16****	.18****	.18**	.19****	.22****
<sup>a</sup> Change in <i>R</i> <sup>2</sup>		.02**			.06***
Adjusted <i>R</i> <sup>2</sup>	.13	.15	.14	.16	.19
<i>N</i>	194	194	84	110	194

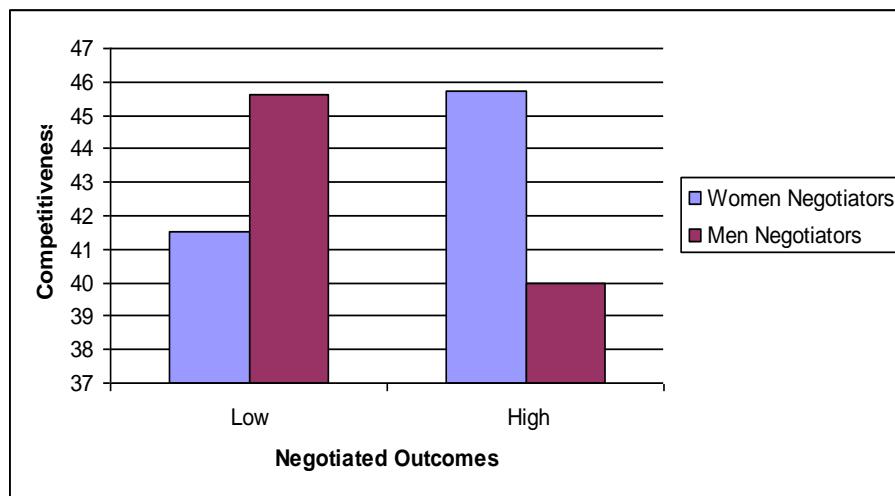
Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , \*\*\*\* $p < .0001$  <sup>a</sup>Change from Model 1

To better understand the nature of this interaction, two types of follow-up analyses were conducted. First, the interaction was graphed; this graph appears in

Figure 1. These results show the anticipated pattern for women: As negotiated outcomes increase, Compete-Other-Assess increases. The pattern for men in Figure 1 shows the opposite pattern: As negotiated outcomes increase, Compete-Other-Assess decreases.

Figure 1

Study 1: Interaction of gender and negotiation outcomes on competitiveness as judged by negotiation counterpart, low negotiated outcomes are 1 standard deviation below the mean and high are 1 standard deviation above the mean.



The second follow-up was to run separate regression models for women and men. These models appear, respectively, as Model 3 and Model 4 in Table 2. As these results show, negotiated outcomes are a significant predictor of Compete-Other-Assess for women; the positive regression weight indicates that higher negotiated outcomes are associated with higher Compete-Other-Assess. However, for men, negotiated outcomes are not a significant predictor. These results suggest that the pattern for men observed in Figure 1, while a negative association, is not statistically significant. Taken together the results of the follow-up analyses support Hypothesis 1.

Because the pattern for men in Figure 1 was unanticipated, we conducted exploratory analyses to better understand these data. Model 5 in Table 2 adds an interaction of counterpart gender and outcomes to the analysis shown for Model 2. Because this interaction is also significant, we ran regression models for each negotiator gender and counterpart gender combination. These models appear in Table 3.

Table 3

Regression analyses predicting Compete-Other-Assess by gender of negotiator and

counterpart

IV	<u>Female Negotiator</u>		<u>Male Negotiator</u>	
	Female Counterpart (Model 1)	Male Counterpart (Model 2)	Female Counterpart (Model 3)	Male Counterpart (Model 4)
	<i>Control Variables</i>			
Negotiator Role	.08	-.10	.28*	-.07
Compete-Self-Assess	.12	.34*	.33*	.48***
<i>Predictor Variable</i>				
Negotiator's Outcomes	.54***	.10	.22	-.25*
R <sup>2</sup>	.30**	.17*	.22**	.32****
Adjusted R <sup>2</sup>	.24	.11	.17	.29
N	38	46	46	64

Notes: \* $p<.05$ , \*\* $p<.01$ , \*\*\* $p<.001$ , \*\*\*\* $p<.0001$

Although all models in Table 3 are statistically significant, a number of interesting findings appear. In the mixed-gender dyads (Model 2 and Model 3), negotiator outcomes were not a significant predictor of Compete-Other-Assess. However, the most interesting results are the contrasting patterns for the same-gender dyads (Model 1 and Model 4). Both models have large  $R^2$  values, but the regression weights are very different. In the female-female dyads, the only significant regression weight is for negotiator outcomes, and these results follow the same pattern as in Model 3 in Table 2 (i.e., negative regression weight). In female-female dyads, the negotiator's own assessment of her level of competitiveness is not a significant predictor of the counterpart's assessment of the negotiator's competitiveness. By contrast, in the male-male dyads, there is a strong positive association between the negotiator's assessment of his competitiveness and the counterpart's assessment of the negotiator's competitiveness. Perhaps the most noteworthy contrast is that, in the male-male dyads, negotiation outcomes were *negatively* associated with the counterpart's assessment of negotiator competitiveness while those variables were *positively* associated in the female-female dyads.

## Study 2

In Study 2, participants negotiated a simulation; then they were asked if the counterpart (male or female) had acted in a manner that was too competitive or not competitive enough. We hypothesized that, because of status and social roles, when degree of judged competitiveness was held constant, women negotiators would obtain fewer outcomes than would men negotiators.

Additionally, we wanted to obtain a more detailed view of assertiveness during the negotiation. Instead of simply measuring perceptions of competing, we chose in Study 2 to measure both competing and cooperating. The theory of cooperation and competition (Deutsch, 1973) and dual concerns theory (Pruitt and

Rubin, 1986) both suggest that competing and cooperating are not simply two ends of the same continuum but that each must be viewed as its own continuum. For example, a negotiator can be high on both dimensions or low on both. Therefore, the question is open regarding whether the assertive behavior resulting in overly competitive assessments by a principal negotiator is solely a presence of competition or also includes a lack of cooperating.

## Method

**Participants.** Initial study participants were 82 students. Because of missing data, data from 2 participants were deleted, providing a preliminary working sample of 80 participants. The sample was 42% female.

**Negotiation Context and Procedure.** Participants negotiated the “Gator Gaucho in Stuttgart” case that was used in Study 1. The procedure was identical to that in Study 1.

**Measures.** Measures were the same as in Study 1 except for the measurement of competing; additionally, measures of cooperating were included.

The post-negotiation questionnaire contained four measures, two for cooperating and two for competing. The first was a judgment of the negotiators’ perception of their own cooperativeness. This question asked the respondent to assess their own level of cooperativeness on a scale of 1 to 9 with higher ratings indicating greater cooperativeness. The second measure was identical. However, it asked the negotiators to assess their perception of the cooperativeness exhibited by their counterparts. The third and fourth measures following the same pattern, asking about competitiveness of themselves and their counterparts. Therefore, each focal negotiator had four measures: their own assessment of their cooperativeness (“Cooperate-Self-Assess”); their counterpart’s assessment of the focal negotiator’s cooperativeness (Cooperate-Other-Assess”); their own assessment of their competitiveness (“Compete-Self-Assess”); and their counterpart’s assessment of the focal negotiator’s competitiveness (Compete-Other-Assess”).

The post-negotiation questionnaire also asked respondents to assess, based on a nine-point scale, whether the counterpart’s level of competitiveness was too much or too little. This item was phrased, “Regarding your *negotiating partner*, was his or her focus on competing *too much, about right, or too little* in order to be productive?” The item was scored on a 9-point scale with 5 being “about right”, 1 being “too little”, and 9 being “too much”. Because the focus of Study 2 was on the sub-set of participants who were judged by their counterparts to have engaged in too much or too little competition, all participants who were judged as “5” on this measure were deleted from the sample. These deletions provided a final working sample of 59 participants; 47% of this sample was female.

**Level of Analysis.** As with Study 1, we used the APIM method (Campbell and Kashy, 2002; Kashy and Kenny, 2000; Kenny and Cook, 1999; Kenny et al., 2006) to test whether the data were independent within dyad. Separate tests were conducted for Cooperate-Other-Assess and Compete-Other-Assess. For Cooperate-Other-Assess, the Chi-square test was not significant ( $\chi^2=0.11$ ,  $df=1$ ,  $p = .74$ ). For Compete-Other-Assess, the Chi-square test was also not

significant ( $\chi^2 = 1.10$ ,  $df = 1$ ,  $p = .30$ ). Therefore, as per the recommendations of Kenny et al. (2006), we conducted the analysis at the individual level.

## Results

Descriptive statistics and interactions for continuous study variables appear in Table 4; these statistics are divided by gender. Correlations below the diagonal are for men, and correlations above the diagonal are for women.

**Table 4**

Study 2: Descriptive statistics by gender for study variables

Variable	Male (N=32)		Female (N=27)		Intercorrelations				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Negotiator Outcomes	1406.0	198.77	1304.0	169.58	--	-.01	-.25	.26	-.15
2. Cooperate Self-Assess	6.97	1.47	6.81	1.41	-.16	--	-.03	-.45	.01
3. Cooperate Other-Assess	6.97	1.45	6.11	1.39	-.05	.54	--	-.24	-.45
4. Compete Self-Assess	4.31	1.94	4.89	1.69	.06	-.64	-.47	--	-.08
5. Compete Other-Assess	4.53	1.87	5.37	1.86	-.09	-.26	-.55	.26	--

Notes: Correlations above the diagonal are for women; correlations below the diagonal are for men. Correlations greater than .29 are significant at the  $p < .05$  level; correlations greater than .44 are significant at the .01 level.

Our first question was, if the level of perceived competing were held constant, would women be able to obtain outcomes as great as men? The means for negotiated outcomes appear by gender in Table 4. The difference is statistically significant ( $t = 2.09$ ,  $df = 57$ ,  $p < .04$ ). This difference indicates that, when both men and women are judged to have engaged in an “about right” level of competing, women gain fewer negotiated outcomes than men. These results are consistent with both social role theory and status characteristics theory.

The second question addressed in Study 2 was whether the perceived assertiveness of men and women manifested itself in cooperating as well as in competing. The mean difference shown in Table 4 for Cooperate-Other-Assess was statistically significant ( $t = 2.30$ ,  $df = 57$ ,  $p < .02$ ). Differences for self-assessed cooperation and competition were not statistically significant nor was the difference for Compete-Other-Assess.

In addition, we found that, while men judge their own mean cooperativeness to be the same as judgments by their counterparts, women were judged by their counterparts as less cooperative than they judged themselves. However, t-tests showed that difference between Cooperate Self-Assess and Cooperate Other-Assess for women was not statistically significant. Therefore, Hypothesis 2 is not supported.

## **Discussion**

The primary purpose of these studies in negotiation was to draw on social role theory and status characteristics theory to see if negotiated outcomes are related to the perceptions of competitiveness and cooperativeness for women negotiators. Having conducted two experiments, we believe that three key conclusions seem warranted.

First, successful women negotiators are judged more harshly than successful men negotiators. The negotiated outcomes of women were strongly related to counterparts' judgments of competitiveness. By contrast, the negotiated outcomes of men were not significantly related to counterparts' perceptions of competitiveness.

As noted by O'Connor and Arnold (2001), negotiated outcomes have previously been studied almost exclusively as criterion variables (e.g., testing proposed antecedents to negotiated outcomes). However, they point out that the actual outcomes have consequences and that outcomes should also be studied concerning their influence on the negotiator. In extending that logic, we propose that outcomes should also be studied concerning their effects on the negotiation counterpart. There are noteworthy implications if counterparts are predisposed to viewing successful women negotiators as more likely to act in a more competitive manner.

An anticipated pattern in negotiation is that cooperative behavior (e.g., building rapport and trust) is likely to be reciprocated by cooperative behavior and that competitive behavior is likely to be reciprocated by competitive behavior (Tinsley et al., 2002). In the same way that Tinsley et al. discovered that a distributive reputation could bias willingness to reciprocate cooperative behavior, results in the current study suggest that violations of gender roles and perceived status-seeking may also bias that willingness.

Second, when the degree of competing for the focal negotiator (as judged by the counterpart) was held constant in Study 2, women received fewer negotiated outcomes than did men. This suggests that women negotiators are in a precarious situation, in which if they fit their ascribed gender role, then they are more likely to experience decreased negotiation outcomes. This finding is consistent with the finding in the status characteristics theory literature that women are less likely to achieve their desired outcomes than are men because of the backlash effect (Carli, 1999; Carli and Eagly, 1999; Ridgeway, 1982; Wahrman and Pugh, 1974).

Third, the Study 1 results in same-gender dyads were particularly intriguing. Greater negotiated outcomes by women negotiators was viewed as more competitive than greater negotiated outcomes achieved by men, while greater outcomes by men negotiators was viewed as more cooperative than were greater

negotiated outcomes achieved by women. In general, it would seem that men and women may have different perceptions of what constitutes cooperative behavior versus competitive behavior. Perhaps negotiation behavior that men may view as cooperative or competitive may be viewed in an opposite manner by women. Likewise, behavior that is viewed as cooperative when enacted by a man may be viewed as competitive when enacted by a woman. This conclusion would be consistent with the finding of Rudman and Glick (1999) that men have greater latitude of acceptable behaviors than do women.

One specific element of negotiation where this interpretation may differ is in due diligence. Pruitt and Rubin (1986) point out that a high resistance to yielding is necessary for optimal negotiated outcomes. Although a potential deal that is acceptable may be “on the table,” due diligence dictates that a negotiator should not accept the offer immediately, but should still work to determine if a more optimal deal is possible. We suggest that men undergoing due diligence are more likely to be viewed by the counterpart as cooperative—because of higher status and the gender role of men—while women undergoing due diligence are more likely to be viewed as competitive—because of lower status and their gender role. Specifically, we propose that resistance to yielding is viewed more competitively when enacted by women than when enacted by men. In short, men have greater latitude in behaviors, and thus behaving competitively is more accepted.

One alternative explanation for this finding is that men can increase their negotiation outcomes in male-male dyads without actually being competitive (i.e., that they were judged as less competitive because they actually were less competitive). While this possibility cannot be ruled out, it is inconsistent with the long-held beliefs that effective negotiation requires a combination of competitive and cooperative behaviors (Lax and Sebenius, 1985) and that resistance to yielding is necessary in order to optimize outcomes (Pruitt and Rubin, 1986).

### **Limitations and Directions for Future Research**

This set of studies argues that status characteristics theory and social role theory suggests how negotiator gender explains the levels at which individuals will judge the competitiveness of a counterpart. Our findings present additional research questions in the realm of leadership and negotiation. For example, the leadership literature has found that managerial behaviors explained social role theory leads to discrimination against women in being selected for managerial and leadership roles. Is there a parallel effect for negotiation? Do organizations discriminate against women in providing access to roles that involve significant negotiation activities?

One puzzling finding in this study has negotiation implications that go beyond gender issues. Results in Table 1 show a correlation in Study 1 of  $r = .38$  between Compete-Self-Assess and Compete-Other-Assess; in Study 2, the correlations between Cooperate-Self-Assess and Cooperate-Other-Assess provided in Table 4 indicate a correlation of  $r = .54$  for men and a correlation of  $r = -.03$  for women. Although the larger two of these three correlations are statistically

significant, each correlation represents, in effect, two measures of the same construct. Interpreted as a coefficient of test-retest reliability, these correlations raise some concern.

An anticipated pattern in negotiation (Tinsley et al., 2002) is that, to some degree, cooperative behavior will be reciprocated by cooperative behavior and that competitive behavior will be reciprocated by competitive behavior. However, implicit in this assumption is the notion that negotiators are correctly interpreting the pattern of the counterpart as being cooperative or competitive. If counterparts are judging the behavior of the focal negotiator as competitive (or cooperative) when that is not the perception of the focal negotiator, the focal negotiator's intended behavior is unlikely to be reciprocated. Additionally, accuracy of the competitiveness as judged by objective means (e.g., a third party) is not necessary. Tinsley et al. (2002) found that even totally fabricated perceptions of the counterpart's competitiveness were sufficient to trigger a competitive response. Future research should investigate the degree to which negotiators—regardless of gender—are interpreting the degree of competitive or cooperative behavior from the counterpart in the same way the counterpart interprets it.

### **Conclusion**

In this study, we used social role theory and status characteristics theory to argue that for women negotiators, perceptions of competitiveness are positively associated with negotiation outcomes, such that women who succeed in negotiation are viewed as acting more competitively than men who are successful.

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## **MEASURING PROFESSIONAL ASSOCIATION ETHICS PRINCIPLES ACROSS UNIVERSITY COURSES: A MODEL AND PILOT STUDY**

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### **ABSTRACT**

This paper explores the question: How might accounting and business professional associations have some assurance that their professional ethics are presented within the coursework of educational institutions? A case is made that measurement of student perception of values within their courses may be key. The core concept is to link these student perceptions to the ethical standards of germane professional associations. A model was developed, the Multi-Stakeholder Values Measurement (MSVM) Model, which enabled a map linking student perceptions to the ethical standards of a professional association. A pilot study was performed utilizing previously-validated student values perception data from undergraduate accounting courses, a part of the Gunn-Lorton Attitudinal Surveys (GLAS) project at the University of San Francisco (USF), and the published ethical standards of the International Ethics Standards Board for Accountants (IESBA). Multiple regression and other statistical techniques were used to validate the model. Statistically significant findings enabled insights into student perceptions based on gender and major within the pilot study. Accounting majors as a whole generally scored higher than non-accounting majors, and perceived the principles of Integrity and Confidentiality to a statistically significant degree. In terms of gender differences, the results yielded a previously expected insight in that females scored higher than males, and in some instances, to a statistically significant degree (Thoma, 1986, Bailey, 2010). Within the accounting majors, females scored higher than males, and to a statistically significant degree for the principle of Conflict of Interest. Taking the group as a whole, all females scored higher than males for all principles, but no statistically significant differences were found. Considering just females, the female accounting majors scored higher than the female non-accounting majors, with statistical significance found for the principles of Integrity ( $p>.01$ ), Conflict of Interest ( $p>.05$ ) and Confidentiality ( $p>.05$ ). A discussion of considerations for future development is presented.

Key Words: Business Ethics, Accounting Ethics, GLAS, MSVM, IESBA

## INTRODUCTION

With the objective of exploring new methodologies to ensure the efficacy and relevance of accounting and business ethics pedagogies at the university level, we explored an alternative view of assessment: How might accounting and business professional associations have some assurance that their professional ethics are presented within the coursework of educational institutions?

A case is made that the measurement of student perceptions with respect to the presence of identified ethical values within their courses may be key. A model has been developed to enable linking these student perceptions to the ethical standards of any number of professional associations. Utilizing previously validated student perception data from undergraduate accounting courses and the published standards of a recognized international professional accounting association, a pilot study was performed to validate the model. Statistically significant findings enabled insights into variations of student perceptions based on gender and major.

## PROBLEM IDENTIFICATION

It is not unusual for newsworthy financial scandals to increase the demand for teaching ethics in accounting and business courses. This is evident in the many ethics-in-business-education articles which often cite visible scandals, such as the Bernie Madoff Ponzi scheme, the government-backed Federal Home Loan Mortgage Corporation (Freddie Mac) misstatement of billions of dollars in earnings, and the American International Group (AIG) stock price manipulation scheme, among others (Deno, 2018, Freeman, 2009). However, focusing on this level of fraud fails to give perspective to the very real fraud which occurs in business everywhere, every day.

The “Report to the Nations: 2018 Global Study on Occupational Fraud and Abuse” from the Association of Certified Fraud Examiners (ACFE) examines the overall state of fraud globally (ACFE, 2018). It details the impact of fraud on businesses of all sizes. In fact, the financial exposure of a fraudulent activity does not necessarily grow with the size of the business. The median loss due to fraud in businesses with <100 employees was twice that for larger businesses. In financial terms, businesses with <100 employees measured a median loss of \$200,000, while businesses with 100+ employees sustained a median loss of \$104,000 (ACFE, 2018). In other words, smaller businesses had greater exposure to fraud than larger businesses, and one might argue could afford them the least.

Another aspect worth considering is that while “asset misappropriation” was involved in 89% of fraud cases, it was “financial statement fraud” that created substantially higher losses. The median loss per identified case of “financial statement fraud” was \$800,000, suggesting that the impact of fraud at the accounting level far outstrips general business fraud on a per-incident basis

(ACFE, 2018). Thus, while not newsworthy on the level of the Madoff, Freddie Mac or AIG scandals, the need for teaching ethics in accounting is significant, if solely on the basis of the ubiquity of accounting throughout the business world.

In terms of scope, every business must account for its financial activity, and the number of businesses – especially, businesses with <100 employees – is revealing. According to the 2017 U.S. Census, there are 5,884,403 firms with <100 employees in the United States, while there are only 112,497 firms with 100+ employees (United States Census Bureau, 2017). Each of these nearly 6 Million businesses are candidates for unethical accounting practices, and it bears reflection that these numbers apply solely to the U.S. economy; the global economy is many times larger still.

Complicating matters further are the opportunities for accounting fraud which emerge with the utilization of new technologies, arguably requiring new accounting methodologies prior the development of accepted accounting practices. One such example is in the area of cryptocurrency (Bitcoin, XRP, Ethereum, et al.), which itself has produced its own financial scandals (Knight, 2019).

## **RELEVANT PRIOR RESEARCH IN ETHICS EDUCATION**

The role for ethics education can be expressed in one simple premise: If accounting and business ethics can be taught at the university level, students are more likely to make ethical decisions in the future when they eventually work in a professional capacity. While such a years-long premise may perhaps be untestable, the possibility of positively influencing future decision-making has been sufficient to undertake the academic challenge. This has generated a myriad of educational pedagogies for teaching accounting and business ethics, and recent efforts have included practice methodologies, case learning, explicit discussions regarding accounting and business ethics issues, and efforts to develop separate business ethics courses (Markkula, 2020, Deno, 2018, Williams, 2010).

In terms of testing, substantive efforts have been directed toward measuring the ethical reasoning capacity of students both during and after accounting and business coursework. This well-established, decades-long endeavor continues today, most frequently revolving around the Defining Issues Test (DIT) and its updated version, DIT-2. A recent example is evident in Flynn, et al. (2019), “Consistency of Ethical Analysis Among Accounting Students”, in the *Journal of Business and Accounting*. “Ethical analysis is often studied using the DIT-2 originally developed by Rest (1979) as the Defining Issues Test and subsequently updated. It is grounded in cognitive moral development theory (Kohlberg, 1969) and its three levels of moral reasoning” (Flynn, 2019, Rest, 1979). Specifically, with respect to accounting and business courses, the DIT-2 “is widely used as a measure of cognitive moral decision-making, moral reasoning and cognitive moral development” (Flynn, 2019). As an example, this recent study examined responses

to the DIT-2 by intermediate and upper level undergraduate accounting students to determine if students “consistently apply ethical frameworks when making decisions with moral content in a survey situation” (Flynn, 2019). The nuances of this work are important to the broader context of the effort described here.

Gender differences have also been examined vis-à-vis the DIT and the DIT-2. Citing University of Alabama Emeritus Professor Stephen J. Thoma’s early work, Bailey, et al. reminds us that “[o]n the DIT, females have a history of scoring higher than males – although the difference is very small” (Thoma, 1986). However, Bailey, et al. several decades later was able to examine ten studies, and while females continued to score higher than males, they found significant differences between genders in only seven of those studies (Bailey, 2010).

Despite the widespread use of DIT and DIT-2, the challenges – some might describe these as criticisms or controversies – with regard to using these tests with respect to accounting ethics students have been on-going. In Bailey, et al. (2010), “Revitalizing accounting ethics research in the neo-Kohlbergian framework: Putting the DIT into perspective” in the journal *Behavioral Research in Accounting*, 23 articles or working papers studying accounting students and 29 studies of professional auditors were reviewed (Bailey, 2010). The authors detail the major criticisms in this way: “While challenges to the DIT instruments continue, the instruments are far from invalidated. Such claims, in our view, are preliminary and, rather, highlight the need for further research”. Noting that prior research had primarily centered around Rest’s Component II analyses, the authors suggested that future research might extend to all four components (Rest, 1979). These considerations are referred to directly as a motivating factor in Flynn (Flynn, 2019).

Of importance, the DIT-2 examines ethical analytic capability, making no distinction as to the specific ethics pedagogy utilized within any course. This is relevant in that higher-education institutions often incorporate multiple ethical frameworks, in addition to and separate from specific business ethics pedagogies. For example, Jesuit universities utilize the Ignatian Pedagogical Paradigm (IPP) to guide students, instilling the continuous personal activity of Context, Experience, Reflection, Action and Evaluation (ICJE, 1993). Given the DIT-2 construct, evaluating students of accounting and business courseware at Jesuit universities utilizing the DIT-2 remains well-suited.

However, this is not a paper about the DIT-2 as a measurement tool for ethical reasoning capability. The effort herein is led by two sections of the Suggestions for Future Research, “Component III: Moral Motivation” and “Component IV: Moral Character” in the Bailey article (Bailey, 2010).

“[Rest] points out that moral values compete with other values to determine final outcomes” (Bailey, 2010). In a complementary manner, Welton, et al. (1994) in “Promoting the moral development of accounting graduate students: an instructional design and assessment” in the journal *Accounting Education*, reminds us that Kohlberg's levels and stages of moral development describe the post-conventional level as “Awareness of other people's rights, universal principles of justice, concern that laws be based on the concept of 'the greatest good for the greatest number' ... [c]oncern with consistent ethical principles, equality of human rights and respect for the dignity of human-beings as individuals. Actions are in accord with these principles when laws violate them” (Welton, 1994, Kohlberg, 1981, Kohlberg, 1984). And finally, Bailey, et al. (2010) poignantly states: “It may be possible to identify the most important factors—institutional, personal, or environmental—that mediate this final link in the moral performance of accountants and auditors” (Bailey, 2010). All these statements are about moral values.

## THE EVOLUTION OF A MODEL

The chasm between the immediate measurement of accounting and business ethics capability during/post-coursework and how these students-as-subsequent-professionals will behave drives the efforts described here. The inability to link, in some concrete way, the ethical educational experience of the student with appropriate behavior at a later date was worrisome for the authors.

Certainly, the expected behavior of the ultimate professional is well defined, embodied in the ethical principles published by the professional associations. Inevitably expressed in the context of the professional work at hand, these ethical principles cannot be expected to be the same from one profession to another, from one specialty to another, or from one association to another. In fact, even with essentially identical professional associations, word choice can be problematic, much less with the selection of an official language, be it English, French, and so forth. All this must be taken into account in addressing this challenge.

At this point, rather than envisioning the problem from the academic viewpoint, we chose to switch the view to that of the accounting and business profession. The core research question was then posed as follows:

*How might accounting and business professional associations have some assurance that their professional ethics are presented within the coursework of educational institutions?*

This opened up our thinking. The purposes of professional associations are far distant from the multifaceted goals of educational institutions. Universities are dedicated to educating the “whole person”, while fully supporting these students’ entry into many careers. Indeed, whatever can be developed to link these two entities, the university must be preserved, as must the professional association. The idea was to put the power into the link, while not imposing structures on either.

The authors have had success measuring student perception of complex values within a complement of courses at both the undergraduate and graduate levels in a number of subject areas, which has been reflected in a number of relevant publications (Gunn, 2016a, Gunn, 2016b). Could we link that data to a subject-relevant professional association as an instance of a general model?

### **THE MULTI-STAKEHOLDER VALUES MEASUREMENT (MSVM) MODEL**

A set of premises were developed to describe acceptable possible solutions in hopes of a general model:

- Students would solely take educational institution-approved surveys to measure the ethical value course content as perceived by its students.
- Educational institutions and professional associations would use their own published ethical values, with no requirement to come to common agreement.
- All data collected utilizing surveys would be compliant with the Family Educational Rights and Privacy Act (FERPA)
- De-identified student data from relevant courses could be accessed by professional associations for analysis purposes.
- Professional associations could “map” multiple ethical values from a number of educational institutions.
- Educational institutions could authorize multiple professional associations to “map” its de-identified student data with respect to ethics mapping exercises.
- Professional associations would have no input into educational institution surveys.

- Students would take no more than a single survey per course.
- Students would take no surveys provided by professional associations.

The overarching premise was to establish the sought after “link”, where ethical values described in one way (academically) could be validly mapped onto other ethical values described another way (professionally). This is the essence of this research, to see if that was possible.

The elements needed were:

- An educational institution with a published ethical framework
- A professional association in with a published ethical framework
- A survey instrument to collect student ethical values perception data
- Student data from accounting and business courses
- A “Map” of the educational institution’s ethical framework onto the ethical framework of the professional association
- A Trusted Third Party to handle FERPA-acceptable access to student data
- Statistical analyses showing 1) a statistically sound model, 2) the linkage between student-perceived ethical values and professional association ethical values, and 3) insights into the students themselves.

Thus, the Multi-Stakeholder Values Measurement (MSVM) Model came into being. Figure 1 depicts the relation and flow of the elements described above in graphical terms.

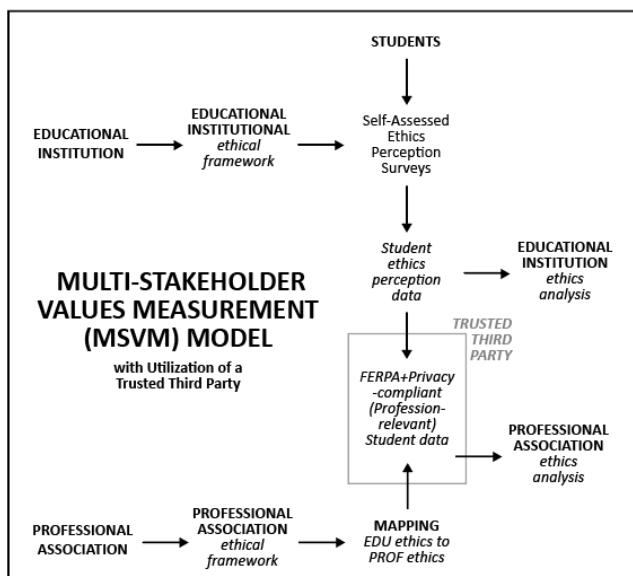


Figure 1. The Multi-Stakeholder Values Measurement (MSVM) Model

Essential features of this model include multiple educational institutions with institution-specific ethical values measurement instruments, each to be used without review or intervention by professional associations, protection of student data, multiple professional associations with association-specific ethical frameworks, and flexible education-to-professional ethics mapping. Recognizing the substantial FERPA and general privacy concerns, the MSVM Model provides for a Trusted Third Party with a two-part service: 1) handling the de-identified student data on behalf of the educational institution, and 2) after being provided with the EDU-ethics-to-PROF-ethics “map”, providing the ethics analysis to the professional association. In this way, a single set of student data can serve multiple professional associations.

There are drawbacks, as well. For example, although there are stringent rules regarding the use of students for testing purposes, and even further restrictions on testing conducted for or on behalf of external organizations, these rules are met routinely. Furthermore, it can be expected that the surveys used by educational institutions could be changed at any time. This is addressed within the MSVM model by a change in EDU-to-PROF mapping. As part of that interchange, educational institutions would likely insist on reviewing the EDU-to-PROF mapping as a condition of participation. Receiving an excellent “professional ethics” score from a significant professional association would have real value, while a low “professional ethics” score could have unfortunate downsides.

## THE PILOT STUDY

To test the MSVM Model, a pilot study was designed, utilizing the elements identified in Table 1.

Table 1. Elements of the MSVM Model in the Pilot Study

Educational Institution (EI)	University of San Francisco (USF)
EDU Ethical Framework	USF's Core Values
EI Survey Instrument	Gunn-Lorton Attitudinal Surveys (GLAS)
EI Student Data	Undergraduate Accounting Courses
Professional Association	Int'l Ethics Standards Board for Accts (IESBA)
PROF Ethical Framework	IESBA Fundamental Principles
EDU-to-PROF Map	See Table #4

The survey instrument selected for the pilot study is survey within the Gunn-Lorton Attitudinal Surveys (GLAS) project at the University of San

Francisco (USF). Student perceptions of ethical values data with regard to university's core values have been published. The 2016 publication, "The Presence of Jesuit Values in a Selection of University of San Francisco Courses: The Students' Perspective" in the journal *Jesuit Higher Education*, profiled 511 diverse students from both undergraduate and graduate students in the 2014-2016 timeframe (Gunn, 2016a). Today, the cumulative GLAS database contains attitudinal survey data on over 1,500 students at both the graduate and undergraduate level, reflecting over 165,000 data points, and yielding a number of peer-reviewed journal articles (Gunn, 2015, Gunn, 2016b).

For the pilot study, all GLAS data classified as ethics survey data in the 2014-2019 timeframe was extracted into a dataset, labelled: "GLAS-ES". This data reflects both graduate and undergraduate students, and a range of instructors from full professors to adjunct faculty. While the GLAS surveys with respect to USF's core values are identical throughout, it was determined that the perception of professional accounting values in non-accounting courses would not be relevant. Also problematic in this pilot study could be other teaching factors, such the previously unmeasured differentials in course content and the ethical values of various instructors, themselves. To remove these factors, a selection of multi-year, multi-course surveys in undergraduate accounting courses were extracted for a single instructor. The instructor is co-author Professor John P. Koeplin, and the course subjects are Cost Accounting, Principles of Financial Accounting, and Principles of Managerial Accounting, all required courses for a Bachelors in Accounting and electives with other Business Majors.

This extracted dataset has been labelled: GLAS-ES-ACCTING, and contains GLAS ethics surveys from Fall, 2015 through Spring, 2019. Table 2 contains the breakdown by major and gender of the student ethics records contained in GLAS-ES-ACCTING. The data records are both diverse in gender and major, reflect a multi-year period, and yet are sufficient to yield dependable statistical relevance between and among subgroups.

Table 2. GLAS-ES-ACCTING Data Set for Pilot Study

Majors	All Students	Female Students	Male Students
Accounting	174	106	68
Non-Accounting	133	93	40
TOTAL	307	109	108

The ethical framework for the pilot study is USF's core values. (See Figure 2.)

The University's core values include a belief in and a commitment to advancing:

- the Jesuit Catholic tradition that views faith and reason as complementary resources in the search for truth and authentic human development, and that welcomes persons of all faiths or no religious beliefs as fully contributing partners to the University;
- the freedom and the responsibility to pursue truth and follow evidence to its conclusion;
- learning as a humanizing, social activity rather than a competitive exercise;
- a common good that transcends the interests of particular individuals or groups; and reasoned discourse rather than coercion as the norm for decision making;
- diversity of perspectives, experiences and traditions as essential components of a quality education in our global context;
- excellence as the standard for teaching, scholarship, creative expression and service to the University community;
- social responsibility in fulfilling the University's mission to create, communicate and apply knowledge to a world shared by all people and held in trust for future generations;
- the moral dimension of every significant human choice: taking seriously how and who we choose to be in the world;
- the full, integral development of each person and all persons, with the belief that no individual or group may rightfully prosper at the expense of others;
- a culture of service that respects and promotes the dignity of every person/
- Source: [www.usfca.edu/about/values/](http://www.usfca.edu/about/values/)

Figure 2. University of San Francisco (USF) Core Values Statement

The selection of a professional association was a considered decision. In the area of general business, professional associations are often focused on business growth, networking, and career development, which is reflected in their ethical guidelines; however, the profession of accounting carries a heavier burden. For example, it must be responsible for a range of legal and regulatory directives with respect to local, state, federal and multi-national authorities, all while providing professional services to clients. Thus, in the accounting profession, the function of professional associations goes further into publishing standards of practice, reviewing changes in the law, administering professional certifications, and much

more. The focus is on the professional practice of accountancy, where ethical values are paramount, as opposed to business growth.

A review of accounting associations reveals that some professional organizations are specific to a type of accounting, such as the Accountant-Lawyer Alliance (ALA). Others are defined regionally by state, national, or international coverage, such as the National Association of State Boards of Accountancy (NASBA), the American Institute of Certified Public Accounts (AICPA), and International Ethics Standards Board for Accountants (IESBA). Each has their own published ethical frameworks, and some are interconnected.

At the international-to-national level, as Catherine R. Allen wrote in “A New Take on Ethics and Independence” in the December 1, 2018 edition of the Journal of Accountancy, “The IESBA standards significantly influence the accounting profession globally, including in the United States. The AICPA and other professional accountancy organizations worldwide, including the Chartered Institute of Management Accountants (CIMA), are ‘member bodies’ of the International Federation of Accountants (IFAC) that agree (among other things) to *meet* the standards set by IFAC-supported boards, including the IESBA.” (Allen, 2018) (Author italics)

While a deeper study on the national-to-state level of professional accountancy associations and their interrelationship was conducted, the authors felt it was important to select was the accountancy association with the broadest reach and general applicability. Given the global nature of IESBA and its complementary ethics relationship with AICPA, which itself is working with a number of states in the US, the IESBA’s five Fundamental Principles were selected for use in the pilot study. (See Figure 3.)

## **CREATING THE EDU-TO-PROF “MAP”**

Neither USF’s core values statement nor IESBA’s Fundamental Principles were written with the idea of testing in mind. In actuality, some ethical value statements expressed multiple values, and for testing, each value must be considered on its own. This was found to be the case when testing the original USF core values (Gunn, 2016a). For testing purposes, the original ten USF core value statements were expanded to thirteen core values. Similarly, some IESBA Fundamental Principles were determined to reflect multiple ethical values. Table 3 details how five Fundamental Principles were expanded.

There are five fundamental principles of ethics for professional accountants:

- (a) Integrity – to be straightforward and honest in all professional and business relationships.
- (b) Objectivity – not to compromise professional or business judgments because of

- bias, conflict of interest or undue influence of others.
- (c) Professional Competence and Due Care – to:
  - (i) Attain and maintain professional knowledge and skill at the level required to ensure that a client or employing organization receives competent professional service, based on current technical and professional standards and relevant legislation; and
  - (ii) Act diligently and in accordance with applicable technical and professional standards.
- (d) Confidentiality – to respect the confidentiality of information acquired as a result of professional and business relationships.
- (e) Professional Behavior – to comply with relevant laws and regulations and avoid any conduct that the professional accountant knows or should know might discredit the profession.

*Source: IESBA, <https://www.ifac.org/system/files/publications/files/IESBA-Handbook-Code-of-Ethics-2018.pdf>*

Figure 3. IESBA 2018 Fundamental Principles

Table 3. The IESBA Fundamental Principle Elements for Mapping Purposes

ORIGINAL IESBA IDENTIFIERS	IESBA IDENTIFIERS FOR MAPPING PURPOSES
Integrity	Integrity
Objectivity	Bias
--	Conflict of Interest
--	Undue Influence
Professional Competence and Due Care	Professional Service
--	Tech/Prof Standards + Legal
Confidentiality	Confidentiality
Professional Behavior	Laws + Regulations
--	Conduct becoming the Profession

The challenge of mapping the educational institution's values onto the professional association's becomes immediately apparent. There was no simple, one-to-one mapping between the two. In fact, for any university core value, multiple IESBA values could be relevant. For the purposes of this pilot study, all relevant IESBA values were recognized by a “x”, with the predominant ethical value marked with an “X”. In practice, a professional association may well select a different profile, and may choose to change that profile over time. In addition, they may elect to have two or more predominant values. Those considerations are beyond the scope of this pilot study, but the MSVM model and statistical approach remains consistent with re-assignment.

The USF-to-IESBA (EDU-to-PROF) map can be found in Table 4. This mapping was made through discussions among the co-authors. While no professional associations were consulted, co-author John Koeplin has both professional and academic accounting affiliations, and professional experience.

Table 4. The USF-to-IESBA (EDU-to-PROF) Map

USF Core Value #	USF Core Value Descriptor	IESBA/AICPA Fundamental Principles						Confidentiality ACQ'D THRU PROF/BUS RELATIONSHIPS
		Integrity STRAIGHT-FORWARD HONEST	Part A - OBJECTIVITY BIAS	Part B - Objectivity CONFLICTS OF INTEREST	Part C - Objectivity UNDUE INFLUENCE	Part A - Professional Competence PROFESSIONAL SERVICE	Part B - Professional Competence TECH/PROF STDS + LEGAL	
1a	<i>Faith+Reason</i>	X			X			X
1b	<i>All Faiths</i>		X	X				X
2	<i>Truth</i>	X		X	X	X	X	X
3	<i>Non-competition</i>		X	X	X			X
4a	<i>Common Good</i>			X	X		X	
4b	<i>Reasoned Discourse</i>	X	X	X	X	X	X	X
5	<i>Diversity</i>		X	X	X			X
6	<i>Excellence</i>					X	X	
7a	<i>Future Trust</i>		X	X	X		X	X
7b	<i>Social Responsibility</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		X	The bold "X" indicates the primary IESBA/AICPA Value assigned					
		X	The smaller X indicates a contributing although not leading IESBA/AICPA Value					
		N/A = NOT INCLUDED - UNIVERSITY MISSION ORIENTED						

## VALIDATION OF THE INSTRUMENT: THE PILOT STUDY

The first task at hand having collected the data and creating the map was to explore whether the USF-to-IESBA (EDU-to-PROF) Map had any validity. To reassure that the assignment of the various GLAS questions to measure the IESBA Fundamental Principles in Table 4 performed that function, a multiple regression analysis was conducted. In simpler terms, were the measures of the professional association's principles tapping into components of the desired overall assessment in a way that would yield useful information on the question posed?

The multiple regression produced two vectors of useful analysis: 1) The multiple regression conclusion itself, which showed the degree with which each of the seven subscales (expanded IESBA Fundamental Principles) contributed to the whole and 2) Measures of the intercorrelations, which demonstrated each subscale's contribution to the whole assessment and

their overlap. The results of the multiple regression were useful in confirming the broad promise of the process. Not surprisingly, the multiple R was near 1.00 as the components of the total score were all together the component scores for the various items in the survey. (See Table 5.)

Table 5. Multiple Regression Results: USF-to-IESBA (EDU-to-PROF) Map

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	S	F	p-value
0.998	0.995	0.995	0.079	9284.08 8	0

The first part of what was useful in the regression analysis is that the coefficients for each item in the scale were significantly non-zero as Table 6 shows from the t and p values. All the subscales made a contribution independent of each other. In this table, the values for the Pearson r have been added to illustrate that the subscales contribution (coefficient) is related to the magnitude of the correlation but not invariably. This is further confirmed by the intercorrelations in Table 7.

Table 6. Multiple Regression Coefficients: USF-to-IESBA (EDU-to-PROF) Map

IESBA Fundamental Principle	R	Coef (b)	SE	Beta	t	P
Integrity	0.716	0.208	0.002	0.431	98.623	0.000
Bias	0.568	0.094	0.005	0.105	20.293	0.000
Conflict of Interest	0.801	0.225	0.004	0.292	53.581	0.000
Undue Influence	0.592	0.111	0.004	0.137	28.431	0.000
Profsnl Service	0.489	0.066	0.003	0.086	18.902	0.000
Stds+Legal	0.750	0.154	0.005	0.179	30.229	0.000
Confidentiality	0.769	0.141	0.004	0.178	31.764	0.000
Intercept		0.026				

Table 7. Intercorrelations: USF-to-IESBA (EDU-to-PROF) Map

IESBA Fundamental Principles	Integrity	Bias	Conflict of Interest	Undue Influence	Profsnl Service	Stds + Legal	Confidentiality	Total
Integrity	1	0.149	0.361	0.177	0.156	0.324	0.390	0.716
Bias	2%	1	0.436	0.393	0.380	0.624	0.411	0.568
Conflict of Interest	13%	19%	1	0.490	0.357	0.588	0.589	0.801
Undue Influence	3%	15%	24%	1	0.348	0.433	0.493	0.592
Profsnl Service	2%	14%	13%	12%	1	0.374	0.436	0.489
Stds+Legal	10%	39%	35%	19%	14%	1	0.580	0.750
Confidentiality	15%	17%	35%	24%	19%	34%	1	0.769
Total	51%	32%	64%	35%	24%	56%	59%	1

Table 7 lists the intercorrelations among the seven Fundamental Principles' subscales and with the total score. The upper right diagonal space lists the correlation coefficients, and the lower left diagonal space lists the percentage of variability accounted for by each pair (i.e.,  $r^2$ ). For the exploration of the validity concern, one important part of this table is the bottom row which shows the percent of the variance shared by each independent Fundamental Principle measure with the total. It has the highest percentage in all the columns except one score in the second column. This shows the items used in each subscale score are fairly independent of one another, but are related most to the total score.

A table of Student t values is included in the Appendix. Not surprisingly, due in no small part to the high  $n$  (307 student surveys), all the correlations are “not zero” (i.e., statistically significant).

This brief digression into a descriptive analysis of the correlations of the seven subscales with each other and with the total score shows that the subscales do measure elements somewhat independent of one another but are all relatable to the total score. This, in turn, validates the USF core values mapping onto the IESBA Fundamental Principles. The Discussion and Conclusions section makes considerable use of this validation as it explores the intended usefulness of the MSVM approach.

## RESULTS

From the perspective of professional accounting associations, the authors posited that it is more likely that accounting majors would ultimately become professional

accountants. Could this pilot study identify a differential between the accounting and non-accounting majors? The results show that the accounting majors scored higher or equally in the perceived presence of all IESBA Fundamental Principles. In fact, the accounting majors perceived the presence of Integrity and Confidentiality to a significantly greater degree ( $p<0.05$ ). The response graph is depicted in Figure 4.

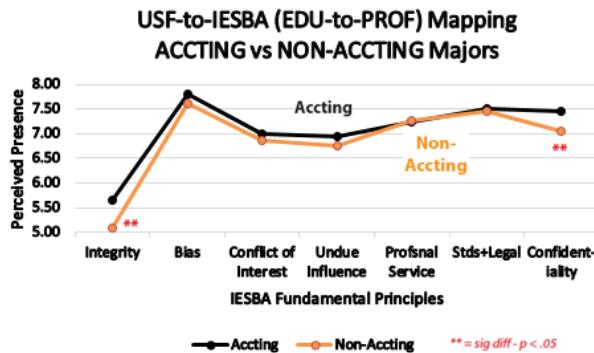


Figure 4. Differential Perceptions of IESBA Fundamental Principles by Accounting vs. Non-Accounting Majors

With the perception of the IESBA Fundamental Principles established for accounting majors, could gender differences be found within this group? This proved to be true and in line with both Thoma (1986) and Bailey (2010). Females scored higher than males on every IESBA Fundamental Principle. In fact, female accounting majors scored significantly higher ( $p<.05$ ) than males on the principle of Conflict of Interest. A graph of these responses is depicted in Figure 5.

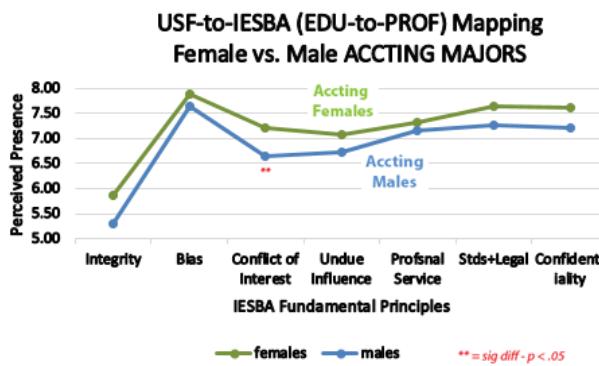


Figure 5. Gender Differences in Perception of IESBA Fundamental Principles by Accounting Majors

Gender differences within the group as whole examined, and females again scored higher than the males on every IESBA Fundamental Principle with the exception of Professional Service, where they scored equally. This, too, is in line with Thoma (1986), and as found in Bailey (2010), a statistically significant difference was

found wherein females scored significantly higher ( $p < .01$ ) than males on the principle of Confidentiality. A response graph is depicted in Figure 6.

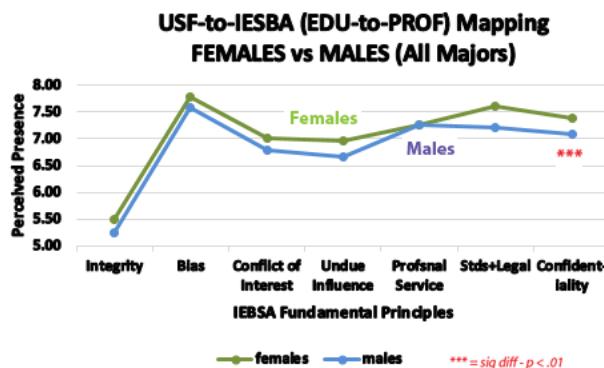


Figure 6. Gender Differences in Perception of IESBA Fundamental Principles by All Majors

Two questions follow from these results. First, did the female non-accounting majors score higher than their male counterparts, just as the female accounting majors did? Quite simply, the answer is no. The high scores for all non-accounting majors were split between males and females, and no statistically significant differences were found.

Which leads to the second question. Given that neither gender had higher scores in the non-accounting major group, how did the females compare when broken down by major? The female accounting majors were the most significant of all the groups. They outscored their female non-accounting counterparts on all principles, save one, where they were equal. Of note, the difference in scores were statistically significant in three instances: Female accounting majors scored higher on the principle of Integrity ( $p > .01$ ), Conflict of Interest ( $p > .05$ ) and Confidentiality ( $p > .05$ ). A graph of the responses is depicted in Figure 7.

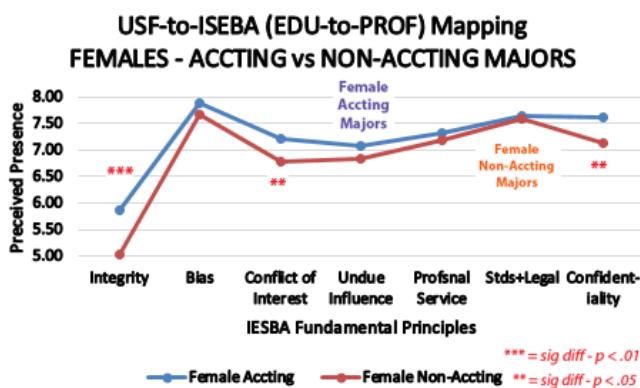


Figure 7. Differential Perceptions of IESBA Fundamental Principles  
by Females by Major

Finally, male accounting and non-accounting majors demonstrated no statistically significant differences. The complete statistical tests for all data may be found in the Appendix.

Note: The Appendix includes complete project statistics. It is available upon request by emailing lorton@usfca.edu.

## DISCUSSION AND CONCLUSIONS

The findings presented here tentatively and descriptively validate the pilot study mapping of the University of San Francisco core values, as evidenced in the Gunn-Lorton Attitudinal Surveys (GLAS-ES-ACCTING) data set, onto the professional association ethics framework described by the IESBA Fundamental Principles. This, in turn, tentatively validates the Multi-Stakeholder Values Measurement (MSVM) Model. In that regard, the core research question of “How might accounting and business professional associations have some assurance that their professional ethics are presented within the coursework of educational institutions?” has received an initial answer – by utilizing the MSVM Model.

While the pilot study intentionally restricted data to surveys from undergraduate accounting courses taught by a single instructor, the size and diversity of the GLAS-ES-ACCTING data set enabled dependable analysis in a number of ways. For example, accounting majors as a whole perceived the principles of Integrity and Confidentiality to a statistically significant degree over non-accounting majors. In terms of gender differences within the accounting majors, the results were found to be in alignment with earlier insights that females score higher than males, and in certain instances, to a statistically significant degree (Thoma, 1986, Bailey, 2010). In this case, it was the principle of Conflict of Interest.

The high scores of female accounting majors continued to be of interest in other areas. Considering the entire data set, all females scored higher for all principles, but no statistically significant differences were found. But then, when considering the females as a group, the female accounting majors scored higher than the female non-accounting majors, and it is here where the greatest significance was found. It was in the principles of Integrity ( $p>.01$ ), Conflict of Interest ( $p>.05$ ) and Confidentiality ( $p>.05$ ). Thus, all females are not the same.

This may well present challenges for professional associations. Given the now expected finding of higher scores by females, should the balance of genders in accounting majors figure into an educational institution's rating? Would all-female colleges be assigned a different threshold than all-male colleges? And given the intentional limiting in the pilot study to a single instructor, could the gender of an accounting instructor make a difference? This last may be measurable.

No statement from the pilot study can be made as to the meaning of the scores themselves. To create a quantifiable scale would require measurement from multiple educational institutions and multiple courses. Only then, might goals for the perception of ethical values be developed by professional associations.

In terms of future research, an expansion of the pilot study to include multiple instructors would be a first step, with the inclusion of graduate business education and even multiple institutions as possibilities. Certainly, the inclusion of other professional associations, other ethical value measurements tools, and explorations into re-mapping of existing data to see the impact on present results are all possibilities.

What will continue in any event will be the dedication of academia to teach accounting and business ethics in the best manner possible, and the commitment of the accounting profession to deliver its services at the highest ethical levels.

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## **BOOMERANG KIDS: WHAT FACTORS IMPACT THE PREVALENCE OF MOVING HOME AFTER COLLEGE?**

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### **ABSTRACT**

In 2014, Pew Research found that more adult children, aged 18 to 34, live at home with their parents than in any other living arrangement. The survey found that 32.1 percent of all adults in this range lived with their parents, a tremendous increase from the 20.0 percent that lived with mom and dad in 1960. And it's not just uneducated young adults that are moving (or staying home). The same survey found that 19 percent of college graduates in the same age range live with mom and/or dad. What has driven this increase? Is it the increase in student loan debt, as many anecdotal arguments assume? This analysis uses the rich Beyond Postsecondary Survey to examine the characteristics impacting the prevalence of adult children living at home after completing college. Results indicate that it is not debt or income that is driving this decision. Instead, results show that males are significantly more likely than females to live at home, all else equal, and that whether a student lives at home and has a job at age 18 are also significant factors.

Key words: Higher Education, Mobility, Labor Economics, Gender Studies

### **INTRODUCTION**

The trend of young adults living with their parents ebbs and flows in the United States. From the 1970s through 1995, there was an increase in the percentage of young men moving back home with their parents. Young women followed a similar trend albeit at a much lower level. In 1995, approximately 16 percent of men and 9 percent women between the ages of 25 and 34 co-resided with their parents. The trend of living at home decreased a bit in the late 1990s. Because of strong economic conditions, between 1996 through 2005, young adults became more likely to move out and bought their own homes. By 2005, a record 43 percent of adults under age 34 owned a home. Then came the Great Recession and the crash of the

housing market. Since that time, homeownership among young adults has dwindled to 35 percent, while the percent of young adults co-residing with their parents has jumped from 14 percent to 18 percent for 25 to 34 year old men, and from 7.5 to 10 percent for women. It has become so commonplace to co-reside with parents that millennials are sometimes referred to as the *boomerang generation*.

Anecdotally, this problem seems to be viewed as a more severe issue for boys than girls. A simple Google search will produce thousands of articles written on the phenomenon of these so-called boomerang kids, and many of the articles focus on boys. There is also quantitative data to back up the interest in the topic. According to Pew Research, males aged 18 to 34 years old were more likely to be living with a parent than they were to be living with a spouse/significant other in 2014, with an incredible 35 percent of men in this age group living with their parents. Only 28 percent of men in this age group were living with a spouse or a significant other, down from a high of 56 percent in 1960 and a level of 40 percent in 2000 (Fry, 2017).

Hanna Rosin's book *The End of Men: And the Rise of Women* (2012), and her previously written article in The Atlantic (2010) of the same name, point out that women are trending toward becoming the majority in the workforce. For every two men who earned a college degree in 2010, three women did the same. She concludes that modern-day America, a postindustrial, service-based economy, is better suited for women than for men. She concludes that this is not a short-term phenomenon but rather a major cultural shift which impacts the work-place environment for men. As a result, the previous bi-polar path of the labor force participation rates of men and women are now converging.

Labor market retraction for men has continued a steady slide for many years. In 1950, over 86 percent of men were a part of the labor force. As of September 2019, that figure had fallen to below 70 percent. Since the manufacturing employment peak in 1979, the US appetite for durable and non-durable goods has remained strong but America's male dominated manufacturing sector has experienced significant job losses sending shock waves through the traditional housing route of young adults. The jobs that men once typically held to provide for their families have stalled out and their adjustment into the relatively lower paying, service sector positions has been deficient. As US imports have increased tenfold, foreign workers have replaced US men in the manufacturing sector serving as the chef for the American consumer's appetite. Many wonder if this decline in manufacturing has led a growing percentage of young working age men to

trade their occupational competitiveness and household responsibility for the comfort and simplicity of a home cooked meal and a bed in their parent's home.

There likely is some truth that recent labor market conditions have contributed to men leaving the labor force, or reducing the number of hours they work, and moving back with their parents. To begin, the American labor market has been slow to adjust since the Great Recession in terms of quantity and quality of jobs. It took six years for the economy to recover the number of jobs lost in the recession with many of these new positions in traditionally low paying sectors. Nearly two million of the post-recession jobs have been added in retail trade, nearly three million in leisure and hospitality and three million in health care and social assistance. Manufacturing, a traditionally higher paying and male dominated sector, is still 1.4 million jobs shy of the December 2007 pre-recession level, while, the construction sector, which was stagnant for six years, is now level. Part-time employment for economic reasons stands at six million, which is two million more than the 2007 level.

Might this trend be different for college-attending young adults? Most analyses of this phenomenon focus on the prevalence of the entire age group living at home and don't break down differential impacts of college-attending and non-college-attending young adults? This is likely due to the lack of high quality, individual-level data on the topic.

In this paper we analyze the propensity of young adults to move home, specifically young adults who initially enrolled in college following high school. The data utilized includes students who attended all different types of higher education, including 4-year universities, community colleges, and certificate programs. The objective is to analyze the propensity of educated young people returning to their parent's homes and to unveil whether, after controlling for these factors, gender does indeed play a significant role. In addition, the role of college major, college location, household income, student debt, and many other demographic characteristics on the decision of young people to live at home are considered. The rich dataset utilized allows us to control for a wide range of variables that should better isolate the true impact of gender and other demographic variables.

Our results show that young adult males are indeed more likely to live at their parent's home six years after high school graduation than young females after controlling for individual characteristics. Surprisingly, and

contrary to some prior studies, family income is not a determinant of one's decision to live with their parents, nor is student debt. Students who graduate in STEM majors are less likely to live at home, as are those who attend a college further from their home towns. Additionally, gender, race and employment responsibilities introduced at a young age impact the decision to live at home.

## LITERATURE REVIEW

Some of the focus on boomerang generation research has centered on the economic landscape encountered by young adults, specifically men. Kaplan (2009) submits that employment and earnings are contributing factors to the plight of young adults to move in with their parents. The parents play a role of support for young adults who have inconsistent labor market behavior. When uncertainty exists, young adults can use their parent's home as a place to regroup. Kaplan also suggests that children who do not attend college are more likely to reside with their parents. Kaplan uses the National Longitudinal Study of Youth for his analysis. His sample contains youths ranging in the age from 16 to 23. Approximately, 55 percent of his observations are males and 45 females. He finds that across ages the female percent of those living away from home is 11 percentage points higher than the males.

Kahn et. al (2013) takes a slightly different view of the data on co-residence than Kaplan. Using American Community Survey data over a fifty year period, they focus on the financial inter-dependency between young adults and their parents. As parents build wealth over time, the younger generation relies on their parents for financial support and tends to be the beneficiaries of the co-residence relationship. The financial problem of young adults is exasperated by the increasing burden of college debt on recent graduates. Rothstein and Rouse (2011) investigate the impact of college debt on occupational choices. They find that students with higher debt are more likely to accept a relatively lower paying job to begin their career.

The issue of debt, including credit card balances, as a factor in the co-residence decision was investigated by Dettling and Hsu (2014). They inspected the credit rating of young adults prior to the decision to co-reside with their parents. They discovered a downward trend in the mean credit score in the months leading up to the move back home which persisted for a few months before leveling. They also provide evidence of college debt rising since the recession, then link college debt to the move back home. They claim the college debt contributes to the debt holdings of the young

graduate and inhibits their ability to obtain credit which in turn leads them back home. Their analysis differs from Kaplan who provides evidence that young adults who do not attend college are more likely to co-reside; yet, a common factor between the research could be credit access. Indebted college graduates, particularly those with no work history or previous credit, and non-college educated young adults may share credit woes.

Mykyta (2012) uses the Current Population Survey from 1995 to 2011 to directly investigate the role of the Great Recession on the living arrangements of young adults. She found an increase in young adults living with their parents during the recession. After separating out students, she does not find an increase among 18 to 34 year olds living with their parents during the 1995 to 2007 time period. This finding is consistent with the large growth in home ownership among young adults during the early 2000s. Consistent with other researchers, she finds an increase in co-residence during and after the recession. She notes the delay of marriage as a factor in co-residence noting the inherent financial independence necessary to enter into a marriage arrangement declined during the recession.

Wiemers (2014) adds to the literature by delving into the impact of unemployment on living arrangements by educational attainment levels. Using data from the Survey of Income and Program Participation she finds that unemployment increases the likelihood of “doubling up” living arrangements. She specifies that those without college degrees are more likely to share residence with parents (and friends).

Wang and Morin (2009) state that the recession caused a “bumper crop” in the number of young adults moving back home with their parents. They site data from the Pew Research Center and Census Bureau which shows that the recession led to a 12 percent increase in the percentage of young adults finding a roommate; they also claim that the recession contributed to the postponing of marriages for young adults. This statistic supports Gibson et. al. (2005); they claim that unwritten financial prerequisites for marriage exists among young adults. Money is a significant factor in the marriage decision.

## **MEN LEAVING THE LABOR FORCE**

The research cited thus far has suggested that young adults are trending back home for financial reasons. With this observation in mind, it is expected that the continued withdrawal of men from the labor force and subsequent

reduction in income corresponds with the increase in the percentage of young adult males living with their parents for financial reasons. In the past, young adults moved back with their parents to help their parents cope with old age; the more recent trend is reversed, as parents have become a financial cushion for the millennial generation (Kaplan, 2012). Since 1968, the percentage of young adults living at the home of their parents has increased from 32 to 36 percent. Most of these young adults are male, 50 percent of whom are out of the labor force.

One proposed explanation for men choosing not to live independently is that men are not burdened with the primary financial responsibility for their families anymore. According to the Pew Research Center, using data from the Decennial Census and American Community Surveys, in 2011, 40 percent of households with children are headed by women as sole or primary providers. Women as sole or primary providers include single mothers who make-up 25 percent of the households, and women who earn more than their husbands who account for 15 percent of the households. In 1960, these numbers were 7.3 percent and 3.5 percent respectively (Pew Social Trends, 2013). This data confirms that the male role as financial provider in households with children has decreased.

Another factor that has impacted the desire of men to live with their parents is the rise in the median age of first marriage. Since 1960, the median age of marriage for men has increased from 22.8 years old to 28.7 years old. Gibson et. al. (2005) provides evidence that low-income couples are less likely to get married. This delay in taking the marriage vow, coupled with the fact that 40 percent of young adult males live at their parent's home provides some circumstantial evidence that the financial responsibilities for young males to support themselves or their family has diminished overtime (Pew Research Center, 2013).

There are social attitudinal factors that should be mentioned when discussing the plight of the male labor force participation rate; however, these factors are beyond the scope of this paper. Our data source does not provide detailed information that addresses these trends. One such immeasurable societal change is the rise in on-line gaming. Participation in this industry has increased among males and females, although males have been shown to be ten times more addicted than females (Rehbein et. al.; 2010). Stated another way, 91 percent of dependents are male. These addicted players are more likely to withdraw from society, more likely to lose control and have more mood swings (Thomas and Martin; 2010).

The challenge in the topic of the tendency for males to be more likely to move home than females is in the quantification of the socio-attitudinal variables that have impacted men over the past few decades. Accurate data on-line gaming, men becoming lazier, or men giving up is difficult to quantify. But, it is mentioned as a basis for the societal trend discussion particularly since females have been less affected by the exposure to these same variables. The percent of females playing on-line games has climbed to 47 percent. Yet, females have fended off these trends and continued to grow in numbers and percent in the labor force. In fact, since 2008, men have obtained 35.7 percent of the 5 million jobs created. That is a disproportionate number since men make-up 53 percent of the labor force. They are also more likely to live independent as young adults. The research leads to the following hypothesis: As men retreat from the labor force, their financial position weakens causing them to depend on their parents for pecuniary support. It is expected that the continued withdrawal of men from the labor force and subsequent reduction in income corresponds with the increase in the percentage of young adult males living with their parents for financial reasons.

## **DATA AND ANALYSIS**

For our analyses we utilized the National Center for Education Statistics' Beginning Post-Secondary 04/09 Longitudinal Study dataset (BPS). The 04/09 wave of this survey contains a vast amount of data pertaining to a sample of students who enrolled in post-secondary education for the first time in Fall 2003. These students were enrolled in either a bachelor's degree program, an associate's degree program, or a certificate program. For simplicity's sake, we will broadly refer to these programs as 'college.'

The particular variable of interest in the BPS survey is the one in which participants are asked to report their living arrangements in 2009, six years after entering 'college.' More specifically the question asks if they are living with their parents in 2009. At this point, the youngest students in the data are approximately 24 years old. Table 1 shows the percentage of students in the data who are living with their parents in 2009. It also breaks it down by students who were living with their parents during the initial interview during their first year in college in 2003. It is striking to note that the percentage of students living at home in 2003 and 2009 are nearly identical, yet it does not necessarily appear to be the same students. Only 12.38 percent of respondents lived at home with their parents in both 2003 and 2009 while 17.62 percent lived away from home in 2003 and returned back to live with

their parents at some point between initial enrollment in college and six years later.

Table 1: Cohabitation Patterns

	Live with Parents in 2009	Live Outside of Home in 2009	Total
Live with Parents in 2003	12.38%	17.32%	29.69%
Live Outside of Home in 2003	17.62%	52.69%	70.31%
Total	30.00%	70.00%	

*Source:* “2004/2009 Beginning Postsecondary Students Longitudinal Study” (BPS), 2011, U.S. Department of Education, National Center for Education Statistics.

As a first step, we utilized a probit model to investigate the factors that influence the probability that a student will be living at home six years after first enrolling in college. Our hypothesis was that demographic factors (such as race and gender) and financial factors (such as student loan balances and income) played a significant role in the choice of these students to live with their parents at age 24.

The probit model is defined as follows:

$$\Pr(Y=1 | X_1, X_2, \dots, X_{11}) = \Phi(\beta_0 + \beta_1 X_1 + \dots + \beta_{11} X_{11})$$

where  $\Phi$  is the cumulative standard normal distribution function. Marginal effects allow the regression coefficients to take derivative form, meaning that a percent change in one of the coefficients leads to an associated change in probability of the binary dependent variable becoming one, or affirmative for “with their parents in 2009” in this case. The wealth of data included in the BPS survey allows us to include a large number of independent variables, ranging from demographic to economic to academic. The summary statistics along with variable descriptions are presented for 2004/09 dataset in Table 2.

**Table 2: Summary Statistics**

Variable	Mean	Standard Deviation
Male	0.424	0.494
Bachelors: binary variable indicating attainment of a bachelor's degree or higher by 2009	0.413	0.492
Married: binary variable indicating student is married in 2009	0.187	0.390
Children: binary variable indicating student has children in 2009	0.236	0.425
Housing03: binary variable indicating student lived at home their first year of college	0.329	0.470
US Citizen: binary variable indicating student is a US citizen	0.951	0.215
Black: binary variable indicating Black race	0.142	0.349
Hispanic: binary variable indicating student is Hispanic	0.123	0.327
Asian: binary variable indicating student is Asian	0.056	0.230
Other Race: binary variable indicating other minority race	0.024	0.154
GPA: categorical variable indicating student's cumulative GPA as of 2009	5.535	1.104
Job04: binary variable indicating that student worked during their first year of college	0.665	0.472
Job Hours 09: number of hours worked at a job each week in 2009	22.466	21.214
Parent's Own Home: binary variable indicating that parent's own their home	0.854	0.353
Out of State: binary variable indicating student attended a university out of state	0.163	0.369
Mom_College: binary variable indicating student's mother graduated from college	0.322	0.467
Dad_College: binary variable indicating student's father graduated from college	0.340	0.474
Loans: total student loans owed as of 2009	\$10,281.01	\$16,015.14
EFC: expected family contribution for student's expenses	\$10,582.50	\$15,518.07
Stopouts: number of times student stopped attending school for at least one semester	0.464	0.706
Transfers: number of times student transferred to another institution	0.408	0.642
Distance: distance from parent's home to first college of attendance	184.194	654.842
Non-Traditional: binary variable indicating that student was 21 or older at initial enrollment	0.093	0.290
Parent's Income 2006: categorical variable indicating parents income in 2006	2.592	1.080
Major_Business: binary variable indicating study in business	0.157	0.364
Major_Tech: binary variable indicating study in a technical field	0.145	0.353
Major_Humanities: binary variable indicating study in the field of humanities	0.122	0.327
Major_Education: binary variable indicating study in the field of education	0.068	0.251
Major_STEM: binary variable indicating study in a STEM field	0.153	0.360
Major_SocialSci: binary variable indicating study in the social sciences	0.108	0.311
Major_Health: binary variable indicating study in a health field	0.116	0.321
Major_None: binary variable indicating field of study was never decided	0.129	0.336

Source: "2004/2009 Beginning Postsecondary Students Longitudinal Study" (BPS), 2011, U.S. Department of Education, National Center for Education Statistics.

Out of the thousands of variables provided by BPS, demographic, economic, and achievement-related variables were chosen to determine their individual and relative impacts upon student choice between living with their parents or living outside of the home. While the dataset is vast, and contains a large number of variables, there is missing data in many cases, and the choice of variables used was partially determined by the availability of reliable, full data. If data were missing for a student, that student was eliminated from the database. This process left us with a large sample of 10,170 students for the analyses that follow.

## RESULTS

The first analysis regarding the probability of living at home six years after initial college enrollment is shown in Table 3. The results presented are the

marginal effects associated with the probit model. This analysis sheds light on some of the factors which contribute to the decision to live at home. The results conform to our expectations in general, with the exception of some of the economic variables. We initially hypothesized that the increase in average student loan balances was a significant contributor to the trend of moving home after school. We also thought this could be related to other economic variables such as income or parents' ability to financially contribute to their children's education. However, each of these variables is surprisingly insignificant.

**Table 3: Probit Model Results**

Variable	Marginal Effects	Variable	Marginal Effects
Male	0.026*** (0.010)	Mom_College	-0.030*** (-0.010)
Bachelors	-0.004 (0.013)	Dad_College	-0.004 (0.011)
Married	-0.284*** (0.009)	Loans	0.000 (0.000)
Children	-0.100*** (0.014)	EFC	0.000 (0.000)
Housing03	0.131*** (0.012)	Stopouts	0.018** (0.008)
US Citizen	-0.037 (0.024)	Transfers	0.005 (0.007)
Black	0.064*** (0.017)	Distance	-0.000*** (0.000)
Hispanic	0.066*** (0.017)	Non-Traditional	-0.050* (0.026)
Asian	0.183*** (0.022)	Major_Tech	0.003 (0.017)
Other Race	0.095*** (0.035)	Major_Humanities	-0.004 (0.017)
GPA	-0.025*** (0.004)	Major_Education	0.043* (0.022)
Job04	-0.026** (0.010)	Major_STEM	-0.037** (0.015)
Job Hours 09	-0.001*** (0.000)	Major_None	-0.012 (0.021)
Parent's Income 06	0.006 (0.005)	Major_SocialSci	0.020 (0.018)
Parent's Own Home	0.018 (0.014)	Major_Health	0.032 (0.017)
Out of State	-0.051*** (0.013)		

\*\*\* Indicates significance at the 1% level

\*\* Indicates significance at the 5% level

\* Indicates significance at the 10% level

Source: "2004/2009 Beginning Postsecondary Students Longitudinal Study" (BPS), 2011, U.S. Department of Education, National Center for Education Statistics.

Results indicate that the most significant determinants of living at home six years after initial college enrollment are mostly demographic and academic related rather than economic related. Males, as hypothesized, are more

likely to live with their parents in 2009. Specifically, males are 2.6 percent more likely than females to live with their parents six years after initial enrollment, all else equal. This gives quantitative support to much of the anecdotal and qualitative evidence previously discussed. Our data indicate that while 29.5 percent of females are living at home with their parents in 2009, that number is 33.9 percent for males. The probit results indicate that this may be driven by more of a cultural phenomenon rather than grades, major choice, etc.

Several other variables also proved to be very interesting. Those who lived at home with their parents during the 2003-04 school year (their freshman year) were 13.1 percent more likely to be living at home in 2009. It may be that they never left, however, based on the data analyzed, it seems as though many did leave but eventually came back. We hypothesize that this is due to signaling, either by parents or the students themselves. Parents allowing students, or even encouraging them, to live at home their first year of college may present the student with a signal that living with your parents as an adult is acceptable. It is entirely possible that this signal is becoming more common as the cultural trend shifts towards more children in their early 20s moving home. In addition, a student who chooses to move out of the home for the first year out of college may be signaling to their parents that they intend to remain independent and will not need an offer of living in their home again.

Equally interesting is the coefficient on the variable Job04. Many parents assume that working while enrolled in school will be detriment to their students. They fear that their grades will suffer and they will have less chance of success. However, results indicate that those who had a job during their freshman year of college, during the 2003-04 school year, are 2.6 percent less likely to be living with their parents six years later, all else equal. Once again, this could be due to signaling from parents who require their students to be employed, or from independent students who are signaling independence to their parents.

The location of the school chosen by students also appears to be a significant determinant of living at home in 2009. Those who attended college out of state are 5.1 percent less likely to be living with their parents, all else equal. In addition, for every 100 miles further from home the school is located, students are 0.2 percent less likely to live at home. Both coefficients are significant at the 1 percent level.

The major chosen by students was less significant than we initially assumed it would be. Major\_Business was omitted from the model, and therefore, each of the coefficients are interpreted as the impact major choice has compared to those who major in business. STEM majors are 3.7 percent less likely to live with their parents in 2009 than business majors, while education majors are 4.3 percent more likely to live with their parents. The other major-related variables were insignificant. GPA was significant at the 1 percent level, as expected, indicating that those who made better grades were less likely to live at home with their parents in 2009.

## CONCLUSION

Many people assume that the increased prevalence of children returning home to live with their parents after college graduation is related to the increased debt held by many recent graduates. Indeed, we believed this was likely the case as well. However, this study indicates that there may be much more to this story. Instead it appears to have more to do with the lack of independence observed in students who return to live at home beginning at the time when they start college. There could be many sources of this lack of independence and continued parental dependence. It could be a cultural phenomenon in which it is now more socially and culturally acceptable to continue supporting and actively parenting children beyond the traditional defined “adult” age. The question remains whether this is driven by the students who return home or the parents who allow, or encourage, them to do so.

There also appears to be something driving male students to return home more often than female students, all else equal. Could this be because of perceived lack of traditional male occupations? Or, could it be because mothers are more likely to allow their sons to return home? Or, maybe because males are now significantly less likely to attend college than females, it is more culturally acceptable to have a son that needs continued support into adulthood?

Further research is needed to disentangle these complicated relationships and decisions. In the meantime, there does seem to be reasonable evidence that encouraging students to work and live independently early on in college will decrease the probability that students will reside with their parents after college. The children of the authors will be submitting their resumes soon.

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## **ADAPTIVE TELEMEDICINE CARE: PRE/POST COVID-19 PANDEMIC**

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### **ABSTRACT**

During the COVID-19 pandemic, many healthcare organizations were forced to utilize eHealth options to continue with patient care. Many healthcare provider groups were unable to treat their patients in their offices and were unable to see patients in a brick and mortar building. Healthcare workers had to start thinking outside of the box in order to continue treating their patients, while maintaining social distancing, and preserving Personal Protective Equipment. Hospitals are closing their doors to non-emergent patients to try and combat the spread of COVID-19. It limited patient options of going into a healthcare facility to use traditional telemedicine. Organizations across the country had to start using products like ZOOM and Doxy.me to treat their patient population. The federal government has currently lifted the billing restrictions in light of the pandemic, so healthcare organizations are able to still collect on office visits while patients are staying home. I will discuss how easy it can be for patients and providers to receive and provide healthcare through the easily accessible digital face to face platforms. Technology is not going to be going away anytime soon and this is the time for healthcare organizations to capitalize on it.

Keywords: healthcare, telemedicine, COVID-19, reimbursement

### **INTRODUCTION**

Most healthcare providers tend to prefer to have a traditional hands-on visit with their patients so they can physically examine the patient. However, with the upgrade in personal devices, and the accessibility to the internet this is changing. “The target of eHealth is wide and concentrates on improving and increasing the cost-effectiveness of health care at large and to solve problems related to access to care, cost, quality, and portability of health care services locally, regionally, and worldwide.” (Glinkowski, 2006, p. I-24) Telemedicine has been a part of the healthcare community for years, but it has slowly progressed from phone visits to digital face to face visits. During the outbreak of COVID-19 providers were forced to use

non-traditional telemedicine in order to “keep their doors open”. Providers no longer required a physical face to face visit since there are so many digital face-time options.

During the COVID-19 pandemic, the regulations have been loosened, allowing providers and patients to connect in different healthcare settings. Historically, in order for a patient to be seen via telemedicine, an insurance carrier would need to pay for the visit. A provider would require the patient go to a local medical facility to be seen. This type of visit has changed with the emergency COVID-19 protocols, and now patients can be seen in the comfort of their own home, at work, or any other locations that a physician is licensed. Insurance carriers are also covering these non-traditional visits, allowing patients and providers to have a non-physical contact visit, and promotes social distancing.

### **HISTORY OF TELEMEDICINE**

Scholars say telemedicine has been in the healthcare industry for approximately 40 years. Recently it has grown in popularity as technology has advanced. The reality is that telemedicine really started in the 1920’s when medical advice was being given through the use of a two-way radio. In very rural areas, patients were able to decide if they needed to be physically seen for their ailments. Historically, provider and patient relationships were built through the use of hands on medicine. Through the advancement of technology this expanded to telephone visits, and now face to face visits through an internet platform. According to Whitten & Holtz, “Study after study documents that patients generally perceive telemedicine in positive ways, and some even express disappointment that it is not more widely available. Yet, this is not the case with providers” (Whitten & Holtz, 2008b, p. 995). Telemedicine has not been widely accepted by providers and can be difficult to get the providers to undertake this type of patient visit.

When it comes to the billing side of telemedicine, there are other roadblocks that providers face when they are seeing patients through this platform before the COVID-19 pandemic. In the state of Texas before COVID-19, a patient had to be seen at a traditional brick and mortar medical facility or the visit would not be covered by insurance carriers. An example of this would be Texas Tech Physicians burn surgeons in Lubbock seeing their burn patients at the El Paso campus via telemedicine. The patient travels to the TTUHSC El Paso Campus and our providers here at the Lubbock campus had a face to face visit through the use of camera

technology. During COVID-19 there have been emergency declaration care orders put in place by President Trump, lifting the restrictions of patients having to be seen in a medical facility to patients having telemedicine visits in their homes. According to the CMS website, “Under this new waiver, Medicare can pay for office, hospital, and other visits furnished via telehealth across the country and including in patient’s places of residence starting March 6, 2020” (“MEDICARE TELEMEDICINE HEALTH CARE PROVIDER FACT SHEET | CMS,” 2020). There are specific documentation requirements that are needed in order to bill for these services as traditional office visits. Providers have to document their location, patient’s location, start time, and end time.

There are barriers to the adoption of telemedicine. The most relevant one is access to high speed internet and technology for both parties. Most of the time this is not an issue because of the implementation of smart devices, but the lack of internet coverage in rural areas still poses a problem. There are also some diagnoses that are unable to be seen through a telemedicine visit. An example would be a patient who needs to have their ears checked due to chronic ear infections, who will also need to see audiology to check for hearing loss due to the infections. Another barrier is not having buy in from the provider. Patients value the recommendations their providers give them regarding their healthcare. If a provider does not promote faith in the eHealth platform, the patient will not be as interested in it, as well.

### **TELEMEDICINE IN PROGRESSING HEALTHCARE**

Telemedicine has many great things you can accomplish with the technology, but a large risk factor is losing the personal connection that comes with interacting in person. It is easy to minimize some of the compassion when you are having a virtual encounter with a person. A journal article by Hjelm states, “... it is observed that this important introductory step is often omitted during a video consultation” (Hjelm, 2005, p. 66). It is not understood why this happens in the video visits and not during the phone and face to face visits. Often, in person meetings have some sort of catch up or off topic banter. Online meetings can start to diminish personal interactions. They have removed that sense of humanity, the face to face interaction most people look forward to when they meet. It is like those that participate in the video visits are so wrapped in the technology they forget the basic interaction most people give when they come together.

The reduction in traveling is one of the primary benefits of the utilization of eHealth. The use of technology has had a large positive impact on patient care. The military has used the telemedicine platform to see soldiers while they are deployed. Typically, the soldiers who are deployed have a difficult time receiving specialized healthcare. A recent study tracked Dermatology care in the military from 2004-2012 that measured the clinical volume, response time and medical evacuation status for military servicemen overseas. Through the course of their research they found the patient response time for consultations for Dermatology care showed that they were seen at a 98% rate within 24 hours of the consultation. These numbers included military servicemen and non-military groups. According to the research they found, "Following teleconsultation, 46 dermatologic evacuations were avoided (32% of 145 among all specialties)" (Hwang, Lappan, Sperling, & Meyerle, 2014, p. 1350). With the implementation of the use of telemedicine the military was able to reduce wasted trips for non-emergent care.

Another underserved group would be the prison population. There are a number of risks involved with the transport of prisoners between medical units. At Texas Tech Physicians we work with the Texas Department of Criminal Justice medical unit in Lubbock, TX, more commonly known as the Montford unit. Prisoners are transported from all over West Texas to receive care. These transports take multiple guards per prisoner and time away from their home units. Also depending on where the prisoner is coming from there might have to be multiple transfers along the way. "The data indicate that 52% of state department of corrections (26 states) are currently operating 34 telemedicine programs. The programs in these 26 states reach 415 facilities out of the total 1,384 existing adult state correctional facilities in the United States" (Larsen et al., 2004). By utilizing this technology offenders are able to receive care at a reduced risk and cost the facilities housing them.

The relevance of eHealth became even more relevant during the COVID-19 pandemic. The military and prisoners are groups that live in close proximity to one another; meaning, if an outbreak were to occur, it could spread very quickly. The spread would be hard to stop once there was a positive exposure. Telemedicine allows health care to continue use without being exposed to the masses. Telemedicine visits can be between patients and providers, therefore reducing the chance of spread.

Each state is different with their regulations for telemedicine. This can make it extremely difficult for patients to have access to specialists. Before COVID-19 patients had to travel either to where the specialist was physically located or to a facility that had the technology to support a telemedicine visit. For much of the rural population time is literally their money. An example would be a farmer who has to stop harvesting their crops to travel to see a physician. It literally costs them more than just the gas and miles put on their car. There are also costs and barriers to the providers, equipment to support the technology, personnel training on how to conduct a visit, and the coordination of sites to get patients seen. These issues can prevent wide implementation of eHealth.

There have been concerns about who can participate in an eHealth visit. The Texas Medical Board, “requires that in order to provide telemedicine medical services to residents of Texas, a person must be licensed to practice medicine in Texas” (Texas Medical Association, 2019). Patients who are seeking care are required to be physically in the state of Texas to receive care through telemedicine, unless the provider is licensed in their current state. There are additional safeguard requirements during an eHealth visit. At the beginning of each visit, “Physicians must complete such tasks as establishing the patient’s identity, documenting and performing patient history, discussing with the patient the diagnosis and treatment options, and providing for follow-up care before a proper patient-physician relationship could be said to be established” (Texas Medical Association, 2019). The Texas Medical Board has implemented these processes to make sure visit quality does not suffer through the use of telehealth visits.

## **REIMBURSEMENT AND FINANCIAL IMPLICATIONS OF TELEHEALTH**

Telehealth is a growing health care industry. It is estimated that over half of all health institutions and hospitals are using some mode of telehealth, and revenue generated from telehealth is growing at a fast pace, increasing 60% from 2013 to 2014 alone (Edmunds et al., 2017). However, the adoption of telehealth overall has remained low due to a variety of reasons. One of these relates to payment policies. Medicare spending on telehealth in 2015 was less than .01 of total health care spending in spite of the fact that telehealth payments were originally authorized as far back as 1997 as a way to increase access to care for those living in rural areas (Edmunds et al., 2017). A congressional concern for adopting telehealth for Medicare beneficiaries was that it would result in increased spending and

costs for the program due to increased demand (Dorsey & Topol, 2016). However, recent studies have found no evidence of increased demand with the implementation of telehealth visits (Courneya et al., 2020; Shigekawa et al., 2018).

Another large governmental payer, Medicaid, has widespread, but limited and sporadic adoption of telehealth. Forty-eight state Medicaid programs cover some form of telehealth services, although coverage varies considerably by state (Edmunds et al., 2017). Furthermore, confusion, ambiguity, lack of clarity regarding which services are covered, and insufficient reimbursement continue to plague many state Medicaid telehealth programs, with stakeholders stating that improvement is needed in order to overcome these barriers to implementation (Usher-Pines et al., 2020).

Coverage among private insurance payers varies significantly, but, is continuing to progress with more payers covering telehealth at comparable rates (Antoniotti et al, 2014; Edmunds et al., 2017). Many states are encouraging adoption of telehealth, with 39 states and the District of Columbia now requiring telehealth parity (Lagasse, 2019). Even before this law was enacted, studies suggested that payers reimbursed telehealth at a rate similar to traditional face-to-face visits (Mehta et al., 2020).

From a provider prospective, telehealth is not only increasing access to care, but also improving convenience and moving towards reducing costs (Dorsey & Topol, 2016). A recent study of HealthPartners in Minnesota reported \$88 lower cost per episode using virtual online visits compared to those provided in a traditional setting. Furthermore, estimated time savings for patients was 2.5 hours, patient satisfaction scores were high, and indicators were strong for clinic effectiveness (Courneya et al., 2020). The study also found no evidence of increased demand (Courneya et al., 2020), a concern that has hindered Congress from implementing telehealth for Medicare beneficiaries (Dorsey & Topol, 2016)

## **TRADITIONAL AND NON-TRADITIONAL TELEMEDICINE**

With any new technology it is important to have early adoption of the product. This can be accomplished by communicating the changes early to all the stakeholders. It allows time for staff to view the product and discuss work flows in their clinics. At Texas Tech Physicians there is a department that is dedicated to the coordination of all traditional telemedicine visits. Providers provide times they can hold a telemedicine

clinic and the telemedicine department takes care of the rest. The traditional telemedicine process has been easy for providers to adapt to, because patients are seen in a controlled environment at another healthcare facility. Providers are able to utilize the nursing staff at the other facility to health with the patient's digital examination. In the example I used previously with the Texas Tech Physicians Lubbock and the El Paso campuses, the burn surgeon in Lubbock will ask the nurse in El Paso about different things to try and detect possible infections. They will utilize their resources to give the same quality care as if the patient was physically in their office in Lubbock.

Although the traditional way of telemedicine has been effective, the COVID-19 pandemic has forced the healthcare community to expand their way of thinking. With facilities shutting down elective care to preserve Protective Personal Equipment, patients who were needing to seek care for chronic issues were left with little options. It is unfortunate that it took a pandemic to expand telemedicine, but it did pave the way for outside of the box thinking to continue traditional patient care in a non-traditional way.

Prior to COVID-19, non-traditional telemedicine was difficult because of the billing restrictions in Texas and around the country. Texas Tech Physicians Department of Surgery decided to implement the new wave of telemedicine before COVID-19 became an issue. The Texas Tech Physicians Department of Surgery Trauma team very rarely need to follow up with patients after their time in the hospital, unless they have sutures or drains that need to be removed. The leadership team made the decision to see patients via ZOOM telemedicine for post-operative patients that only needed a wound check. This allowed patients to stay in their home and not travel hours for a 5-minute wound check. These postoperative visits are a non-billable visit. It allows the surgery department to not miss out on billing, provide continuation of care, and save the patients time and money. “In 2020, Medicare added coverage for “e-visits” for established patients (no geographic restriction), which are non-face-to-face patient-initiated digital communications that require a clinical decision that otherwise typically would have been provided in the office” (Bajowala, Milosch, & Bansal, 2020, p. 3).

The importance of having social distancing patient visits has become crucial during COVID-19 to reduce exposure to other patients and staff. Organizations realize that in order to continue bringing in cash flow they need to expand how patients are seen for routine care. Currently, with

the expansion of telemedicine with waiver 1135, Medicare covers office, hospital, and other visits through telemedicine across the country. This is not limited to patients seeing providers through other facilities, but in their homes. This has been accomplished through the use of products such as ZOOM, Doxy.me, and other facetime platforms. The rollouts were fast and furious to reduce the disruption of patient care. Traditionally, any time an organization is interested in new technology and work flow processes has a structured rollout plan, but the COVID-19 pandemic did not allow for that. Consistency among the organization is important. It allows for marketing to the masses about what the group can offer. It also allows for additional technology to be developed, such as creating online patient check in, or for patients to wait from their car until rooms are available via texting, and other options for patients to social distance during their visit.

Since the doors and payments have opened to utilizing the new platforms of telemedicine, it will be detrimental to go back to the way it used to be. The implementation of using products such as ZOOM can be labor intensive to get up and running if you do not have the proper work flows in place. When the Surgery Department started to utilize telemedicine for the post-operative patients, ZOOM made the most sense for the group. There is a business agreement in place with the vendor and every person at Texas Tech had access to it. It took about 1-2 months of testing how to use ZOOM to create an office experience that works well for our providers, staff, and patients. It was important for patients to have consistency in the patient experience, giving that in clinic visit feel. The leadership staff identified who their telemedicine expert is, and tasked them with getting acquainted with the product. During the course of discovery, it was found that they could create separate rooms to give the experience of a patient being in an exam room where the provider would join them. This find was groundbreaking for the staff, they are able to use the same link with multiple patients while giving each patient their own private time with the provider to discuss their needs.

### **CONTINUING PANDEMIC CARE – POST PANDEMIC**

In order for telemedicine to be effective leadership has to evaluate a few different options. How will patients get checked in? How will forms get signed? How will this be a secure visit? How to get buy in from providers? Do you have the right technology and staffing levels? Each of these things take time and planning to accomplish. Software tends to be the most expensive piece of the implementation process. The ZOOM platform allows for password and waiting rooms to be used to prevent hackers from

joining in on a patient visit therefore keeping in compliance with HIPAA. Once the Information Technology portion is resolved understanding what the staffing requirements needed to make it successful is the next hurdle.

Finding the right staff to be the face of your digital visit is important. Patients will want to be able to connect and not be just a number. In most clinics, telemedicine will not be the only form of patient care. Leadership will have to evaluate the best times to have telemedicine visits. Based on my experience, setting designated times for providers to see telemedicine appointments give more staffing flexibility, thus preventing the need for additional staff to be added to the clinic.

In order to keep continuity and compliance, leadership will need to make sure to have formal policies and procedures in place. These will need to outline what the secure patient communication platforms are, and consent documentation forms are required. These policies will have to stay up to date with state and federal telemedicine requirements. Identifying patients who can be seen through Telemedicine is also crucial. According to the CDC it can prevent, “Situations in which in-person visits are more appropriate due to urgency, underlying health conditions, or inability to perform an adequate physical exam” (*Coronavirus Disease 2019 (COVID-19)*, 2020). Having these safeguards in place will allow for staff to feel confident in the expectations and set clear expectations for a telemedicine visit.

Governance committee and support staff will also be needed for the continued development of telemedicine. Identifying people from clinics and non-clinical departments will prevent roadblocks due to lack of technical support or compliance issues. The governance committee would be responsible to keep up with the laws and regulations. They would also be responsible for evaluating the software needs for telemedicine. The committee would also be responsible for the training, continued education, staying current with law updated and remaining in compliance.

Within the Department of Surgery, the only people currently involved in the telemedicine visits are front desk staff members and providers. Numerous tests of the technology and world flows have been completed before going live with test patients. The staff member prepares the patient for the digital visit, making sure all forms are signed through an online check in system. It is a digital platform that allows patients to check in online, sign all consents needed for the visit and to pay for any copays or

balances they have on file. The staff member is responsible for providing the appointment details, and check in instructions to the patient through the patient portal or a secure email when the patient is scheduled. A reminder is sent the day of the appointment with the link and password to the patient. The provider also received the link for the digital visit on their calendar as a reminder of their telemedicine clinic. Before the e-clinic starts the staff members log into the telemedicine platform and create the digital exam rooms. They admit the provider and patients one at a time. The staff member is the facilitator of the whole visit. They greet each patient, make sure their camera and microphone work, confirm who they are through two patient identifiers, and confirm all consents and payments are in place. Patients are then placed into a digital exam room and the provider is also placed into the room after the staff member informs them who they are about to see. The staff member leaves the digital exam room until the provider once the exam is complete. The provider will give instructions to the staff member regarding any follow up needs, then the staff member is responsible for completing the patient checkout process.

Upon completion of each step, a controlled rollout plan to the clinics should be formed. It should be identified that clinics with similar processes should rollout together, allowing the support staff to have the resources available when problems occur. Depending on how each rollout goes, it should take 2-3 weeks for staff and providers to become comfortable and confident with the telemedicine platform.

## **CONCLUSION**

“Unfortunately, providers and policymakers are playing catch-up with telehealth technologies right now and are just beginning to recognize that they are essential solutions for keeping potentially infected individuals out of hospitals and doctors’ offices, said G. Cameron Deemer, president of DrFirst, a healthcare communications and telehealth technology company.” (Telemedicine during COVID-19: Benefits, Limitations, Burdens, 2020) Telemedicine has proven to be essential in the healthcare world even before the COVID-19 pandemic. According to new research, “A new qualitative review looking at healthcare workers perceptions of using mobile technology has also shown that telehealth can be beneficial not only for patients but also for the workers” (Jordan, 2020, p. 184). Providers are beginning to recognize the necessity these visits bring to the patient population. The utilization of easily accessible products to conduct telemedicine appointments, is allowing a lot more providers to connect with patients, provide a better continuity of care, and reduce the cost of

healthcare. Patients in rural locations are able to spend less time and money receiving the care that would normally go neglected. Military bases all over the world are able to provide specialty care to their service members and prevent unnecessary transports that could endanger lives. Prisoners are able to receive healthcare while keeping staff and providers safe and being good stewards of the funding, they receive. If the COVID-19 pandemic has taught the healthcare community anything it is that telemedicine is here to stay and can be expanded. There are so many resources that are underutilized. If the federal government continues to allow telemedicine, our nation has the capability to have better access to healthcare. According to Bashshur, “The persistence of telemedicine in various forms and iterations over a period of several decades attests to its usefulness, versatility, and ever-expanding capabilities” (Bashshur et al., 2009, p. 605). That article was written in 2009, even eleven years ago the healthcare community recognized the need for advancement in telemedicine. Since then it has established a better continuity of care, a reduction in cost, and is good for the future of healthcare.

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## TEACHING ECONOMICS WITH MAJOR LEAGUE BASEBALL SIMULATIONS

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### **Abstract**

In a Principles of Microeconomics course, classroom simulations and game theory exercises can complement the typical theoretical models covered throughout a semester. This paper details a baseball simulation where students act as general managers of a franchise. Student managers control almost all variables related to their team's profitability, including prices, costs, team composition, location, and advertising. After teams compete at auction for their roster, a computer simulates the games throughout the season and managers continue to adjust economic variables. The experiment is designed to focus students' attention to pricing in various market structures, game theory, auction theory, as well as risk management.

Key Words: Simulations, Pedagogy, Baseball, Economics, Classroom Experiment

### **I. Introduction**

In Principles of Microeconomics classes, it can be difficult for students for students to grasp how abstract theoretical models taught throughout the course translate into practical examples. Students spend hours attempting to memorize graphs of supply and demand, evaluating the impact of elasticity on total revenue, or illustrating profit-maximizing behavior in various market structures. Competitive experiments, in contrast, provides an outlet for students to evaluate data and outcomes drawn from various economic principles (Capra, 1999). They also provide a simple way to test predictions of theoretical models utilized in Principles of Microeconomics courses.

Utilizing a classroom experiment from Major League baseball, where all students act as general managers, can be more difficult to implement than it would seemingly appear. Specifically, possible exploits in the equations had to be checked and tested to ensure the models utilized could not be gamed. Also, significant research into major league baseball attendance was conducted to try to estimate what variables would most significantly affect attendance and team revenues.

The goal of this classroom experiment was not necessarily to perfectly model Major League attendance and revenue outcomes, but to get students to see how

altering various economic variables could impact their costs, revenues, and overall profitability. As such, there were many dynamics present in the simulation to focus students' decisions around the following theories: pricing in perfect competition, pricing in a monopoly/oligopoly setting, dealing with asymmetric information, elasticity, risk aversion, and auction theory including the winner's curse.

This paper is organized as follows. The next section describes Big League Manager experiment both in terms of procedure and implementation. The third section describes how behavior varied by the participants and the resulting outcomes. The final section concludes this paper.

## **II. Design of the Baseball General Manager Experiment**

This baseball simulation was designed to give students control over numerous variables that would ultimately determine their revenues, costs, and profits in the game. The students were acting as general managers that controlled their team roster, pricing of numerous goods and services associated with the team, team location, and promotional costs. It was important to stress to students the importance of the goal of the game, which was to create the most profitable team not the team that was necessarily the best on the field. Interestingly, studies have shown that Major League Baseball does experience the highest returns to winning in professional sports (Bradbury, 2018).

Managers were first tasked with selecting their team from Major League Baseball, which ultimately determined their division and schedule. They would then select the city where they wanted to play. There was a benefit to selecting a larger market, but a risk of facing additional competition in those markets. Then managers participated in a draft night. All current Major League players were eligible to be selected via a closed bid auction in class and data on all player rankings was provided to the managers a week prior to the draft. Managers were also given current player salary information but informed they could bid any price they wanted for a specific player. Teams were filled out at random subsequent to the draft and compensated at the league minimum salary. Their teams were imported into a computer baseball simulation, which determined whether their team won and lost, as well as how players performed. Managers could elect to set their own lineups or have the computer generate the best lineup. Given the time constraints of the class, one week of baseball was simulated per day.

Once the teams were set, managers had two sets of variables they could alter throughout the season. First, the managers had daily decisions. Each day a manager could alter their team's roster, ticket price, merchandise prices, and food prices. Second, managers could weekly alter other variables including stadium capacity, team location, promotions, or they could accept to lock-in broadcasting and/or local advertising offers. The broadcasting and local advertising offers were revenues that could vary over the season based on team performance. The returns

to these revenues increased over the season if the team sustained a winning record but declined if they were not as successful. Teams were free to lock-in an offer for the remainder of the season at any time.

Simulation results were posted every night including game outcomes, team standings, attendance results, merchandise and food sales, and ticket revenues. This part of the experiment required a lot of work in managing the simulation and also required students to stay active in the game throughout the competition as the variables were constantly changing from day to day. At the end of the simulation, the baseball playoffs were simulated, and revenues were distributed in a fixed amount based loosely on Major League Baseball playoff payouts. At the end of the experiment, student profits were discussed, and students were to write a paper detailing how their decisions related to economic theory we discussed in class.

Most of the game decisions were directly tied to specific economic principles. The auction was conducted so that students could understand more about auction theory and the winner's curse (Burger, 2008). Attendance was probably the single most important variable and it was a function of numerous variables including team success, price, probability of winning, having star players, and opponent quality. The estimated probability of winning was taken from the Fall Baseball Research Journal (Richards, 2014).

It was very important for students to consider elasticities present in the model (Park 2013). Students could also price more monopolistically with success (Alexander, 2001), but also had variables that resembled more of a competitive market when considering broader products such as merchandise (McConnell 2013). While setting the price of their various products and services, students had to bear in mind the varying cost structure of each. Students also had to cope with imperfect information in a few respects (Chakravarti, 2017). First, there was no guarantee a player would perform in the simulation as they had in real life the previous year. Second, they did not know whether competitors would enter their market in a given period or how competitors would price more competitive merchandise. Finally, student had to decide how to manage risk (Stiglitz, 1974). Teams with higher salaries incurred higher levels of risk as winning was necessary to justify those salaries. Additionally, teams could lock in advertising and broadcasting revenues to limit risk, but that sacrificed the potential for higher future returns.

### **III. Outcomes of the Simulation**

The most profitable teams were the ones that were the best managed in many respects, as there was no real dominant strategy a team could utilize to be successful. The teams that led the league in profits generally excelled in putting together a quality team at a reasonable price, priced their products and services appropriately, and were not afraid to take reasonable risks. Figure 1 below

demonstrates that there was actually very little correlation between winning the most and being the most profitable team.

**Figure 1**

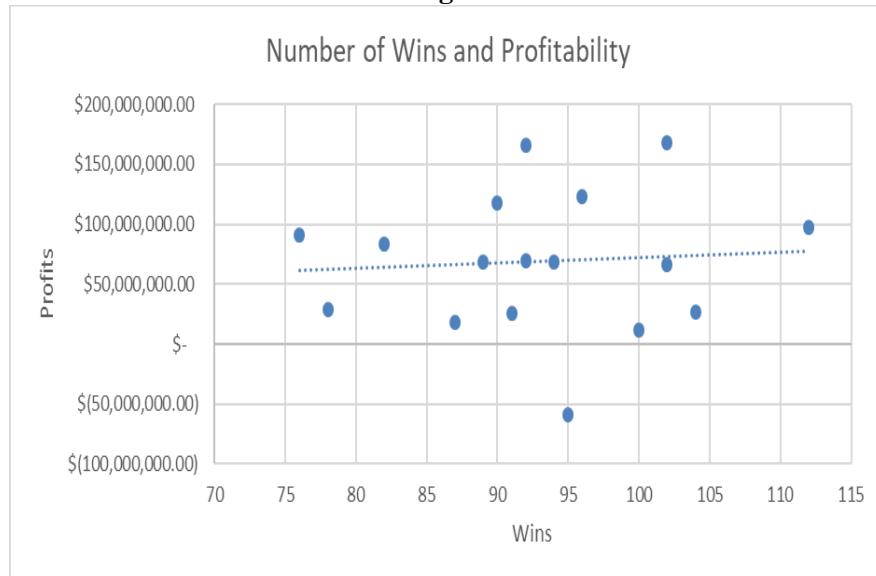
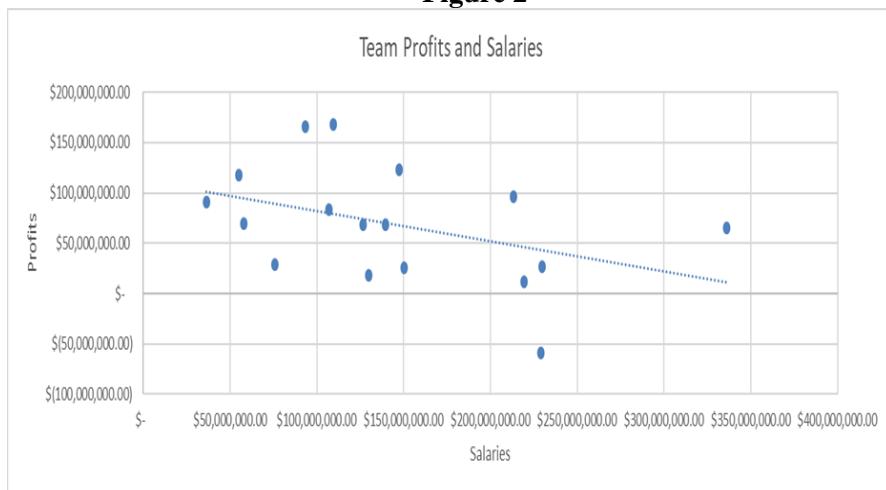


Figure 2 supports this finding by illustrating that teams that spending the most on players generally did not outperform their competition in terms of profit.

**Figure 2**

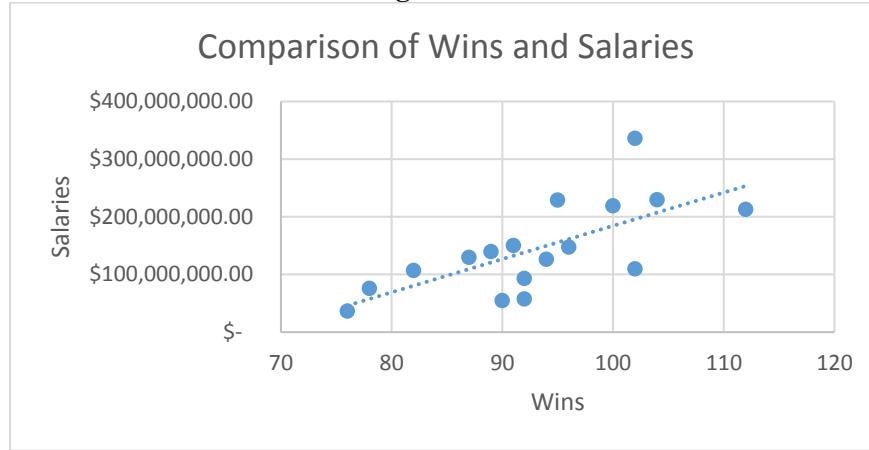


It should be noted that teams that did spend more on salaries did significantly increase the likelihood of winning as illustrated in Figure 3. This did reflect this winner's curse present in the simulation. While the teams spending more at the

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auction did have better teams in terms of winning games and generating higher attendance levels, many found they were overpaying for their wins. In fact, many teams began dropping players to dump salaries throughout the simulation. This allowed other teams to acquire talented players at reduced costs. It should be noted that the most successful teams were not totally risk averse in terms of spending money either. While winning did significantly increase a team's revenues, managing costs and strategic pricing tended to be just as if not more important.

**Figure 3**



There were other very interesting observations that occurred throughout the simulation. First, the teams that spent the most in the auction had the best teams on paper and tended to select bigger markets. They never moved out of the larger market even in the presence of competition. Additionally, these more talented teams tended to take more risks in advertising and broadcasting revenues by not locking in these offers early in the game. Second, pricing behavior varied by team. Some teams acted as market leaders and priced very carefully every period. Other teams tended to follow these leader's decisions in later rounds after realizing they over-priced or underpriced. Some teams simply used trial and error and were less effective at generating profits. Third, the draft auction created particularly interesting behavior. After the first two rounds, lower caliber players were being priced for as much or more than earlier auctioned premier players. Managers got more competitive when making decisions under the fear of having an inferior player on their team. Finally, students did start thinking about their marginal revenue product as the simulation continued. They would tend to add or drop players as they started thinking more about the value the player would add to the team rather than whether they would simply be a better team.

#### IV. Conclusion

The theoretical lessons examined in this experiment can often be difficult to express over the course of a semester by simply looking at models or industry examples. Similarly, truly understanding the impacts of pricing, costs, elasticities and market structures can become unclear if students do not have an opportunity to experiment with those variables and observe the outcomes of their decisions. This is why simulations and laboratory experiments in economics are continuing to gain popularity.

Teaching in microeconomics can be enhanced by careful experiments and exercises that focus on the application of economic theory. This particular game is very challenging to implement, because it involves careful use of differing variables, as well as a significant time investment by the instructor to input the data, run the simulation, and generate results. Nevertheless, the time investment was well worth the lasting impact the simulation had on students. They transformed from students that memorized theoretical models into managers that implemented various economic techniques. This increased their appreciation for the relevance of the economics learned in the classroom as well.

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## **Appendix**

### **Big League General Manager**

#### *A Baseball Business Simulation*

##### Introduction

Welcome to the Big League General Manager simulation. This semester you will be the general manager of a professional baseball team. As the general manager, you will be responsible for all key team decisions ranging from player composition to beer prices. Although I have attempted to make the simulation as realistic as possible, some assumptions of major league baseball have been relaxed to emphasize important economic concepts.

Your goal is to run the most profitable baseball franchise in the league, which should be distinguished from having the best team in the league. Success in this game will depend on numerous variables, which will be determined by your decisions, your competitor's decisions, and chance.

We have a limited number of weeks to complete the simulation, so numerous games will be simulated daily. The season will be broken into eight periods with each period covering approximately a 20 game span. You will be able to change some decisions on a daily basis, but other decisions may only be changed once a period.

You may choose to run a team individually or with one other classmate. The first night of class you will select one of the Major League Baseball franchises to manage. While you select the team name, this selection will only dictate your team's schedule and division. It will not determine your team composition or even your team's location. The game will officially begin the second class period with the player selection. However, your assignment will begin the first night of class, as you will likely spend a significant amount of time before the second class period to prepare for the player selection. By the end of the first full week,

your organization will be ready for action and hopefully making decisions to turn significant profits!

Good Luck, Have Fun, and Think Strategically!

### Player Selection

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Players will be selected in the second class session through an auction process. Given the limited amount of time and the large number of players on a major league team, the entire process likely will not be completed in this one evening. The process below will describe the player selection process and team requirements.

#### *A. Draft Night*

You will be given a spreadsheet of available players and their positions. Player abilities will be determined on the basis of their Major League Baseball season statistics. You will need to utilize a resource to examine player statistics during that season.

I will run the draft process the second night of class. There will be a spreadsheet of available players, and the auction order. You should come to class with offers prepared for all players on the draft list. We will conduct one round of players at a time. A round will consist of a player at each position. The players on the auction list are not necessarily in order from highest rated to lowest, but I will put higher profile players earlier in the auction. After every round, you will be allowed a few moments to revise offers for players in the next round. This revision will be allowed so that you can adjust your offers as a result of what happened in the previous round. For example, if you get your first choice at shortstop, you may want to rescind offers to other players.

You should be aware that some teams will be managed by the computer. To fill their players in the auction, I will assign a random probability from 0.5 to 1.0 for each computer team. This is the amount of the current player's salary that they will offer in the auction. Current salaries can be found at <http://www.baseballprospectus.com/compensation/cots/>.

#### *B. Supplemental Auction*

In the likely event that we do not auction off all the players, your team will be filled in the supplemental auction. The supplemental auction will be conducted through e-mail. Each team will email me offers for any player. You need to include instructions as well for your priority. For instance, you need to order your players by priority and let me know how many players at that position you would like to hire. You can also instruct me to not hire another player over \$X if you

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successfully get a player over that amount. Supplemental offers will be due by Saturday at noon.

Note about the auction process: The league minimum will be \$440K. Your value cannot be less than this amount. In the event you do not fill your 25 player roster at auction, then your team will be filled at random by me. The salary will be the player's current major league salary (therefore, you should make sure you give an offer to enough players to ensure you set the price.)

### Rosters and Lineups

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#### *A. Roster Requirements*

Your roster will consist of 25 players. Most teams will have about 13 position players and 12 pitchers. You will need to make sure you have at least one player that can play each fielding position: C, 1B, 2B, 3B, SS, LF, RF, CF. In addition, you should probably make sure you have at least five starting pitchers. While you can force relief pitchers to start, these pitchers are not as durable will likely wear down your relievers over the course of a season by forcing the bullpen to pitch numerous innings. I have included player positions and secondary positions in the player spreadsheet. While a player may be able to play more than one position, they will be prone to make more errors at their secondary positions.

#### *B. Lineups*

You will set four different lineups. A lineup will instruct me who will start and where they will hit in the batting order. If you do not have a clue about baseball lineups, you should do an internet search on where to hit players in a lineup (e.g. players that steal bases and get on base a lot should probably hit first, whereas your worst batter should hit last). If you are playing at an American League Team's home park, the designated hitter will apply. This player will not play a position, but will hit for the pitcher in the lineup.

Your four different lineups will be for the following: v. RHP (DH), v. RHP (no DH), v. LHP (DH), v. LHP (no DH). As a general rule, Right handed batters hit better against LHPs and vice versa. However, this is not always the case! For example, you probably do not want to ever bat Kendry Morales for Albert Pujols, regardless of the pitcher. You should look up the statistics and there are plenty out there.

Your initial roster will be due Sunday at noon for the first week of class. You may change your lineup daily. However, you need to get your lineup in before midnight for it to apply to the next day's games.

*C. Trades*

You may make trades with any of your classmates. The trade deadline is July 30<sup>th</sup> in the major league season, so you will need to correlate this with where we are in the simulation. You are free to trade on any terms (i.e. you can trade for players as well as cash). Each team will take on the salary of the player they acquired and it cannot be renegotiated. For a trade to be effective, both you and the team you trade with need to post a topic discussion on WebCt. One team needs to state the terms of the trade and the other needs to verify its accuracy. Trades will be effective for the next simulated day. If you want to trade with a computer simulated team, you will need to post a trade offer on WebCt, and I will notify you of the computer's decision. As commissioner of the league, I do reserve the right to veto any trades that I feel are inappropriate. Sometimes a computer team may make you an offer. I will post these offers to WebCt and your consent on the message board will confirm the trade.

The Simulation

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Unfortunately, every team does not play on the exact same day and our schedule does not correspond with the Major League schedule. This constraint has required me to be creative in forming the simulation schedule. Basically, there will be two timelines that you should note. The first will be the game simulation schedule. There are 26 weeks in the baseball schedule. One week will be simulated every day, regardless of whether you are in class and the results and player stats will be updated daily with the results. This will end the regular season on Thursday, April 5<sup>th</sup>. At that point, the divisional playoffs will be simulated the following day, then the championship series, then the World Series on subsequent days. You may make roster changes that will affect the next week's games on a daily basis through email. In addition, you may alter your price levels every day for the next day's simulations.

The other relevant timeline will be in regards to decisions that you can make only periodically. These decisions will be in regards to team location, advertising, promotions, and television contracts. There will be eight such periods where you may change these variables. These dates will be every Tuesday and Friday by 5pm during the simulation. Each decision period will apply your changes for 10 home games (11 on the final decision), regardless whether you have reached that point in the schedule or not. Here is the periodic decision schedule:

Periodic Decision:

1. March 9<sup>th</sup>, First 10 home games
2. March 13<sup>th</sup>, Second 10 home games
3. March 16<sup>th</sup>, Third 10 home games

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4. March 20<sup>th</sup>, Fourth 10 home games
5. March 23<sup>rd</sup>, Fifth 10 home games
6. March 27<sup>th</sup>, Sixth 10 home games
7. March 30<sup>th</sup>, Seventh 10 home games
8. April 3<sup>rd</sup>, Last 11 home games

## General Manager Variables

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Aside from choosing your team roster and setting the lineup, you will be responsible for numerous variables that will affect your team's final profit. The variables that you control are stated below.

### *A. Ticket Prices*

You will set the average ticket price for the game. While Major League Baseball has numerous types of seats, in this game we will simply be pricing the average ticket price. Ticket prices are a key variable in determining both the level of attendance as well as your team's total ticket revenue. Your total ticket revenue will simply be the average ticket price times the attendance. Attendance will be a function of numerous variables, only some of which you control.

### *B. Team Advertising*

You will select the amount of advertising expenditures that your team makes. Advertising expenditures will positively affect your attendance levels.

### *C. Food Prices*

You will determine the prices your team charges for hot dogs, beer, and soda.

### *D. Apparel Prices*

You will determine the price your team charges for caps and shirts. Your price level will impact your firm's sales and the sales of other franchises.

### *E. Team Location*

Unlike sports franchises that are governed by league rules, you will have the option of re-locating your team in any of the 8 periods. Your team's attendance is a function of the city's population, income, as well as the location of other teams. If you feel that your team would be better served in another market then you are free to move in any or all of the 8 periods. You should note that you will receive an attendance bonus the longer your team remains in a market thought.

*F. Local Advertising Revenue*

At the beginning of each period, your team will receive an offer for local advertising. You will have the option of accepting the offer only for the current period or the remainder of the simulation. If you accept the offer for the remainder of the simulation, you will receive that amount for all remaining periods regardless of team performance. If you accept only for the current period, subsequent offers will be based on your team's performance. A list of potential offers by period will be provided in the section on local advertising and broadcasting.

*G. Television Contracts*

At the beginning of each period, your team will receive an offer for broadcasting rights. You will have the option of accepting the offer only for the current period or the remainder of the simulation. If you accept the offer for the remainder of the simulation, you will receive that amount for all remaining periods regardless of team performance. If you accept only for the current period, subsequent offers will be based on your team's performance. A list of potential offers by period will be provided in the section on local advertising and broadcasting.

*H. Stadium Capacity*

At the beginning of the simulation, you will determine your stadium capacity. There will be an initial cost of \$378 per seat to maintain your stadium. You may later add capacity in any of the eight decision periods, but may never subtract capacity. Capacity additions will be \$500 per seat.

*I. Special Promotions*

Once every period, you may select one game as a bobblehead promotion and one game as a bat promotion. You can select the game where these promotions will apply. However, you may only have one per period. The costs and benefits will be discussed below.

Attendance

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Fan Attendance will be one of the most important variables in your simulation. It will determine many facets of your team's revenue, as it is a key variable in terms of ticket sales, food sales, and merchandise sales. While you will be able to

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impact your attendance through some decisions you make, the quality of the team you field will also significantly impact your attendance.

Your team attendance will be determined by the following equation:

$$\text{Attendance} = 2000 \text{ minimum attendance} + 7408 - (((1-\text{win}\%)^2)*1600)*\text{Price} + 0.0003*\text{Fan Pop.} + \text{N.Per.}*500 + 0.119*\text{PCPI} + 5562*\text{BH} + 4469*\text{Bat} + (\text{Log}_2(\text{Advert.}^3))^2.3 + 300*\text{Fan Fav.} + 993*\text{Lead} + 1153*\text{VLead} + 869*\text{LeadWC} + 35,953*\text{ProbWin}^2 + \text{Win}\%^2 + \text{Opp. Win}\%^2 + 437*\text{StarPitcher} - 500*\text{GB}$$

Where:

Minimum Attendance = 2000 and is the minimum possible attendance

Price = your ticket price

Fan Pop = your fan population. This variable is determined by several factors. First, the city's MSA is taken as a base. If no other teams exist in the MSA, the city MSA is your fan population. However, if other teams are in your market, the fan population will be adjusted by your price and winning percentage. First, I will compute your winning percentage in the market. Second, I will subtract your ticket price from the average price in the market. The difference between your price and the average ticket price will be multiplied by 0.002. This will be the market price adjustment and will be subtracted from the winning percentage in the market. The result of this computation is your fan base in the market. I will multiply your fan base by the population to get your number for Fan Population.

For example, suppose you are in a city with a population of 10 million and there is one other team in the market. You have won 50 games and they have won 70. So, your win percentage in the market is 41.7%. I will then add a price adjustment. If your price is \$30 and their price is \$50, then the price adjustment will be  $(30-50)*0.001$ , which equals -0.02. This will be subtracted from your win percentage in the market of 41.7%. So, the outcome is  $41.7\% - (-2\%) = 43.7\%$ .

N.Per.= The number of consecutive periods your team has remained in a market.

PCPI= Per Capita Income in the MSA.

BH equals 1 during a game with a Bobblehead promotion

Bat equals 1 during a game with a bat promotion

Advert.= the amount you elect to spend on advertising

Fan Fav.= fan favorites. A player is deemed a fan favorite under the following conditions: In the beginning of the season, a player will be a fan favorite if they are denoted as a previous year all-star. An additional fan favorite multiplier will be included if the player won the MVP. Once all-star voting and MVP voting come in to play (around mid-May), the top all-star vote getters will be fan favorites and additional fan favorite multipliers will apply to players receiving MVP consideration (about 3 players per league).

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Lead= Your team leads its division

VLead= The visiting team leads the division

LeadWC= Your team leads the wildcard race

ProbWin^2= This is the probability your team wins squared. The probability your team wins is determined by the following equation:  $(p-pq)/(p+q-2*p*q)$ , where p is your winning % and q is your opponents winning percentage.

Win%^2= Your winning percentage squared

Opp.Win%^2= Your opponent's winning percentage squared

StarPitcher= 1 if you have a star pitcher playing. The same rules apply as those for fan favorites. The only distinction is an additional multiplier will be given for pitchers receiving Cy Young Award consideration.

GB= Games Behind the division leader

## Concessions and Merchandise

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You will set prices for concessions and merchandise up to once per simulation day. You will be selling three refreshments: Hotdogs, beer, and soda. The sales of each will be determined by the following:

Hotdog sales = .9\*Attendance -.08\* hotdog price\*attendance - .022\*attendance\*beer price - .0089\*attendance\*soda price.

Beer sales = .5\*attendance – beer price<sup>4</sup> - .0078\*attendance\*hotdog price.

Soda sales = .9\*attendance -.1\*attendance\*soda price - .0156\* attendance\*hotdog price.

You will also be selling hats and shirts. The sales of these items are as follows:

Hat sales = .5\*attendance – hat price\*1000 + .0003\*Fan Population – (hat price-average hat price)\*700 + 100\*Lead + 70\* LeadWC.

Shirt sales = .5\*attendance – shirt price\*1100 + .0003\*Fan Population – (hat price-average hat price)\*600 + 80\*Lead + 60\* LeadWC.

## Costs

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You will have numerous costs that you need to factor into your decisions. Some of the costs will be fixed in nature and some will be variable. The following information explains how your costs will be determined for the game.

### A. Player Salary Cost

Your player salaries will be determined at auction. If you trade players later then you will assume the salary of the players you receive and shed the salaries of the players you lose.

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### *B. Stadium Cost*

The stadium cost is \$38 per seat of capacity that you elect at the start of the game. If you later add capacity, the cost will be \$50 per seat for the additional seats.

### *C. Coach Salaries*

Your coaches' salaries will be \$2.5 million for the season. This cost cannot be altered.

### *D. Administrative Costs*

Your administrative costs will be \$12.5 million for the season. This cost cannot be altered.

### *E. Scouting and Minor Leagues*

Your scouting and minor league expenses will be \$20 million for the season. This cost cannot be altered.

### *F. Advertising Costs*

Advertising costs help increase team attendance. You will set the amount of these expenditures. You may alter these expenses once each simulation day.

### *G. Concession Costs*

This is the cost associated with selling hotdogs, beer, or soda. The cost will vary depending on the number of units that you sell. The cost per hotdog will be determined by the following formula:

Hotdog cost = \$0.8 per hotdog if you sell fewer than 5000 hotdogs; \$1 if you sell between 5 and 10,000 hotdogs, \$1.20 per dog if you sell between 10,000 and 15,000, and \$1.50 per dog if you sell over 15,000 hotdogs.

The cost of beer will be based on the following formula:

Beer cost = \$2 per beer if you sell fewer than 5000 beers; \$2.5 if you sell between 5000 and 10,000 beers, \$2.70 per beer if you sell between 10,000 and 15,000, and \$3 per beer if you sell over 15,000 beer.

The cost of soda will be based on the following formula:

Soda cost = \$0.25 per soda if you sell fewer than 5000 sodas; \$0.4 if you sell between 5000 and 10,000 sodas, \$0.5 per soda if you sell between 10,000 and 15,000, and \$0.6 per soda if you sell over 15,000 soda.

The cost of hats will be based on the following formula:

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Hat cost = \$7 per hat if you sell fewer than 2000 hats; \$8 if you sell between 2000 and 4000 hats, \$8.5 per hat if you sell between 4,000 and 15,000, and \$9 per hat if you sell over 15,000 hat.

The cost of shirts will be based on the following formula:

Shirt cost = \$7 per shirt if you sell fewer than 2000 shirts; \$8 if you sell between 2000 and 4000 shirts, \$8.5 per shirt if you sell between 4,000 and 15,000, and \$9 per shirt if you sell over 15,000 shirt.

### *H. Promotional Costs*

If you have a bobble head day, you will be required to spend \$5 for the first 10,000 fans. If you have a bat day, you will spend \$9 for the first 10,000 fans. You can only have one of each of these promotions per period.

## Local Advertising and Broadcasting Revenue

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As stated above, your team will receive an offer for local advertising and broadcasting rights at the beginning of each period. You will have the option of accepting the offer only for the current period or the remainder of the simulation. If you accept the offer for the remainder of the simulation, you will receive that amount for all remaining periods regardless of team performance. If you accept only for the current period, subsequent offers will be based on your team's performance. A list of potential offers is shown below:

### A. Local Advertising

Period	Winning Percentage					
	<0.4	<0.45	<0.5	<0.55	<0.6	>.6
1						
2	\$1,300,000	\$1,500,000	\$1,650,000	\$1,700,000	\$1,720,000	\$1,750,000
3	\$1,250,000	\$1,450,000	\$1,600,000	\$1,750,000	\$1,790,000	\$1,850,000
4	\$1,200,000	\$1,400,000	\$1,600,000	\$1,900,000	\$2,000,000	\$2,200,000
5	\$1,150,000	\$1,350,000	\$1,600,000	\$2,125,000	\$2,250,000	\$2,400,000
6	\$1,100,000	\$1,300,000	\$1,500,000	\$2,000,000	\$2,300,000	\$2,500,000
7	\$1,050,000	\$1,250,000	\$1,400,000	\$1,900,000	\$2,350,000	\$2,600,000
8	\$1,000,000	\$1,100,000	\$1,200,000	\$1,800,000	\$2,250,000	\$2,700,000

In period one, you will be offered \$1,600,000. You can accept this for period one only or elect to receive this amount per period for the entire simulation.

## B. Broadcasting

Period	Winning Percentage					
	<0.4	<0.45	<0.5	<0.55	<0.6	>.6
1						
2	\$2,300,000	\$3,000,000	\$4,500,000	\$4,800,000	\$5,000,000	\$5,200,000
3	\$2,200,000	\$2,750,000	\$5,000,000	\$5,250,000	\$5,400,000	\$5,600,000
4	\$2,100,000	\$2,600,000	\$5,000,000	\$5,500,000	\$5,750,000	\$5,900,000
5	\$2,000,000	\$2,400,000	\$5,000,000	\$5,750,000	\$6,000,000	\$6,250,000
6	\$2,000,000	\$2,300,000	\$4,800,000	\$5,600,000	\$6,200,000	\$6,450,000
7	\$1,900,000	\$2,200,000	\$4,600,000	\$5,250,000	\$6,400,000	\$6,600,000
8	\$1,800,000	\$2,000,000	\$4,300,000	\$5,000,000	\$6,300,000	\$6,750,000

In period one, you will be offered \$4,900,000. You can accept this for period one only or elect to receive this amount per period for the entire simulation.

## Playoff Revenue

If your team makes the playoffs, you will receive the following payoffs:

Division Series- \$1 million per home game

Championship Series- \$1.4 million per home game

World Series- \$2 million per home game

## First Simulation Day

At the beginning of the season, fans will be excited to see your team perform. Your win percentage will be set to an automatic 65% for the first five home games. You will not be deemed to be winning the division or trailing the division for these first five games.

You will need to select the following variables by March 9<sup>th</sup> at 5 pm.

- a. Ticket Price
- b. Stadium Capacity
- c. Advertising Expenditures
- d. Team's Location
- e. Days that you want to have a bat or bobble head promotion in the first period (any of the first ten home games)
- f. Prices for merchandise and concessions.
- g. Whether to accept the local advertising and broadcasting contracts for the entire season or just the first period.

## **EXTRA CREDIT AND PERCEIVED STUDENT ACADEMIC STRESS**

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### **ABSTRACT**

This article examines the impact of extra credit availability on students' perceived stress. The study looks at two areas. First, what type of extra credit students prefer be made available. Second, how student academic stress is impacted by the availability of extra credit. Results show that undergraduate business students at a private university prefer merit based extra credit and that perceived academic stress is higher for students when extra credit is available. Stress is particularly high for higher-performing students.

**Key Words:** Extra Credit; Collegiate Mental Health; Stress; Anxiety; Business

### **INTRODUCTION**

The mental health of college students is increasingly coming into the collective conscious as headlines report students' increased stress, depression and anxiety. With titles like "Record Numbers of College Students Are Seeking Treatment for Depression and Anxiety - But Schools Can't Keep Up" in Time Magazine (Reilly, 2018), it is hard to ignore the increasing need to address student mental health needs. Concerns about depression, stress, and anxiety in the classroom are not new, nor are they limited to the United States (Kumaraswamy, 2013; Spielberger, 1962; Towbes & Cohen, 1996). The Center for Collegiate Mental Health 2018 Annual Report (2019, January) reports that anxiety and depression are the most common concerns of students seeking counseling services. Student self-reports of anxiety and depression continued to increase compared to previous annual reports. Particularly concerning is the fact that the rate of threat-to-self characteristics for students seeking counseling services increased for the eighth year in a row.

Increases in stress, anxiety, and depression may be the result of students facing more complex problems than in the past, the stress of the abrupt

change from high school, difficulty in achieving social intimacy, the pressure to succeed or a wide variety of other causes. As recommendations for outreach to students happens in non-classroom settings, counseling services and other support services,, it is critical that faculty understand how to support these students in the classroom (Beiter, Nash, McCrady, Rhoades, Linscom, Clarahan, & Sammut, 2015; Delucia-Waack, Athalye, Floyd, Howard, & Kuszczak, 2011; Kumaraswamy, 2013; Mahmoud, Staten, Hall, & Lennie, 2012).

Stress, anxiety and depression impact students' academic ability. Students who report higher levels of anxiety have an unrealistic lack of confidence in their memory and poorer memory accuracy as those who report lower anxiety (Delleman & Fernandes, 2015). Stress, anxiety and depression have been linked to student illness (Rawson & Bloomer, 1994). Test anxiety has been linked to lower GPA in graduate and undergraduate students (Chapell, Blanding, Silverstein, Takahashi, Newman, Gubi & McCann, 2005). Depression has been found to negatively impact exam performance and overall academic performance (Andrews & Wilding, 2004).

As instructors, we may believe that we should work to reduce stress in our classes, while not reducing rigor. However, a recent study reports that students do not believe that anxiety should be removed from the classroom but rather that students should learn to address anxiety-inducing situations before graduation (Burch, Batchelor, Burch, Gibson, & Kimball, 2018). Perhaps one approach to reducing student stress, without reducing rigor, is to offer extra credit. According to a study conducted by Elbeck and DeLong (2015), a majority of students (52%) ask for extra credit after taking an exam or completing a learning activity as a means by which to make up or recover lost points. As discussed in the next sections of the paper, the availability of extra credit is hotly debated among instructors but it is also popular among students and may offer a way to reduce students' stress.

## LITERATURE REVIEW

"Should one desire to start a barfight in a community tavern, the topics of politics, religion, and maternal heritage are likely precipitants. If one wishes to start a verbal brawl in a university faculty club, the desirability of extra credit is incendiary material" (Norcross, Horrocks, & Stevenson, 1989, p. 199). And, so the research shows. For example, later work by Norcross (Norcross, Dooley, & Stevenson, 1993) presents evidence suggesting there is "no middle ground" (the title of their paper) in the use and justification of extra credit. Research suggests ethical issues and difference in philosophies contribute to tensions over extra credit. Hill,

Paladino, & Eison (1993) note that some instructors believe that extra credit encourages lax student behavior while others believe that extra credit offers students additional opportunities to learn. Norcross, et al. (1993, p. 209) asked faculty to identify an instance in which extra credit was appropriate. Only 41% of the respondents could do so. When the remaining 59% were asked why they oppose the practice, common answers included “the course assignments on the syllabus are necessary and sufficient,” “there is already enough to do in the class,” and “other available methods, such as exam curves, rewrite opportunities, and dropping the lowest grade, handle the situation.” However, the same study found several faculty supported the use of extra credit, citing its ability to “motivate students to work harder” and “explore a topic in greater depth.” Sheaffer (2011) later confirmed these findings.

In general, faculty favor content-related forms of extra credit over non-content-related. Hill, et al. (1993) had faculty indicate their likelihood of use of various modes of extra credit. Among the most frequent (p. 211) were modes such as “handing in questions about the text...,” “...assignments that complement the text material,” and “taking a pop quiz.” Among the least frequent were modes such as “donating food to the needy,” “donating blood,” and “... questions unrelated to the course content....” A high-level review of literature shows that most empirical studies of the efficacy of extra credit measure content-related modes such as summarizing journal articles (Hardy, 2002), reactions to content-related media (Sheaffer, 2011), quizzes over required readings (Fuad & Jones, 2012, Padilla-Walker, 2006), seeking tutoring (Oley, 1992), and quizzes over class lectures (Maurer, 2006). Students, unsurprisingly, favor the use of extra credit (Bate, 1976, Maurer, 2006, Sheaffer, 2011), especially when it is content-related (Groves, 2000).

We were unable to uncover any research that empirically examined the relationship between extra credit and stress. Magna Online Seminars (2011) notes that some believe that extra credit reduces student anxiety and motivates students to learn while others believe extra credit lowers academic standards and creates more work for instructors. Norcross, et al. (1989) also argue that extra credit reduces student anxiety. Again, neither article empirically investigated these claims.

One interesting and consistent finding in the extra credit literature is that high-performing students generally take advantage of extra credit opportunities more frequently than low-performing students do. Grijalva, Koford, and Parkurst (2018) measured students’ grades at the time they turned in extra credit assignments and found that higher grades increased the probability of turning in an extra credit assignment, and that high-

performers discounted the delayed rewards from extra credit less than low-performers did. Hardy (2002), Harrison, Meister and LeFevre (2011), and Padilla-Walker, Zamboanga, Thompson, & Schmersal (2005) all found a significant positive relationship between pre-extra credit grade and the submission of extra credit assignments. None of those studies was designed in such a way as to determine a cause for the relationship. Maurer (2006) used a quasi-experimental model comparing semesters when extra credit was available to semesters when it was not. As in other studies, high-performers took advantage of extra credit opportunities more frequently than low-performing students did. However, exam averages did not differ between semesters. Maurer thus ascribed the higher rate of extra credit participation to the higher-performers' conscientiousness and suggested that high-performing students are more motivated to attempt extra credit because they have a higher expectancy of completing it successfully.

These studies piqued our curiosity as to whether low and high performing students would differ as to their anxiety around extra credit. Does high-performers' higher confidence (ascribed by Maurer, 2006) make extra credit less stressful? Or does their higher conscientiousness (again, ascribed by Maurer, 2006) make them feel obligated to attempt extra credit, creating anxiety-inducing task overload? Though we could not test confidence and conscientiousness as mediators, those variables do suggest different effects of high performance on whatever anxiety may surround extra credit.

### **Research Questions**

This study examines how the availability of extra credit impacts student stress and whether this relationship might differ on the basis of student performance. The study looks at two areas. First, what type of extra credit students prefer be made available. Second, how student academic stress is impacted by the availability of extra credit.

**RQ1:** How does extra credit affect student perceptions of academic stress?

**RQ2:** How does the course learning assessment criteria presented on a syllabus impact student perceptions of academic stress (PAS)?

### **RESEARCH METHODS**

Two surveys were developed; one survey had extra credit as an option while the second did not have extra credit. Both surveys provided the assessment criteria (both type and weight) for two options of the same

course followed by the question “When selecting courses which course would you prefer?” Students could select option 1, option 2, or no preference. The surveys also included the Perception of Academic Stress (PAS) measure and demographic questions.

## MEASURES AND INSTRUMENTATION

### Extra Credit

The survey instrument consisted of a one-page hypothetical Business Course syllabus. This document contained only assessment criteria for the course (see Appendix A & B). The assessment criteria included categories such as attendance and participation, quizzes, exams, research paper, team project, and individual presentation, each with specific weights. Two versions of the survey instrument were presented to the students. One version offered extra credit opportunities as part of the assessment criteria structure while the other version did not. Students were not made aware that two different versions of the syllabus were distributed. The two surveys were mixed together such that every other student received a different version.

Each of the two versions of the Business Course syllabi contained two different assessment criteria options or choices. On the extra credit syllabus, the two options differed by how the extra credit could be earned. One option was through the attendance of a career or College of Business speaker event. The other option was merit based vis-à-vis additional homework, rewriting a paper, or repeating a quiz or exam. All other assessment criteria were unaltered. On the version of the syllabus without extra credit, option one offered a 20% exam weight and a 30% team project weight. Option two consisted of a 30% exam weight and a 20% team project weight. Students were asked to select the option (1 or 2) they would prefer if taking the course. After reviewing the syllabus, students were then asked to rate their perception of academic stress.

The two surveys allowed us to compare between students’ response to having and not having extra credit. The different extra credit offerings provided insight into the type of extra credit students prefer.

### Stress

Data was collected and measured using the Perception of Academic Stress (PAS) scale (Bedewy & Gabriel, 2015). Subscales of the PAS include: a) pressures to perform, b) perceptions of workload, c) academic self-perceptions, and d) time restraints. All questions associated with the PAS were integrated into the study. Survey questions were posed using a 1-to-5 Likert-scale with an ordinal level of measure. Responses were

assumed to be and converted to an interval level of measure in order to apply parametric tests during data analysis. To identify and describe the individual characteristics of survey participants, demographic questions including age, gender, GPA, major, and class cohort were incorporated into the instrument.

### **Participants**

Business students enrolled in an undergraduate introductory management course at a private university were randomly provided the two surveys. Student participation was voluntary.

### **RESEARCH DESIGN**

The population consisted of College of Business students attending a mid-Atlantic private college during the spring 2018 term. The sampling frame included all 200 students enrolled in a 100-level management course, a required course for all business students. During the spring 2018 term, 8 sections of this course were offered, taught by 4 different faculty. Students were recruited by the faculty from each section to participate in the study. The survey was administered during regularly scheduled synchronous class sessions.

### **Sample Size**

When conducting multiple regression with 9 or fewer predictor variables, a minimum sample size of  $N = 100$  is recommended (Combs, 2010; Nunnally, 1978). According to Green (1991), with 7 predictor variables, a multiple regression sample size should equal  $50 + 8k$ , or 106. A minimum sample size of 103 was estimated using G\*Power 3.1.9.2, assuming an *a priori* power analysis,  $\alpha = .05$ ,  $\beta = .80$ , and a medium effect size (Faul, Erdfelder, Lang, & Buchner, 2007).

### **Reliability and Validity**

To be considered reliable, an instrument is expected to produce a Cronbach's alpha of .70 or greater (Babbie, 2010). The Perceived Academic Stress (PAS) scale yields a Cronbach's alpha total item reliability of .70 (Bedewy & Gabriel, 2015). To minimize threats to internal validity and the influence that outliers have on the accuracy of prediction, a statistically large sample was used. In addition, participants were selected from a sample frame assuming an equal likelihood in experiencing academic stress. To avoid external threats to validity, a large sample was used to minimize the effects of low response rates (Lavrakas, 2008). A field

study was conducted with experts from a range of professional and academic backgrounds. The experts evaluated the logical flow, readability, and relevance of the survey questions and panelists assessed the accuracy and clarity of the questions.

## RESULTS

### **Sample Description**

Per Tables 1 and 2, a majority of the respondents were male (74.5%), 19 years of age (50.6%), part of the University freshman class (82.3%), with a self-reported GPA from 3.0 to 3.49 out of a 4.0 scale (40.2%).

Table 1

*Cross-Tabulated Age and Gender Frequencies and Percentages (N = 164)*

Age	Participant gender					
	Male		Female		Other	
	N	%	N	%	N	%
18	44	36.7%	13	32.5%		
19	62	51.7%	20	50.0%	1	100%
20	9	7.5%	3	7.5%		
21	1	0.8%	2	5.0%		
22	3	2.5%	1	2.5%		
Over 22	1	0.8%	1	2.5%		
Total	120	74.5%	40	24.8%	1	0.6%

A majority of respondents (83.5%) self-reported as either accounting (19.5%), marketing (18.9%), other management (18.9%), other (13.4%), or management (12.8%) majors. Table 3 shows the distribution of majors for the survey panel.

Table 2

*Cross-Tabulated Cohort GPA Frequencies and Percentages (N = 164)*

Cohort	Participant GPA									
	3.5 to 4.0		3.0 - 3.49		2.5 - 2.99		2.0 - 2.49		< 2.0	
	N	%	N	%	N	%	N	%	N	%
Freshman	48	87.3%	55	90.2%	21	72.4%	9	100.0%	1	100.0%
Sophomore	4	7.3%	5	8.2%	3	10.3%				
Junior	3	5.5%	1	1.6%	2	6.9%				
Senior					3	10.3%				
Total	55	35.5%	61	39.4%	29	18.7%	9	5.8%	1	0.6%

**Table 3**  
*Major Frequencies and Percentages (N = 164)*

Major	N	%
Marketing	31	18.9%
Management	21	12.8%
Other Management	31	18.9%
Accounting	32	19.5%
Finance	14	8.5%
Information Management	2	1.2%
Analytics	3	1.8%
Human Resources	3	1.8%
Entrepreneurship	2	1.2%
Other	22	13.4%
Missing	3	1.8%
Total	164	100.0%

Eighty-two students received the extra credit version of the survey instrument to evaluate while 82 students received the non-extra credit version. One student who received the extra credit version of the survey opted out of the study. Table 4 identifies the majors of the respondents and which survey instrument they reviewed. Three students in the sample did not identify their major. Generally, those receiving the syllabus were categorized within the 3.0 to 4.0 GPA range with 69.2% and 82.6% of respondents receiving the extra credit and no extra credit versions, respectively. Table 5 identifies the distribution of the survey instrument by GPA range.

**Table 4**  
*Cross-Tabulated Major and Syllabus Version Frequencies and Percentages*  
*(N = 164)*

Major	Extra Credit		No Extra Credit	
	N	%	N	%
Marketing	15	18.8%	16	19.8%
Management	7	8.8%	14	17.3%
Other Management	19	23.8%	12	14.8%
Accounting	19	23.8%	13	16.0%
Finance	6	7.5%	8	9.9%
Information	1	1.3%	1	
Management				1.2%
Analytics	3	3.8%		
Human Resources	2	2.5%	1	1.2%
Entrepreneurship			2	2.5%
Other	8	10.0%	14	17.3%
Total	80	49.7%	81	50.3%

**Table 5**  
*Cross-Tabulated GPA and Syllabus Version Frequencies and Percentages*  
*(N = 164)*

GPA	Extra Credit		No Extra Credit	
	N	%	N	%
3.5 to 4.0	31	38.3%	25	31.3%
3.0 - 3.49	25	30.9%	41	51.3%
2.5 - 2.99	18	22.2%	11	13.8%
2.0 - 2.49	7	8.6%	2	2.5%
< 2.0			1	1.3%
Total	81	50.3%	80	49.7%

### Data Analysis

Survey data was analyzed using SPSS version 27. Survey responses collected by the faculty were imported into SPSS from a Microsoft Excel file. Table 6 summarizes the instruments used to collect data.

Students that received the extra credit syllabus preferred extra credit assignments (62.2%) as compared to attending a College of Business or career event (Table 7). Students that received the syllabus without extra credit preferred option 1 (63.5%). This option weighted team projects more

heavily (30% as opposed to 20%) and exams less heavily (20% as compared to 30%).

**Table 6**  
*Business Course Syllabi Data Collection Instruments*

Versions	Extra Credit		No Extra Credit	
	Option 1	Option 2	Option 1	Option 2
Attend an event	X			
Assignment		X		
30% team project, 20% exam			X	
20% team project, 30% exam				X

**Table 7**  
*Cross-Tabulated Syllabus Version and Option Frequencies and Percentages (N = 164)*

Option	Version			
	Extra Credit		No Extra Credit	
	N	%	N	%
Option 1	27	36.5%	47	63.5%
Option 2	46	62.2%	27	36.5%
No Response	1	1.4%		
Total	74	50.0%	74	50.0%

The Perception of Academic Stress (PAS) scale is scored via four subconstructs. The minimum and maximum scores for each subconstruct is listed in Table 8. The higher the PAS score, the lower the level of stress experienced by the student.

**Table 8**  
*Minimum and Maximum Scores for Each PAS Subconstruct*

Subconstruct	PAS Score	
	Minimum	Maximum
Pressures to perform	5	25
Perceptions of workload	4	20
Academic self-perceptions	5	25
Time restraints	6	30
Total	20	100

Student PAS scores are provided in Table 9. Students who evaluated the syllabus without extra credit reported 4% less stress than their counterparts

who reviewed the syllabus offering extra credit. Therefore, more stress may be experienced if extra credit is offered as part of the evaluative criteria on a syllabus.

**Table 9**  
*Mean and Median PAS Subconstruct Scores per Syllabus Version  
 (N = 164)*

Subconstruct	PAS Score		Version			
	Minimum	Maximum	Extra Credit		No Extra Credit	
	Mean	Median	Mean	Median		
Pressures to perform	5	25	15.34	15	16.19	17
Perceptions of workload	4	20	12.61	13	13.06	13
Academic self-perceptions	5	25	18.49	19	18.97	19
Time restraints	6	30	20.10	20	20.96	21
Total	20	100	66.54	67	69.18	70

**Table 10**  
*Mean and Median PAS Subconstruct Scores per Syllabus Version and Option (N = 164)*

Subconstruct	PAS Score		Extra Credit Options			
	Minimum	Maximum	Events		Merit	
	Mean	Median	Mean	Median		
Pressures to perform	5	25	15.48	16	14.98	15
Perceptions of workload	4	20	13.22	14	12.33	12
Academic self-perceptions	5	25	19.11	20	18.24	18
Time restraints	6	30	20.54	20	19.5	19
Total	20	100	68.35	70	65.05	64

Subconstruct	PAS Score		No Extra Credit Options			
	Minimum	Maximum	20/30 Exam/Team		30/20 Exam/Team	
	Mean	Median	Mean	Median		
Pressures to perform	5	25	15.89	16	16.56	18
Perceptions of workload	4	20	12.89	13	13.33	14
Academic self-perceptions	5	25	18.68	20	18.96	19
Time restraints	6	30	20.84	22	21.07	22
Total	20	100	68.30	71	69.92	73

When comparing the mean and median subconstruct scores between syllabus options as reported in Table 10, the lowest stress (69.92) is observed by those assigned to the no extra credit syllabus with a 30% exam, 20% team project weight. The highest level of stress was reported by those students associated with the merit-based extra credit syllabus option (65.05). Interestingly, students linked with the extra credit syllabus preferred the merit-based option, which is more stressful as compared to the event-based assessment criteria.

### Testing Assumptions

Prior to conducting multiple regression, the dataset was explored for abnormalities and assumptions were tested to ensure sufficient conditions existed to utilize this particular multivariate statistical approach. A listwise approach was used to manage missing data; 20 cases were removed. Nominal variables were coded with dummy variables prior to conducting the analysis. Outliers were analyzed using residuals and Cook's distance (Dunning & Freedman, 2008). Applying pairwise deletion, two observations were removed from the analysis.

Descriptive statistics were generated and normality plots were examined to test for normality. Univariate normality was evaluated using skewness and kurtosis indices. Field (2009) suggested that skew indices greater than three and kurtosis indices between 10 and 20 signify non-normality. No variables were highly skewed or kurtotic. All data was considered normally distributed. Scatterplots and histograms were evaluated for linearity. To test for homoscedasticity, Levene's test was evaluated at  $p > .05$ . To evaluate for independence of errors, a Durbin-Watson test statistic for the model should result within a range of 1 to 3 (Field, 2009). With a Durbin-Watson test statistic of 1.922, the data was considered independent of correlation errors between residuals. Variance Inflation Factors were reviewed and all fell within the acceptable range of .1 to 10 (Field, 2009).

### Results

Although the overarching Perception of Academic Stress (PAS) scale was not statistically significant in its entirety, predictive relationships were discovered between the subconstructs of the inferential model and the independent variables, and in specific, academic self-perceptions (ASP). Linear multiple regression was conducted to test the research questions and related hypotheses.

**Table 11**  
*Model Summary (N = 164)*

R	R Square	R Square	Adjusted Estimate	Std. Error of the R Square		Change Statistics				Sig. F Change	Durbin-Watson
				Change	F Change	df1	df2				
				0.100	3.850	4	138				
0.317	0.100	0.074	4.396					0.005		1.922	

*Note.* Dependent variable = Academic Self-Perceptions.

**Table 12**  
**Analysis of Variance of the Regression Model ( $N = 164$ )**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	297.579	4	74.395	3.850	0.005
Residual	2666.896	138	19.325		
Total	2964.476	142			

*Note.* Dependent variable = Academic Self-Perceptions.

The ANOVA established that the model was statistically significant, with  $F(142) = 3.85$  at  $p < .01$ , for age, GPA, version of the syllabus, and option from each version as predicting academic self-perceptions (see Table 11). The model indicated that age, GPA, and the syllabus version and option had a significant relationship upon the academic self-perceived stress experienced by students ( $-1.25\beta_1(\text{age}) - 3.08\beta_2(\text{GPA}) - 0.031\beta_3(\text{version}) + 0.094\beta_4(\text{option})$ ,  $t(142) = 3.85$ ,  $p < .05$ ).

## DISCUSSION

The results of this quasi-experiment are enlightening to the scholarship of teaching and learning. For one, if given the choice, students may be more apt to select a merit assignment as opposed to attending a social event to earn extra credit. Since the majority of our sample consisted of first year college students, one explanation of this finding is that students newer to college may be more apprehensive about attending an event in a less familiar environment. Another reason, unrelated to our sample, may be that more college students are working to pay for college than ever before and may have less time to attend an event and complete their studies. According to a recent government survey, over 52% of college students are working at least 27 weeks per year or more to cover the cost of college (U.S. Census Bureau, 2017).

Students assigned to the syllabus version without extra credit lobbied for a more heavily weighted team project as opposed to an individual exam. Students may presume the team project workload to be moderated due to the sharing of deliverables among members. Yet, students reported more stress by their popular choice. Perhaps the increased stress emanates from past team experiences, working with others, the potential for time conflicts, or the concern of how they will be academically perceived by their teammates. Another interpretation is that more students within our sample had a high GPA and they may be concerned that, due to their higher achieving status, they may need to do more of the work for the team to be successful and meet their exacting standards.

In the Elbeck and DeLong (2015) study referenced earlier, among high performing students, the proclivity is to appeal for extra credit on a reactionary basis (60%) in lieu of a proactive pursuit (33%). In contrast, low performing students are far more balanced in their appeals with 43% requesting extra credit from a recovery standpoint and 43% from a proactive one. Therefore, students with a higher GPA may be more stressed out because they perceive themselves as having more to lose.

Research from Grijalva, Koford, and Parkhurst (2018) aligns with the findings of this study in that the higher a student grade, the more likely they are to complete an extra credit assignment, if given the opportunity. If students with a higher GPA have a greater frequency of completing extra credit, they may also have more elevated stress levels due from the self-imposed pressure to maintain an expected level of academic performance. The findings of this study align with this statement.

Academic self-perception is the belief that one has regarding their current and future academic abilities. This self-concept informs the choices that students make and influences their academic and professional goals. Those with lower academic self-perception may underrate their ability to achieve and elect to enter into less rigorous programs or career paths (Wilson, Siegle, McCoach, Little, & Reis, 2014). As interpreted from the regression model, the lower the self-reported GPA, the higher the academic self-perception stress. Offering extra credit as an option in a course to explore a topic in greater depth, recoup lost points, or demonstrate reward and effort, may elevate the stress experienced by those with a lower academic self-perception of themselves.

As for the independent variable age, the regression equation indicated that younger students experienced more academic self-perception stress than those in the sample population who were older by comparison. This result directly relates to a study conducted by Chung, Robins, Trzesniewski, Noftle, and Roberts (2014) in that students who persist in college improve their academic self-perception over time. The unfamiliarity of what will be expected can be intimidating and stressful as a newcomer to college. As students gain experience, achieve success, and develop a greater sense of self, academic self-perception evolves and stress related to academic self-perception declines.

## LIMITATIONS

The purpose of this study was to evaluate the academic stress experienced by students upon the review of a one-page syllabus with two possible assessment criteria options for each syllabus. One limitation of this study was the incorporation of a survey as the data collection

mechanism. Questions were posed using a multiple-choice Likert-scale format. Therefore, respondents were not provided with the opportunity to explain or elaborate upon their answers.

An additional limitation of this study was the survey panel. Only business majors enrolled in a freshman Management synchronous course during one term at one specific institution served as the sampling frame. Hence, the research is limited to the perspectives of only those students involved in the study.

Research results may not be generalizable to the entire population of students, business or non-business majors, within or outside the institution of study. Bachelor degree seeking undergraduate students served as respondents for this study. Therefore, the perspectives of secondary, graduate, or doctoral students may differ from those surveyed as part of this research.

## FUTURE RESEARCH

Future research should be conducted to evaluate the impact of extra credit on student stress in non-business majors and upper division or graduate-level course offerings since this study evaluated first year business students. Additional work should seek to clarify if extra credit is perceived differently in an online learning environment. Structural equation modeling could be employed to establish if causality exists between extra credit assignments and student academic stress. The research design used in this study could be modified to include an explanation of the extra credit assignment to determine if differences in student stress are perceived.

This study should be extended globally to conclude if cultural differences influence the results. Further analysis should incorporate high school GPA and other preparedness measures to better understand the population. Qualitative questions could be added to the data collection instrument to learn more about students experiences and to delve further into what is stressing them and why. Future work should compare stress levels originating from extra credit of traditionally aged students to non-traditional ones. The study should be expanded to assess whether alternate methods of extra credit are more or less stressful. Furthermore, researchers should evaluate the combination of various learning assessments and activities to learn more about their influences on the stress levels of students.

Anxiety is the most frequently reported health issue on college campuses (Center for Collegiate Mental Health, 2017). Nearly 85% of students are reportedly overwhelmed with almost 80% of them at the point of exhaustion. About 15% of all college students have been diagnosed with or have received some treatment for an anxiety disorder (Samoulis,

Barcellos, LaFlam, Belson, & Berard, 2015). Given this trend, more research should seek to understand the underlying factors that cause or influence student stress and anxiety including, but not limited to, learning assessments and activities such as extra credit, team projects, case studies, presentations, and examinations.

## CONCLUSIONS

While somewhat controversial, extra credit is a means by which students can reinforce learning, engage further in any area of study, and improve their grades. In general, this study found that students prefer an extra credit assignment over attending an event. Correspondingly, perceived student academic stress increases when extra credit is presented. The results were surprising in that students may select an extra credit, merit based assignment, as opposed to an event or some other non-merit activity. While the intention of offering an extra credit assignment is ultimately to benefit students, a “bonus” opportunity may lead to more than what a student bargained for, additional stress and anxiety.

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## APPENDIXES

### Appendix A – Business Course Syllabus with Extra Credit Assessment Criteria for Required Business Course

Option 1	Option 2
10% Attendance and Participation	10% Attendance and Participation
10% Quizzes Weekly quizzes will consist of multiple choice and true/false questions.	10% Quizzes Weekly quizzes will consist of multiple choice and true/false questions.
30% Exams Exams include multiple choice, true/false and short answer questions.	30% Exams Exams include multiple choice, true/false and short answer questions.
20% Research Paper Research papers will be 10-15 pages long with at least 8 external sources.	20% Research Paper Research papers will be 10-15 pages long with at least 8 external sources.
20% Team Project Team project includes a written research paper and 20-minute presentation.	20% Team Project Team project includes a written research paper and 20-minute presentation.
10% Individual Presentation Individual presentations will be 15 minutes in length and require a minimum of 5 external resources.	10% Individual Presentation Individual presentations will be 15 minutes in length and require a minimum of 5 external resources.
up to 5% Extra Credit is available <ul style="list-style-type: none"><li>• Attendance at a College of Business speaker event</li><li>• Attendance at a career event</li></ul>	up to 5% Extra Credit is available <ul style="list-style-type: none"><li>• Additional homework assignment</li><li>• Rewrite a paper</li><li>• Repeat a quiz/exam</li></ul>

**Appendix B – Business Course Syllabus without Extra Credit  
Assessment Criteria for Required Business Course**

<u>Option 1</u>	<u>Option 2</u>
10% Attendance and Participation	10% Attendance and Participation
10% Quizzes Weekly quizzes will consist of multiple choice and true/false questions.	10% Quizzes Weekly quizzes will consist of multiple choice and true/false questions.
20% Exams Exams include multiple choice, true/false and short answer questions.	30% Exams Exams include multiple choice, true/false and short answer questions.
20% Research Paper Research papers will be 10-15 pages long with at least 8 external sources.	20% Research Paper Research papers will be 10-15 pages long with at least 8 external sources.
30% Team Project Team project includes a written research paper and 20-minute presentation.	20% Team Project Team project includes a written research paper and 20-minute presentation.
10% Individual Presentation Individual presentations will be 15 minutes in length and require a minimum of 5 external resources.	10% Individual Presentation Individual presentations will be 15 minutes in length and require a minimum of 5 external resources.

## **ALL ABOARD FOR HOUSTON, DALLAS, OR MAYBE NOWHERE**

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### ***ABSTRACT***

Imagine a Texas where Dallas and Houston are merely 90 minutes apart. But wait, you do not even have to get behind the wheel leaving you free to work, relax or socialize the whole way at 200 miles per hour. This is the vision that Texas Central Partners, LLC is selling. It is an intriguing proposition at first glance however opponents of the project want to put the brakes on it altogether in the name of individual property rights.

**Key Words:** Property rights, eminent domain, Federal and State Constitutions, Delegation of Powers.

### **INTRODUCTION**

In 2009, Lone Star High Speed Rail, LLC, the predecessor of Texas Central was formed. Then in 2012, Texas Central Railroad Partners, Inc. and Texas Central Partners, LLC (collectively referred to as Texas Central) were formed in 2010 (Martin). Texas Central Railroad Partners' role is to develop the line and Texas Central Railway's role is to advocate for building the line. Their stated purpose is to build a wholly private rail line connecting Dallas and Houston with high speed bullet trains, making the 240 mile trip with trains departing every half hour during peak travel times and making a single stop along the way near Roan's Prairie, in Grimes County (The Project). The company's ability to do so is dependent upon whether it has the right to condemn property belonging to unwilling property owners along the route using eminent domain.

The power of eminent domain is inherent in the sovereign powers of both the Federal and Texas Constitutions, however both the State and Federal governments may delegate their power to private entities. In Texas, these delegates include (among others) cities, towns, colleges, school districts, pipeline companies, utility companies and railroads (Leopold).

Legally speaking, the issue turns on the meaning of the phrase "operating a railroad" as used in the Texas Transportation Code. If Texas Central is "operating a railroad", it enjoys the full power of eminent domain equivalent to that of the State itself. However, if it is merely an entity

formed in the hope of operating a railroad in the future, it has no eminent domain power whatsoever. In this framework, it is no surprise that Texas Central takes the position that its current day-to-day activities, as it prepares to construct and operate a rail line, constitutes “operating a railway.” Equally apparent should be the opposition’s position that “operating a railroad” requires a currently existing railway with trains running on it.

The exercise of eminent domain is rarely a popular topic but is even less popular in a state like Texas which maintains strong ties to its agrarian past and present. Texas Central’s plan is exceptionally unpopular among the communities that lie along its proposed route for several reasons. The possibility that anyone could form a business on Monday with the intention to operate a railway, and on Tuesday begin the eminent domain process to take private property is an unsettling prospect. This is only amplified by the fact that over ninety-five (95) percent of the real property in the Texas is privately owned (Lopez, et., al). This is not the only aspect of Texas Central’s Plan that its detractors and opponents find concerning.

First, Texas Central is a business entity backed (or is at least alleged to be backed) by international business interests. Second, the company has acknowledged that it lacks the funding to carry the project to completion. Finally, no matter how convenient it is for people traveling between Houston and Dallas, the planned line only has one stop in between located in remote Roan’s Prairie. As a direct consequence, a majority of landowners whose land would be burdened by the railway, as well as the communities along the route, cannot make any practical use of it.

There is a great deal at stake for all parties involved in this struggle. Texas Central has associated and or retained a retired Texas Supreme Court Justice who has added his voice to the mix by essentially rendering his own advisory opinion on the matter (Enoch). Landowners along the proposed route are to a large degree represented by Texans Against High Speed Rail, a non-profit corporation devoted to “defeating” Texas Central.

To date two challenges Texas Central’s self-proclaimed imminent domain powers have been litigated to a conclusion at the trial court level. One in Harris County resulted in a win for Texas Central, but only because the landowner failed to follow through with their suit resulting in a default judgment. The second, and far more important case, involved a challenge in Leon County resulting in a defeat for Texas Central in the form of a judicial ruling that the company is not “operating a railroad” and thus has no powers of imminent domain (Matthews).

## **ABOUT TEXAS CENTRAL RAILWAY'S PLAN**

Texas Central's plan is to connect Dallas and Houston by high-speed rail, reducing a one-way trip down to ninety (90) minutes using train technology already being used in other countries (Safety and Security). Texas Central has doggedly asserted that it will accomplish this feat without a drop of public funding despite an estimated cost of more than twelve (12) billion dollars (Learn The Facts).

The technology portion of Texas Central's plan appears sound. It has partnered with Central Japanese Railway (CJR), the company responsible for the technology utilized by the Shinkansen bullet train system in Japan. The Shinkansen has operated since 1964 and has never suffered a wreck or crash resulting in passenger injury or fatality (Learn The Facts). The trains themselves are not the source of much concern. What concerns many critics is the role CJR and the Japanese Bank for International Cooperation will have in the operation of Texas Central should the rail-line actually get built. To date, Texas Central's largest source of financing is a \$300 million loan backed by Japanese interests announced in late 2018. This loan dwarfs the roughly \$75 million in capital raised by Texas Central from private investors. Among those Japanese interests is the state-owned Bank of International Cooperation (JBIC). JBIC describes itself as a "policy-based financial institution" with four goals:

- 1) Promoting the overseas development and securement of resources which are important for Japan;
- 2) Maintaining and improving the international competitiveness of Japanese industries;
- 3) Promoting the overseas business having the purpose of preserving the global environment; and
- 4) Preventing disruptions to international financial order or taking appropriate measures with respect to damages caused by such disruptions (Japan Bank for International Cooperation).

Goal number two (2) is where Texas Central comes in. Pursuant to this goal, JBIC provides financing to buyers of Japanese machinery for infrastructure projects outside of Japan (Japan Bank for International Cooperation).

The question hovering over JBIC's massive loan to Texas Central is whether it was made because the bank believes in Texas Central's project or if it was made just to create a market for CJR's trains.

## **THE EMINENT DOMAIN PROCESS IN TEXAS**

Eminent domain is the power of the government to take private property belonging to citizens for public use. Both the United States and Texas

Constitutions limit this power and require payment of adequate compensation to the party suffering the taking (The Texas Constitution, Article 1, § 17). When an entity actually uses its power of eminent domain it is commonly referred to as condemnation.

The exercise of eminent domain in Texas is controlled by Title 4, Chapter 21 of the Texas Property Code. The code lays out a rather straightforward standard procedure applicable in all cases (Texas Property Code Title 4, Section 21.011). The process itself is not complicated.

First, the entity (assuming it has eminent domain authority) attempting to acquire real property must make a “bona fide offer” to purchase the property at private sale (Texas Property Code Title 4, Section 21.013). An offer is “bona fide” if it meets certain statutory requirements. These include: 1) an opening offer made in writing, 2) a written appraisal from a certified appraiser of the property’s value and any damages to the owner’s remaining property, 3) followed by a final offer made in writing at least thirty (30) days after the opening offer was made. Said final offer must be equal to or in excess of the appraisal and allow the property owner at least fourteen (14) days to make a decision (Texas Property Code Title 4, Section 21.013 (b)).

Second, if the parties cannot reach an agreement the entity seeking to acquire the property may begin condemnation proceedings by filing a petition in either the state judicial district court or county court at law (Texas Property Code Title 4, Section 21.001). However, district courts are empowered to decide any issue relating to a condemnation case, including whether the entity seeking to exercise eminent domain has the authority to do so in any suit involving a claim for property, damages to property occupied under eminent domain, or for an injunction to prevent a party from entering or using the property under eminent domain (Texas Property Code Title 4, Section 21.003). Venue in a condemnation case is proper in the county where the property owner resides if they live in any county where the property at issue is located or in any county where part of the property is located if the owner does not reside in a county the property is located in (Texas Property Code Title 4, Section 21.013 (a)).

Finally, the presiding court must appoint three (3) special commissioners who are disinterested real property owners residing in the county for the purpose of assessing the damages that will be suffered by the property owner when condemnation is complete. These special commissioners are tasked with assessing the amount of damages fairly and impartially and are armed with the power to compel witnesses, punish contempt, and administer oaths (Texas Property Code Title 4, Section 21.014). The special commissioners must hold a hearing, calculate the damages that will be

suffered, and file their findings with the presiding court. If no party files a timely objection to the commissioner's findings, the court will adopt those findings as the court's judgment and issue any process necessary to see the judgment enforced (Texas Property Code Title 4, Section 21.061). If any party does lodge a timely objection then the case proceeds to trial and is treated like any other civil cause of action (Texas Property Code Title 4, Section 21.018). It is only at this stage that a landowner resisting condemnation may actually raise some very important issues, namely whether the entity attempting to condemn their property has the right to do so and whether the use the property is intended for is truly a "public use (Texas Property Code Title 4, Section 21.003; Dowell)."

### **PUBLIC USE**

Both the Texas Constitution and the United States Constitution limit the exercise of eminent domain to situations when the property taken shall be for public use. However, public use is defined very loosely.

Federally, "public use" has been defined by the U.S. Supreme Court so broadly that even the taking of private property for the purpose of economic development is allowable even when the developed or re-developed property is not open to the public. Essentially, the only limits on "public use" recognized by the Supreme Court are in the following situations. First, a purely private taking, the taking of an owner's property purely for the benefit of another private party would not pass constitutional scrutiny. Second, a taking merely covered by the pretext of a public purpose but done with the intent to benefit a private party would also not satisfy the public use requirement (*Kelo v. City of New London*, 545 U.S. 469). Any doubt about the breath of the full extent of the concept under federal law should have died with the Supreme Court's now infamous opinion in *Kelo v. The City of New London*.

In *Kelo*, the Court held that a plan by the city of New London, Connecticut to take the real property owned by individuals in a particular area of town and transfer it to private parties who would then build tax money generating improvements such as hotels, restaurants, offices, and newer, more expensive homes, satisfied the public use requirement, allowing the exercise of eminent domain. The Court was not particularly bothered that huge portions of this ninety (90) acre development would never be made open to the public. The development was intended to create jobs and raise the property tax base by "endeavoring to coordinate a variety of commercial, residential, and recreational uses of land, with the hope that they will form a whole greater than the sum of its parts" and as such is for a public use (*Kelo v. City of New London*, 545 U.S. 469).

The Supreme Court's *Kelo* opinion left no doubt that any private citizen's property could be taken via eminent domain and given to another private entity under the guise of economic development. The effect of this decision reverberates in the Texas Central situation because there is no constitutional barrier between the wholly privately owned company exercising eminent domain powers, leaving the statutory construction of the Texas Transportation Code as the only impediment to the project's progress.

### **ENTITIES WITH EMINENT DOMAIN POWERS IN TEXAS**

Among the entities to whom the power of eminent domain has been delegated to by the Texas legislator are railroad companies. However, the exact wording of the statute giving railroads this power is at the heart of the current struggle between Texas Central and landowners.

The Texas Transportation Code grants imminent domain powers to all railroad companies incorporated before September 1, 2007, and all other legal entities *operating a railroad*, as well as interurban electric railways (Texas Transportation Code § 112.002 & 131.011-.012). However, the statute referring to interurban railroads refers back to the "rights and powers granted to a railroad company."

Texas Central was not formed until 2010 meaning that if it has imminent domain powers it is because it is *operating a railroad* and which has been the focus of both of the challenges to Texas Central's agenda in the courtroom.

### **STATUTORY CONSTRUCTION**

Statutory construction is at best an adventure in Texas and at its worst a family vacation to Hell and parts unknown. Every court's goal in the statutory construction realm is to discern the legislative intent behind the statute's adoption. Courts have several tools available to assist them. These include the traditional canons of construction and two statutory schemes for construction. However, it is vital to understand that none of these tools are mandatory or in any way force a particular court to use a particular method to reach its decision (Beal).

Ground zero for any statutory construction puzzle begins with the words themselves (*Boykin v. State*, 818 S.W.2d 782). This is "because our state constitution assigns the law *making* function to the Legislature while assigning the law *interpreting* function to the Judiciary." (*Boykin v. State*, 818 S.W.2d 785) Beginning with the actual wording of the statute being construed is also done out of respect for the process whereby those words became the law and in recognition that the legislators are entitled to having courts that follow the laws as they were written (*Boykin v. State*, 818 S.W.2d 785). As a result, when the literal text of a statute is clear and free from ambiguity, courts give its literal meaning effect (*Smith v. State*, 789 S.W.2d

590, 592). Stated another way, when a statute is understandable and unambiguous, the Legislature should be given the benefit of the doubt that it knew what it was doing when the statute was adopted. Accordingly, when a statute is clear and unambiguous, a court has no business making alterations to it (*Coit. v. State*, 808 S.W.2d 473, 475; *Ex Parte Davis*, 412 S.W. 2d 46, 52). These extends to the canons themselves: “if a statute is unambiguous, rules of construction or other extrinsic aids cannot be used to create ambiguity.” (*Fitzgerald v. Advanced Spine*, 996 S.W.2d 864, 866). As noted above, statutory construction can be an adventure which is mainly due to the many contradictions between the various canons of construction. The common-law canons include: a presumption that the legislature intended for its words to be given their ordinary meaning; a requirement that a statute be construed as a whole and not considered piece-meal; a presumption that the legislature intended the statute to read as-written, i.e. a “court should not read a word, phrase, or sentence to be useless or a nullity.” (Beal). Muddying the waters further are the Code Construction Act and Construction of Laws Act (Tex.Gov.Code § 311, 312). These acts are surely some of the strangest to ever come out of Austin. They are rules allegedly codifying how a statutory construction inquiry should be conducted but in reality have been determined to be merely guidelines with no more power than the traditional canons described above (*Thiel v. Harris County Democratic Exec. Comm.*, 534 S.W.2d 891, 894). Among these statutory canons is section 311.012, stating that construing a statute requires a court to read words in the present or past tenses to also include the future tense (Tex.Gov.Code § 311.012).

Section 311.012 is at the heart of Texas Central’s argument that it acquired all of the powers of imminent domain when it was formed because “operating a railroad” in the Transportation Code includes the intention to operate a railroad at some point in the future *See Defendant and Intervenor’s Motion for Partial Summary Judgment.*) . Interestingly enough, the Supreme Court of Texas has set some interesting statutory construction precedents related solely to eminent domain cases. Over sixty (60) years ago the Court held that

The protection which the law has erected for the benefit of the citizen as against the power of the exercise of the power of condemnation should be liberally construed. Stated otherwise, the power of eminent domain must be strictly construed against those corporations and arms of the State vested therewith (*Coastal Gas States Producing v. J. E Pate, et al*, 309 S.W.2d 828, 831).

As recently as 2012, the Supreme Court reiterated this position on construing statutes related to eminent domain and appears to have even extended it by stating that when there are any doubts as to the scope of an entity's statutorily granted eminent domain powers those doubts must be construed in the landowner's favor (*Texas Rice Land Partners, LTD. V. Denbury Green Pipeline-Texas, LLC*, 363 S.W.3d 192, 198).

### **HARRIS COUNTY CASE**

To be clear, more than one case in Harris County (and in other counties, especially Ellis County) has involved Texas Central and the question of eminent domain, however, to date, only one of those has ended with a ruling rendered by the presiding court.

Texas Central sued August S. Lander, a Harris County land owner, in the 334<sup>th</sup> District Court of Harris County seeking access to his property to conduct surveys and conduct other inspections or examinations related to making routing decisions for Texas Central's project. On January 10<sup>th</sup>, 2017, Judge Steven Kirkland signed default judgment in favor of Texas Central when the defendant, Lander, did not appear in court. Judge Kirkland's judgment stated that Texas Central was a railroad company with the powers of eminent domain (Martin).

However this judgment, although a victory, is practically worthless in terms of precedential value because of its default nature.

### **LEON COUNTY CASE**

In February 2019, State District Judge Deborah Evans presiding over the 87<sup>th</sup> District Court ruled that Central was not empowered to use eminent domain because it is not "operating a railroad" and is not an "interurban electric railway (Staff, Begley)."

The case began when Leon County landowners James and Barbara Miles resisted Texas Central's demand for access to their property in order to survey the land for its potential acquisition and use for the project. With James as the named plaintiff they sued Texas Central seeking a declaratory judgment from the court that Texas Central does not have eminent domain powers because it is not operating a railroad. Eventually, Texas Central filed a motion for summary judgment (followed by an amended motion) requesting the court find that there was no genuine issue of fact as to whether it was indeed operating a railroad as contemplated by the Transportation Code. In essence, Texas Central sought a declaration that it is operating a railroad. In its motion as well as its summary judgment evidence, Texas Central conceded that it did not own any locomotives, passenger cars, any depots, or even any tracks (*Defendant and Intervenor's Amended Motion For Summary Judgment*" at page 15). Texas Central's

arguments were rooted in the Code Construction Act's section regarding word tenses and that according it was "crystal clear" that it is actively operating a railroad (*Defendant and Intervenor's Amended Motion For Summary Judgment*" at page 15).

The Miles' counsel pointed out, in their response to Texas Central's Amended Motion for Summary Judgment, that Texas Central's premise that it acquired eminent domain powers and the right to condemn private property just by incorporating with the intent to operate a railroad one day is very chilling to property owners (*Defendant and Intervenor's Amended Motion For Summary Judgment*" at page 15).

Judge Evans disagreed with Texas Central's position and issued a short ruling that Texas Central was neither operating a railroad nor an interurban electric railway. When one solely relies on the Code Construction Act, it might seem an illogical decision. However, when viewed with the larger lenses of the common-law canons of statutory construction, the statutory canons, and the rules of construction unique to eminent domain statutes it is easier to both appreciate the monumental task the Judge was tasked with as well as how she reached her ultimate decision.

Judge Evans' ruling is not effective only in Leon County. The 87<sup>th</sup> Judicial District also includes Freestone and Limestone counties each of which lies along the planned route for Texas Central's project. Very roughly speaking, at this moment one-fourth of the planned 240 mile route has been effectively rendered a no-eminent domain zone by Judge Evans' ruling (The Texas Bullet Train).

## **FUTURE AND CONCLUSION**

With so much on the line for both sides this struggle over the meaning of "operating a railroad" is not over. Both sides have vowed to continue the struggle and see it through to the end.

The appellate process will involve a *de novo* review of the statute at each appellate level (*Tex. Dep't of Transp. v. Needham*, 82 S.W.3d 314, 318; *Walker v. Packer*, 827 S.W.2d 833, 840; *Tex. Dep't of Pub. Safety v. Loeb*, 149 S.W.3d 741, 743; *Travel Music of San Antonio, Inc. v. Douglas*). This will entail another round of statutory construction subject to the same guiding but non-mandatory principles Judge Evans undoubtedly used to reach her decision. And then, yet another round of the same should the losing party choose to appeal all the way to the Texas Supreme Court (*Tex. Dep't of Transp. v. Needham*, 82 S.W.3d 314, 318; *Walker v. Packer*, 827 S.W.2d 833, 840; *Tex. Dep't of Pub. Safety v. Loeb*, 149 S.W.3d 741, 743; *Travel Music of San Antonio, Inc. v. Douglas*). Eventually, the case might make its way to the United States Supreme Court.

Whatever the ultimate outcome may be this issue is far from being decided with any finality and Judge Evans' ruling is likely only the beginning rather than the end of this battle. With so much at stake for Texas Central and its investors, as well as the potential danger to every Texan's private property rights this issue will bear watching over the coming years.

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## PERCEPTIONS OF ONLINE PRIVACY

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### ABSTRACT

Privacy is a topic of growing concern in the age of social media and the Internet. If organizations and educators are to maintain constituents' trust, they must understand individuals' perceptions of privacy and work to meet these expectations. This study assesses privacy perceptions using a survey about a genealogy website that makes substantial personal information available online. As such, it serves as a good test case for users' views of online privacy. The results, based on almost 200 responses, revealed that individuals have discrepant views of online privacy. The effects of prior experience, student level, major, grade point average, and gender on privacy perceptions were assessed. Implications of the findings are examined.

Keywords: Privacy Perceptions, Online Privacy, Ethics, Survey

### INTRODUCTION

According to Westin (1967), privacy is "the claim of an individual to determine what information about himself or herself should be known to others." BusinessDictionary.com (2019) defines "privacy" as "the right to be free from secret surveillance and to determine whether, when, how, and to whom one's personal or organizational information is to be revealed." Fundamentally, privacy involves the ability of an individual to control the disclosure and use of one's personal information. Mason (1986) identified four ethical issues in the information age: privacy, accuracy, property, and accessibility. Mason cautioned that there is a threat to privacy from the growth of information technology with "its enhanced capacity for surveillance, communication, computation, storage, and retrieval" (Mason, 1986, p. 5). Decades and many technological changes later, Mason's words ring truer than ever. Not only do databases, email, surveillance, and global positioning systems impinge on privacy, but so too do social media and the Internet of Things. For example, in 2018, Cambridge Analytica (C.A.) harvested the profile data from millions of Facebook users without their knowledge or consent, enabling the company to create psychological profiles and use this information for political advertising purposes. The Internet of Things also raises privacy concerns. Voice-assistant devices, for example, may eavesdrop on private conversations and execute unexpected actions. A family experienced their Amazon Echo device recording a private conversation and sending it to a random person on

their contact list (Kim, 2018). The FTC has also cited privacy and security dangers related to smart meters, connected cars, and healthcare devices (Pindrop, 2018).

Surveys by the Pew Research Center indicate that privacy is important to many Americans, and they are concerned that their privacy is not adequately protected. A 2015 Pew study found that 93% of US adults said that being in control of *who* gets information about them is important, and 90% of these respondents said that controlling *what* information is collected about them is important (Madden & Rainie, 2015). Another Pew survey found that 91% of Americans agreed that people have lost control over how personal information is collected and used by companies (Rainie, 2018). Turow, Hennessy & Draper (2015) point out that people often make a tradeoff in gaining access to a platform in exchange for providing personal information not willingly, but because of feeling resigned to not being able to change these practices. The perceptions of constituents about how much an organization protects their personal data affects trust. If people lack trust in a company's privacy practices, they may cease doing business with the organization. Thus, shortly after the Facebook incident, a Pew survey found that 25% of Facebook users had deleted their accounts (Perrin, 2018).

Privacy is also a relevant concern in higher education. Spicer (2020) points out that recent laws that give people greater control over their personal data such as the General Data Protection Regulation (GDPR) enacted by the European Union in 2018, state privacy laws such as the California Consumer Privacy Act, and the Maryland Higher Education Data Privacy Act of 2020 can have important impacts on higher education. For example, an online course may be composed of students from Europe and different U.S. states and these users might have varying expectations about how their personal information will be managed according to the personal privacy laws of their country or state (Spicer, 2020).

The compromise of Personal Identifiable Information (PII), which laws such as the GDPR are designed to protect against, can lead to social, material, or psychological damage. One vehicle for the dissemination of PII is genealogical websites, such as Heritage.com, Familynowtree.com, and Ancestry.com which gather data from various public databases to build profiles. Our study focuses on online privacy perceptions based on responses to survey questions about the genealogy website, familytreenow.com. While other studies have considered online privacy, they have primarily been based on abstract or hypothetical questions about privacy. In contrast, this study involves participants answering questions about online privacy in the context of the practices of a real-life website. This approach is consistent with communication and instructional theory, that "concreteness" is a crucial element of effective communication that creates a more realistic assessment of a situation by people (Clark & Paivio, 1991; Prabu, 1998). That is, the concrete expression of an idea in realistic terms may enhance communication beyond the mere presentation of an abstract or hypothetical concept. Thus, this study takes a different approach to measure privacy perceptions and aims to be more "concrete."

Another potential benefit of this study is that it utilizes a “mixed methods” approach (cf. Creswell, 2014). Most related studies have used a quantitative approach, while this study combines quantitative and qualitative data by including an open-ended question to allow respondents to contribute their thoughts. Generating this information is particularly important in an exploratory study, where research issues are still evolving.

## LITERATURE REVIEW

The research used to derive the hypotheses for this study includes findings from online privacy studies where available. Where not available, relevant research findings or models are presented from the broader privacy or ethics literature, since as noted by Mason (1986), privacy is one of the main issues in information systems ethics. This study considers differences in online privacy perceptions based on prior experience, student level, major, grade point average, and gender.

Certain ethical decision-making models (e.g., Bommer et al., 1987) recognize “life experience” as a factor that may affect ethical decision making. That is, prior experience with something may increase its salience and affect a person’s decision making. For example, Thaler and Sunstein (2009, p. 25) point out that, “if you have personally experienced a serious earthquake, you’re more likely to believe that an earthquake is likely than if you read about it in a weekly magazine.” This notion, applied to the current study, means that if a person has experience being a victim of identity theft or a data breach, he/she would be more likely to have a greater level of concern about online privacy. According to Li (2011, p. 461), several studies have shown that “previous experience with information misuse and disclosure... knowledge of media coverage on information misuse... and previous experience with online privacy invasion... all have a positive impact on privacy concerns.” Thus, the first hypothesis of this study is:

H1: Participants who have been the victims of identity theft or a data breach will demonstrate greater online privacy concerns than those who have not.

This study involved students at different experience levels: undergraduate and graduate students and Information Systems majors and non-IS majors. Graduate students, by definition, have more educational experience than undergraduates. It might also be expected that IS majors would have more academic experience with privacy than non-IS majors, since this topic is incorporated into the IS curriculum. For these reasons, it may be expected that graduate students and IS majors would be more sensitive to online privacy than undergraduates and non-IS majors. According to O’Fallon & Butterfield (2005, p. 387), ethics research “generally indicates that more education, employment, or work experience is positively related to ethical decision-making.” In terms of privacy, a study by Sheehan (2002) found that persons with higher levels of education were more concerned with their online privacy than persons with less education. In addition, Kezer, Sevi, Cemalcilar, & Baruh (2016) found that mature adults had greater privacy concerns than adolescents. Similarly, it might be expected that graduate students who are

typically older and more emotionally mature would be more concerned with privacy than undergraduates.. If a difference were to be observed in this study, it would be expected that those with greater educational experience will display a higher degree of online privacy concerns than those with less educational experience. Thus, hypotheses three and four are:

H2: Graduate students will demonstrate greater online privacy concerns than undergraduate students.

H3: Information Systems Majors will demonstrate greater online privacy concerns than Non-Information Systems Majors.

Some classic models of ethical decision making such as Ferrell and Gresham (1985) recognize “knowledge” as a factor that may impact ethical decision making. For this reason, companies sometimes conduct ethical training for their employees to increase their awareness and knowledge of ethical issues. Presumably, the more knowledge a person has about a topic, the more awareness and sensitivity he/she has about it. In their study, Park, Cambell, & Kwak (2012) found that knowledge played an important role in directly predicting privacy protection online. There have been recent calls to study the role of privacy knowledge and privacy concern in greater detail (Brough & Martin, 2020). Since students with a higher GPA have attained a higher degree of academic achievement, they might be presumed to have greater knowledge of online privacy concerns than students with lower GPAs. Thus, hypothesis four is:

H4: Students with higher grade point averages will demonstrate greater online privacy concerns than students with lower grade point averages.

Finally, some ethical models (e.g., McDevitt et al., 2006) recognize gender as a factor that may affect ethical decision making. However, the research results about gender are mixed with respect to privacy concerns (Ismail & Mohamed, 2017; Yao, Rice & Wallis, 2007) and ethical decision making (O’Fallon & Butterfield, 2005; Loe et al., 2000). Among studies that have found gender differences, females have usually been shown to behave more ethically than males (Chen, Ni, & Tong, 2016; Kennedy, Kray, & Ku, 2017) or to have a greater ethical sensitivity than males (O’Fallon & Butterfield, 2005; Loe et al., 2000; Youn, 2009). Gender has also been found to play a significant role in information disclosure on social media, with females being more reluctant to disclose personal information than males (Walton & Rice, 2013). A similar finding was reported for a more recent meta-analysis of social media studies (Tifferet, 2019). Thus, if gender effects were to be observed in this study, they would likely be in the direction of females having greater privacy concerns than males. Thus, hypothesis five is:

H5: Female participants will demonstrate greater online privacy concerns than male participants.

## METHODOLOGY

This study assessed individuals’ online privacy perceptions using familytreenow.com. This genealogy website provides users with the ability to

search for people and to trace their family tree. Unlike other sites, *familytreenow.com* provides access to information free of charge, and it does not require users to even register at its site. This website gained notoriety in a 2017 *Washington Post* article (Ohlheiser, 2017), which was followed by over 60 news stories about the site within a few weeks which were mostly critical of its practices (Stanton, 2017). A pilot study by the authors of *familytreenow.com* suggested that this website was controversial, and that it would provide a sound basis to test inter-group privacy differences (Cappel & Shah, 2017).

At the home page of *familytreenow.com*, a user can search for a person by entering their first and last name and state. The website returns a list of matching entries and the user can “drill down” to the details for a specific person. The detailed entry shows a person’s first and last name, year of birth, age and “possible relatives,” i.e., the complete name, birth year, and age of “immediate family members, current & previous spouses, stepparents, and current & previous in-laws.” It also displays the person’s “possible associates,” i.e., the complete name, birth year, and age of “current & past roommates and second level relatives (relatives of in-laws, etc.”); their current and past addresses (that may go back more than 20 years); and “all current and previously known phone numbers for the subject.”

Since it was expected that most subjects were not aware of *familytreenow.com*, and some knowledge of this website was necessary to complete the survey, the researchers provided a short slide presentation about the website prior to survey administration. This introduction included several screen-captures of what a user would encounter during a typical session. The presentation identified the purpose of the website, its functions, how to use it, and it displayed information the website provided in response to a sample search with selected personal information blocked out. The researchers followed a script in this presentation and made a conscientious effort to present this site in a neutral manner to prevent bias. Then the participants completed the survey. The first item asked subjects whether they had ever heard of this website prior to this session. The next seven items assessed participants’ perceptions about privacy-related issues about this website using a five-point Likert scale from “strongly agree” to “strongly disagree,” with a mid-point of “neutral.” The order of “positive items” that were supportive of this website’s practices were rotated with “negative items” that were not supportive to avoid respondent bias. The survey also contained an open-ended item that allowed respondents to express their comments. Thus, a “mixed methods” research approach was used as described by Creswell (2014) since it contained both closed-ended, quantitative items as well as an open-ended, qualitative item. Demographic items were included for student level, major, GPA, gender, and whether the subject had ever been the victim of identity theft or a data breach where their personal information was disclosed or made available to others.

Data were collected from three sections of a sophomore-level, business core course in Information Systems; three sections of upper-level IS courses in Systems

Analysis & Design and Visual Studio taken mainly by IS majors and minors; and two sections of graduate courses in Systems Analysis & Design and Enterprise Software. There were 192 total survey responses, which represents a participation rate of more than 96% of the total students enrolled in these courses. Table 1 summarizes the participants' characteristics. As indicated, 24% of the sample reported they had been a victim of identity theft or data breach, compared to 76% that were not. The participants consisted of about 20% graduate students and 80% undergraduates. Over two-thirds of the participants (37%) were Information Systems majors, and 63% were non-IS majors. Their median grade point average was 3.475. By gender, the sample was 37% female and 63% male.

**Table 1. Participant Profile**

		<b>Number</b>	<b>Percent</b>
<b>Identity Theft/Data Breach</b>	Yes	46	24.2%
<b>Victim</b>	No	144	75.8%
		<hr/> 190	
<b>Student Level</b>	Graduate	39	20.3%
	Undergraduate	153	79.7%
		<hr/> 192	
<b>Major</b>	Information Systems Major	71	37.4%
	Non-IS Major	119	62.6%
		<hr/> 190	
<b>Grade Point Average</b>	Above median	91	50.0%
	Below median	91	50.0%
	(Median 3.475)	<hr/> 182	
<b>Gender</b>	Female	70	37.0%
	Male	119	63.0%
		<hr/> 189	

Some items sum to less than 192, due to some non-responses.

## RESULTS

The findings of this study are presented in Table 2. As shown in the second column, there was consistent support for hypothesis one that those participants who have been victims of identity theft or a data breach expressed greater online privacy concerns, i.e., they were less supportive of this website's practices, than those who have not. This is indicated by significantly higher means for all eight items in the table. There was partial support for the second, third and fourth hypotheses that involved student classification level, major, and grade point average, respectively. For hypothesis two, five of eight measures indicated that graduate students demonstrated greater online privacy concerns than undergraduates. For hypothesis three, IS majors showed greater online privacy concerns for four of eight measures than other majors. For hypothesis four, for four of eight measures, those

**Table 2. Results (Mean Responses)**

Survey items	H1: Identity theft or Data breach victim (supported) Yes No t			H2: Student level (partially supported) Grad UG t			H3: Major (partially supported) IS Oth t			H4: GPA (partially supported) Abv Bel t			H5: Gender (not supported) F M t		
	3.20	2.72	2.32 *	3.05	2.78	1.27	2.84	2.83	0.09	2.97	2.68	1.80	2.84	2.84	0.00
I have no problem with this website making this information available. (rc)	2.82	2.33	2.82 **	3.08	2.29	4.56 ***	2.67	2.32	2.44 **	2.59	2.24	2.65 **	2.42	2.48	-0.42
I think that what this website is doing is illegal.	3.48	3.12	2.07 *	3.59	3.11	2.99 **	3.30	3.15	0.94	3.35	3.03	2.11 *	3.10	3.29	-1.22
The practices of this website are normal in the age of the Internet where there is no privacy. (rc)	2.96	2.51	2.61 **	2.71	2.59	0.67	2.66	2.60	0.42	2.64	2.52	0.96	2.68	2.59	0.65
If I saw my personal information on this website, I would try to remove it if I knew how.	3.74	3.15	2.96 **	3.69	3.20	2.45 **	3.52	3.17	2.05 *	3.24	3.27	0.19	3.09	3.44	-1.97 *
The information this website makes available could be misused.	4.28	4.06	1.74 *	4.08	4.12	-0.29	4.07	4.13	-0.53	4.12	4.11	0.10	4.13	4.11	0.19
I think this website should be allowed to operate as it currently does. (rc)	3.24	2.83	2.39 **	3.38	2.82	3.02 **	3.15	2.80	2.41 **	3.05	2.75	2.26 *	2.86	2.99	-0.88
Summated measure: for all the items above	3.89	2.96	5.87 ***	3.37	2.99	5.11 ***	3.18	3.00	2.76 **	2.99	2.82	2.94 **	3.02	3.11	-1.35

The higher the mean, the *less* supportive were respondents' perceptions of this website's practices.  
(rc) indicates a reverse coded item. \* p < .05; \*\* p < .01; \*\*\* p < .001

participants with higher GPAs showed significantly greater online privacy concerns than those with lower GPAs. Finally, there was no support for the fifth hypothesis that females would exhibit greater online privacy concerns than males. Seven of the eight measures showed no significance, and the other item indicated significance in the opposite direction.

The open-ended item produced 71 comments, with more observations being non-supportive of this website's practices than supportive. The most common

criticisms of this website were that: it is seen as an invasion of privacy; it gives users a creepy feeling; its information could be used for stalking, harassment or identity theft; it should not provide phone numbers or addresses; and users should be required to register at the site and/or pay for the information the website provides. In contrast, other subjects stated that they had no concern that the website makes this information available, that its information is derived from public sources, and that other websites provide similar information.

## **ANALYSIS**

While this study used an alternative approach to obtain survey data based on a real-life website that raised privacy issues, the results obtained are largely consistent with privacy studies that have used more hypothetical measures (e.g., Yao et al., 2007; Sheehan, 2002) and with research review articles that have synthesized prior research (Li, 2011; O'Fallon & Butterfield, 2005; Loe et al., 2000). Prior experience was the most salient factor for making a difference in online privacy perceptions. Participants who had been the victims of identity theft or a data breach showed significantly more privacy concerns across every survey measure in Table 2. In contrast, student level, major, and GPA showed significance for about half of the eight measures. Finally, gender was not significant across nearly all measures.

Possible future research directions suggested by this study include utilizing a sample of older adults or conducting a cross-cultural study. This study involved college students who have grown up using social media and may be accustomed to their personal data being online. In contrast, older adults with a different life experience may have substantially different views of privacy. Thus, replicating this study with older adults is relevant. Also, a cross-cultural study of online privacy appears fruitful. Europe has led the way in privacy legislation since Europeans have a tradition of being more concerned with privacy than Americans. Thus, extending this study to another culture may produce significantly different results. There is also a need for research to clarify how individuals think about the trade-off between privacy and convenience, i.e., the dynamics involved with agreeing to gain access to online resources in return for giving up elements of personal privacy. Lastly, the open-ended responses uncovered some observations that may merit further study. For example, some subjects were concerned that familytree.com discloses addresses and phone numbers. Future research could identify which specific elements of personal data people find the most objectionable to public disclosure so that organizations can understand and protect privacy better.

Some limitations should be noted. First, the sample consisted of students at a large, public university in the Midwest United States. Their views about online privacy may not necessarily be representative of other samples in other locations. Second, this is a cross-sectional study of privacy perceptions at the time of this study. With more attention given to privacy in the media, some people's views of online privacy may evolve over time. Third, this study is based on the use of one website,

familytreenow.com. The authors encourage researchers to use other samples, locations, websites, or other contexts to assess online privacy perceptions.

## CONCLUSION

Familytreenow.com highlights the tension between online privacy and convenience, and the need for companies to consider policies about users opting in versus opting out of systems. This website serves a useful purpose for people who wish to trace their family tree. Yet, it also makes a great deal of personal information freely available to anyone who uses the site, and this raises the potential of misuse of information or even personal harm to individuals. Privacy is often noted to be inversely related to convenience, in that many people want privacy but feel the need to trade it off to use a site. A second issue is that users do not elect (opt in) to this website. Instead, their personal information is made available to anyone who searches for it unless a person opts out of this website. Yet, to opt out requires that users are first *aware* that this website exists and that they can navigate through the website's "fine print" to opt out. Interestingly, this study found that only 4% of respondents were aware of this website prior to their participation in this study. Thus, familytreenow.com serves as a good example of how individuals' personal information is made available online to anyone who wants it often without the knowledge or consent of the people whose information is disclosed. Therefore, it is understandable why most privacy legislation such as the European Union's GDPR call for an opt in approach to protect privacy.

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## POTENTIAL FRANCHISE OPPORTUNITIES FOR ENTREPRENEURS IN THE COFFEE INDUSTRY

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### ABSTRACT

One of the fastest growing franchises today is the coffee industry. As entrepreneurs decide to start a small business, franchising remains a valid option. Franchising is one of the fastest-growing market-entry strategies. According to Kerin and Hartley (2018), “more than 75,000 franchises of the U.S. firms are located in countries throughout the world” (p. 161). A franchise is an extension of an already existing brand or business that wants to expand. When a franchise is purchased, fees are paid for (1) the right to operate a business, (2) participate in a standard operating system, and (3) use the brand name and proprietary information of the franchise. In this paper, we analyze franchise fees, royalty fees, advertising fees, purchase prices, expected monthly revenues, and potential bottom line profits in the coffee industry. Dunkin, PJ’s Coffee, and Biggby Coffee represent three of the top coffee franchises.

Key words: franchise, entrepreneur, small business

### INTRODUCTION

According to Dittfurth, Gerhardt, and Joiner (2019), one reason small business owners decide to franchise is because this model allows individuals to function as if they were operating a much larger enterprise or corporation. Purchasing a franchise has many advantages to the business owner. As this paper delineates, one advantage is having a proven history of potential profits by having accurate forecast of expenses and sales. Another advantage of the franchising is a customer base who has been exposed to the products and services that business provides (Murphy, 2006). This gives the consumer a confidence and expectation that connects them to the business opportunity on day one of the establishment’s opening. The brand name recognition that the franchise carries assist the business owner with marketing and public relations (Emerson & Trautman, 2019). Not only does the business owner benefit from good public relations and name recognition but also purchasing power. Franchisers provide there franchisees the benefit of the tremendous cost savings due the volume

purchasing they are able to accomplish (Emeson, 2013). This benefits the franchise holders in keeping expenses for product and raw materials to a minimum and therefore maximizing their potential for profits.

Coffee has become one of the leading businesses in the world. One-third of the United States population drinks coffee on a daily basis. On average, American's spend \$21.32 per week on coffee alone. The projection for coffee sales is expected to grow to \$28 billion by 2021 according to Franchise Chatter. The typical coffee drinker consumes 3.13 cups pf coffee per day, according to Franchise Business Review. Several coffee franchises has become one of the top industries associated with the franchising business structure.

When one thinks about coffee, Starbucks usually comes to mind. Gerhardt, Hazen, Lewis, and Hall, (2015) discussed Starbucks as a licensed store. Licensed stores are significantly different than a franchise business. Licensed business are generally portrayed as a cheaper alternative to franchising. In 1971 Starbucks Coffee opened in Seattle Washington at Seattle's famed Pike Place Market. This establishment was not particularly noteworthy until it hired Howard Schultz in 1983. Mr. Schultz began to research in Italy coffee beans, espresso and the coffee bars from the region. He found that the community built around coffee had so much more to offer than what was America concept of coffee. Before the phenomenon of Starbucks, many Americas were drinking instant coffee like Taster's Choice or Maxwell House. The bar of quality was set very low and a reeducation of consumers was on the horizon. In 1982 Starbucks had three stores and by 1987, Starbucks had 6 stores. Howard Schultz had vision for Starbucks and it transformed the coffee industry in America. In 1987 he and a group of investors purchased the company for \$3.8 million. Today, the company's value exceeds \$100 billion. Starbucks has 21,000 stores and is located in more than 65 countries.

This paper does not address licensed businesses such as Starbucks. Instead, coffee franchises will be discussed. Kerin and Hartley (2018) defined a franchise as "a contractual arrangement between a parent company (a franchisor) and an individual or firm (a franchisee) that allows the franchisee to operate a certain type of business under an established name and according to specific rules" (p. 323). Franchising allows entrepreneurs, specifically small business owners, an opportunity to grow a successful business and minimize risk at the same time.

Comparisons of the fees, purchases, expenses, and the projected annual revenues of various fast-food restaurants have been presented with the American Society of Business and Behavioral Sciences. In the coffee

industry, a number of options exist that offer franchises. Best coffee franchises include Dunkin, PJ's Coffee, Biggby Coffee, Scooter's Coffee, Brioche Doree, Maui Wowi, Cafe2U, Caffe Bene, and Cabin Coffee Co. just to name a few. For the current analysis, Dunkin, PJ's Coffee, and Biggby Coffee have been chosen in the coffee industry franchising to determine base-line fees and expenses.

Table 1 lists key researched financial data for Dunkin, PJ's Coffee, and Biggby Coffee. This table will identify different monthly fees, royalty fees, advertising fees, purchase price, franchise fee, security fee, projected annual revenues, and lease agreements.

TABLE I BASE-LINE FEES & EXPENSES			
	Dunkin'	PJ's Coffee	Biggby Coffee
Monthly Fees			
Royalty % Fee	5.9% of sales	5% of sales	6% of sales
Advertising Fee (Marketing)	5% of sales	2% of sales	3% of sales
Purchasing Expenses			
Purchase Price	Between \$95,000 and \$1.7 M (varies)	Between \$168K - \$566K (varies)	Between \$166K – \$324K (varies)
% Down of Purchase Price	25%	25%	20%
Franchise Fee	\$40K – \$90K	\$20K – \$30K	\$26K – \$35K
Projected Annual (Revenues)	\$900,000	\$670,289	\$360,000
Lease Agreement Term	20 years	10 years	10 years

Table I depicts a summary of three best coffee franchises in the marketplace. This table presents different monthly fees, projected annual revenues, and initial purchase expenses. In order to review bottom line profits, the fees and expenses are used in this comparison analysis. In this paper, non-traditional restaurants were not considered (such as food trucks, airports, malls, etc.). Researched data will be used on the three selected coffee franchises (Table I) to define generic profit and loss (P&L) statements which allow projected bottom line profits.

Literature searches and reviews on franchising have not given substantial data for entrepreneurs to compare bottom line monthly profits. Future franchisees will be able to review the information provided and determine if a coffee franchise is their desired business.

### **DUNKIN'-- TRADITIONAL FRANCHISE-FEES & MONTHLY BOTTOM LINE**

Dunkin', formerly known as Dunkin' Donuts, is one of the most well-known franchises worldwide. Founded in 1950 by Bill Rosenberg in Quincy, MA, Dunkin' became a franchise after five years of operation. Currently, Dunkin' has over 11,300 restaurants worldwide with 8,500 restaurants in 41 states across the United States. Dunkin' is a subsidiary of Dunkin' Brands, Inc. and has over 130 years of franchise experience with Dunkin' and Baskin-Robbins. Dunkin' is known for its "America's favorite all-day, everyday stop for coffee and baked goods", according to Dunkin'Brands website.

The purchase price of a traditional Dunkin' varies depending on 1) past sales of existing restaurants or 2) total of building and opening a new restaurant. These options usually range from \$95,000 to \$1,700,000 per store. The traditional Dunkin' usually requires 25% down of the purchase price. The franchisee must also pay an initial franchise fee of \$45,000 - \$90,000 to Dunkin' for a 20 year legally binding franchise agreement. In addition to the purchase cost and franchise fee, the Dunkin' franchise must also pay ongoing monthly fees. A monthly royalty fee of 5.9% of the monthly sales/revenues for that particular store is payable to corporate Dunkin'. In addition, an ongoing advertising/marketing fee of 5% of monthly sales/revenues per store is due to corporate Dunkin'. This money is used for television, radio, internet advertising, social media, and promotions as well as other marketing expenses being supported by Dunkin'. The average annual revenue for Dunkin', as reported by Dunkin', is \$900,000. Table I outlines the expenses and fees for Dunkin'. These fees, expenses, and revenues is used to predict monthly bottom line profits for a Dunkin'. This analysis shows the monthly profits an entrepreneur could possible make if they decide to franchise.

### **PJ'S COFFEE—TRADITIONAL FRANCHISE-FEES & MONTHLY BOTTOM LINE**

PJ's Coffee was founded in New Orleans, LA, in 1978 by Phyllis Jordan. Originally known as PJ's Coffee & Tea Co.", PJ's became a franchise in 1989. In 2008, PJ's Coffee sold to Paul, Steven, and Scott Ballard, New Orleans natives. Since then, PJ's has become the go-to coffee shop for all New Orleans residents according to PJ's website. Currently, PJ's Coffee has over 100 storefronts in 14 states across the United States. PJ's Coffee is "committed to doing business in ways that are good for the planet and each other", according to PJ's Coffee website.

Using the same approach that was used in analyzing Dunkin', PJ's Coffee reviews the fees and expenses of franchising a traditional stand-alone PJ's Coffee (Table I). The purchase price of a traditional PJ's Coffee varies depending on 1) past sales of existing restaurants or 2) total of building and opening a new restaurant. These options usually range from \$158,000 to \$566,000 per store. The traditional PJ's Coffee usually requires 25% down of the purchase price. The franchisee must also pay an initial franchise fee of \$20,000 - \$30,000 to PJ's Coffee for a 10 year legally binding franchise agreement with two additional renewal terms of 10 years each. In addition to the purchase cost and franchise fee, the PJ's Coffee franchise must also pay ongoing monthly fees. A monthly royalty fee of 5% of the monthly sales/revenues for that particular store is payable to corporate PJ's Coffee. In addition, an ongoing advertising/marketing fee of 2% of monthly sales/revenues per store is due to corporate PJ's Coffee. This money is used for television, radio, internet advertising, social media, and promotions as well as other marketing expenses being supported by PJ's Coffee. The average annual revenue for PJ's Coffee, as reported by PJ's Coffee, is \$670,289. Table I outlines the expenses and fees for PJ's Coffee. These fees, expenses, and revenues is used to predict monthly bottom line profits for a PJ's Coffee. This analysis shows the monthly profits an entrepreneur could possible make if they decide to franchise.

### **BIGGBY COFFEE-FEES & MONTHLY BOTTOM LINE**

Biggby Coffee (pronounced "big B") was founded in 1995 by Bob Fish and Mary Roszel as Beaner's Coffee. In 2007-2008, the chain was officially renamed to Biggby Coffee. Currently, Biggby Coffee has over 230 locations in 8 states across the United States. Biggby Coffee embraces the motto "B happy, have fun, make friends, love people, drink great coffee", according to the Biggby Coffee website.

Using the same approach as Dunkin' and PJ's Coffee, fees and expenses of franchising a traditional style Biggby Coffee was used to determine potential bottom line profits (Table I). The purchase price of a traditional Biggby Coffee varies depending on 1) past sales of existing restaurants or 2) total of building and opening a new restaurant. These options usually range from \$166,000 to \$324,000 per store. The traditional Biggby Coffee usually requires 20% down of the purchase price. The franchisee must also pay an initial franchise fee of \$26,000 - \$35,000 to Biggby Coffee for a 10 year legally binding franchise agreement with renewal of the term of 5 years if requirements are met.

In addition to the purchase cost and franchise fee, the Biggby Coffee franchise must also pay ongoing monthly fees. A monthly royalty fee of 6% of the monthly sales/revenues for that particular store is payable to corporate Biggby Coffee. In addition, an ongoing advertising/marketing fee of 3% of monthly sales/revenues per store is due to corporate Biggby Coffee. This money is used for television, radio, internet advertising, social media, and promotions as well as other marketing expenses being supported by Biggby Coffee. The average annual revenue for PJ's Coffee, as reported by Biggby Coffee, is \$360,000. Table I outlines the expenses and fees for Biggby Coffee. These fees, expenses, and revenues is used to predict monthly bottom line profits for a Biggby Coffee. This analysis shows the monthly profits an entrepreneur could possible make if they decide to franchise.

## SUMMARY AND CONCLUSIONS

Once the various percentages of revenue required to be paid in monthly franchise (royalty fee and advertising fee), combined with the projected annual revenues that a normal franchise can expect to make (as shown in Table I), monthly bottom line profits can be formulated by a simplified profit and loss statement. It is important to note that franchise fees and revenue estimates can be obtained from the corporation's Uniform Franchise Offering Circular--- which is usually only made available to pre-qualified potential franchisees, or they can usually be found on most corporate websites. An entrepreneur who is interested in a potential franchisee can use this information to determine the monthly profit (or loss). This paper did not go into depth concerning the actual costs of purchasing each franchise due to the variance from store to store. In addition, the negotiated sale price of an existing restaurant or the cost of a new build would need to be included in the cost.

When looking at the sample of coffee franchises such as Dunkin', PJ's Coffee, and Biggby Coffee, numerous similarities and some differences are seen in each. The monthly royalty fees and advertising fees are similar (2%-6%) and all share the same fee and expense structure that is seen in most fast food franchises. Also, the franchise fee low end fee) for all the three coffee franchises were consistent from \$20,000 - \$40,000. The only distinctive difference in the coffee franchises discussed in this paper was the lease agreement with two having 10 year leases and one having a 20 year lease.

In summary, when considering a franchise, the franchisee must understand that the royalty fees are paid upfront and that management fees are continuous, usually paid monthly. Marketing fees are also paid on a monthly basis. The franchisee must follow the franchisors operations of running the business. One must carefully analyze the expenses and fees to determine if they want to pursue operating a franchise.

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## **UNVEILING EMPLOYEE PERCEPTIONS OF AUTHENTIC LEADERSHIP USING CATEGORICAL SEQUENTIAL PATTERNS**

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### **ABSTRACT**

The post Enron debacle along with the checkered perception of leadership, sparked a fervid response in favor of Authentic Leadership, both in the corporate and academic domains. Authentic Leadership (AL) received significant traction with remarkable value-laden wide footprints. Strategically and operationally, Authentic Leadership has been shown to exert positive effects on both inter and intra-organizational dynamics at all levels. In literature, various studies have shown that Authentic Leadership positively influences employees' perception of leadership, trust, communications and job satisfaction, among other findings. While such assertions are apt and notable, however, as called out in the literature, there is a need to objectively untangle embedded conceptual ambiguities, polarized at times, in the light of sophisticated analyses, such as categorical sequence modeling. The findings presented in this article analyzes employees' sequential patterns while completing online surveys. Appropriation of Knowledge Digraph Contribution (KDC), an interpretation and application of Artificial Neural Network, unraveled patterns of interesting dichotomy. On one hand, Authentic Leadership improves employee's perception and trust in their leaders, however, it quickly dissipates if it is not incongruence with AL practices and the employee's own perception of authentic leadership. Nuanced latent patterns from sequential data indicated that offshore employees are comparatively more impacted, while both home-based and offshore female employees, were more sensitive in indicating lack of trust in leadership and future outlook due to AL violations.

Keywords: Authentic Leadership, Leadership Perceptions, ANN Patterns.

### **INTRODUCTION**

In a morally turbulent time with increased competition, vociferous customers and the upside-down organizational paradigms, new models of leadership are required. While the contextual leadership styles vary with its own merits, however, the authentic leadership style as emerged as a 'gold standard' in contemporary times (George, 2016; George et al, 2007; Northhouse, 2016; Sexton, 2017). The Authentic Leadership (AL) is said to be a balanced-approach, relations-oriented and while it accommodates genuine self-reflections and empathy for followers, it is focused on long term viability and interest of all stakeholders (Northhouse, 2016; Kruse, 2013; Walumba et al, 2008; Walumba et al, 2010; George, 2003). Study after study in different knowledge domains have shown positive effects of

Authentic Leadership on followers. While the debates regarding the fluidity of AL conceptual constructs are ongoing, however, AL theoretical constructs are deemed sound enough to be validated empirically (Walumbwa et al, 2008; Walumbwa et al, 2010; Neider & Schriesheim, 2011; Cronbach, 1984; Whitehead, 2009; Gardner et al, 2011). Despite the fact that more efforts are put forth, including qualitative and quantitative methods in validating the complex constructs of AL, the author is not aware of any study that may have benefitted from discernment of followers (or subordinates or employees) latent sequential patterns in survey data using an Artificial Neural Network tool called, Knowledge Digraph Contribution (KDC). In particular, this study seeks to unravel nuances behind the corroding AL effects from the employee's point-of-view, located both at the home and at an offshore location. Employees at an offshore location are contracted but act as a full time employee of the home organization based in the United States.

## LITERATURE REVIEW

Given the myriad of examples from corporations and leaders '*behaving badly*', it is not surprising to witness compelling force in renovating constructs of leadership and what must be expected from a leader. In contemporary times, the constructs of Authentic Leadership (AL) has gained attention as it is reflective, relationship-oriented, '*true*' and genuine, among other propositions (Northouse, 2016; George, 2016; George et al, 2007; Walumbwa et al, 2008; Walumbwa et al, 2010). With the changing business landscape, marred with global competition and under constant scrutiny, there have been greater demands on leaders to examine their own behaviors and positively influence their employees at all levels of organization. Consequently, improving workforce productivity in meeting organizational goals through a highly motivated workforce (Walumbwa et al, 2008; Burke, 2006; George, 2003).

All studies in AL literature identifies leader's self-cognition as an imperative and foundational step before exerting positive influence on the followers. While physiological needs are important, the critical need for self-cognition and a deeper understanding of employee attitudes (or psychological underpinnings) are emphasized by the AL scholars (Northouse, 2016; Kruse, 2013; Walumbwa et al, 2010; George, 2003). Accordingly, Quraishi and Aziz (2018), citing several seminal works, and highlighted main percepts of AL as: "*positive psychological capacities*", "*optimistic self-development*", "*positive ethical climate*", "*relational transparency*" with all stakeholders. Additionally, these authors, while studying the effects of Organizational Citizenship Behavior (OCB), reiterated the theoretical imperatives of leadership to include, *self-awareness* (comprehensive knowledge of personal strength and weaknesses; the true self), *relational-transparency* (sharing of genuine beliefs, feelings and opinions), *balanced processing* (objective and rational steps seeking to accommodate both data and followers opinions) and finally, *internalized moral perspective*, which are true expressions of leader's inner moral code unfazed by the outwards pressures from peers or

societies (for more see, Walumbwa et al., 2011; Walumbwa et al., 2008; Gardner et al., 2005; Kernis, 2003; Avolio, Walumbwa, & Weber, 2009; Walumbwa et al., 2010; George, 2003).

This revitalized, value-driven style with borrowings from multiple disciplines, including spiritual leadership, necessitates a new way of thinking about leadership. It introduces complex interplay of lesser-known visceral variables within the mix that were not typically considered for earlier styles of leadership. For example, Coercive or Authoritative Styles (for e.g., see, Sexton, 2017; Hoyt & Mulph; 2003; George & Sims, 2007; Fry et al., 2005; Wang et al., 2019; Northouse, 2016; Walumbwa et al., 2008). AL being the ‘gold standard’ and better than prior leadership models, leaders envisages constructive AL adaptation for quick reaping of motivated and productive workforce, on one hand, while suppressing any lingering employee perceptions of immoral, abusive or exploitative leadership, on the other. According to Favaro et al., (2001) there is mounting evidence strongly indicating the increased removal of executives in past decades. Thus, it is likely that the unchecked persistence of unfavorable feelings towards leadership may result in a no-win situation, termed as “vicious-circle theory” by Grusky (1961). In such a situation, all stakeholders, not excluding the organization and employees, suffer due to removal, succession and re-acquaintance with the leadership and subpar performance, at least in the short-run (George, 2016; Schmid et al., 2017). AL being the true touchtone of leadership standards, it is not surprising to find an abundance of confirmations about its viability from studies in different domains of scholarly pursuits. For example, Laschinger, Wong and Grau (2008) found the authentic leadership behavior was significant in nurses' perceptions of empowerment culminating into lower levels of emotional fatigue and skepticism. In similar vein, Quraishi and Aziz (2018) observed AL constructs to be useful in raising job satisfaction, training and development, and, in achieving guaranteed Organizational Citizenship behaviors (OCB) of the secondary school teachers. Additionally, studies from the business domain provide converging evidence of AL efficacy. Towards this end, Rego et al. (2014) observed AL constructs to have direct and indirect effects on employees' hope and creativity. In return, employees' creativity results in a better personal performance, paving the way for organizational innovation and competitiveness (Zhang & Bartol, 2010). Moreover, Wang and Hsieh (2013) found observed positive effects of employees' trust and engagement. Hence, fostering a positive subordinate's self-development (Walumbwa et al., 2008). Nevertheless, AL is not without some serious reservations. Critics argue that ‘true’ or ‘genuine’ self is impossible to know. It portrays perfection and goes against the very grain of conventional wisdom; it entirely avoids human fallibility and natural tendencies to err, part and parcel of being human. Furthermore, organizationally speaking, not only does the collective self take precedence over the individual self, but most importantly, the unidirectional approach is top-down. It is the leader who decides what is authentic while subordinates are expected to unconditionally accept and follow it. The employees' authentic self is tied to authenticity as believed by the leaders. More disturbing would be the

very negation of AL by putting up immoral acts in order for leadership to be seen as genuinely authentic. This can be exploited in moralizing abusive and authoritarian leader-subordinate relationships (for more see, Ford & Harding, 2011; Pfeffer, 2015; Bass & Steidlmeier, 1999; Grant, 2016; Schwartz, 1990; Erickson, 1995).

While the debates on AL continues in literature, there are calls to validate the AL theoretical constructs which seem sound to follow up with empirical research. Since AL is a blend of multiple disciplines with considerable ambiguity between constructs, it is of immense importance to empirically discern and untangle the complex interplay of all involved variables (see, Walumba et al., 2008; Yukl, 2010; Avolio & Gardner, 2005). Additionally, being part of the contemporary knowledge society with complex interdisciplinary and exploratory approaches, there is a pressing need to utilize advanced tools in discerning phenomena of interests. True, that such sophisticated tools unveil unique patterns of understanding not addressed in classical analyses (Ismaili & Golden, 2008a & 2008b). Towards this end, an interpretation of Artificial Neural Network (ANN), called KDC (Knowledge Digraph Contribution), has been used to reveal latent sequential patterns of employee's perception of AL.

### **SITUATIONAL CONTEXT**

The conducted efforts and the presented findings in this article are covered under the non-disclosure agreement (NDA) with the host organization based in the United States. These NDA services are performed free of cost to the host organizations with the understanding to allow publication of findings under strict anonymity and as guided by NDA. The discussed and items in this article offers full protection to the organization as guaranteed in the non-disclosure agreement.

The author of this article was approached by the host organization based in the United States to analyze categorical online survey data. The host organization which has offshore presence globally, collected data from the employees based in the United States as well as from one offshore location for this effort. This author was not involved in the implementation or the online data collection process for this exercise. For this article, the author received de-identified data samples for analyses using KDC from the host liaison, based in the United States (for process flow see Ismaili, 2019).

As a strategic move to potentially gain operational and tactical benefits, the host organization trained and implemented the constructs of Authentic Leadership (AL) style. As a follow up, the host organization wanted to empirically explore the employee's perception of AL. Primarily, the focus was to discern realization of promising AL patterns along with nuanced cross-cultural differences, if any.

### **METHODOLOGY**

For this exercise, both permanent employees from the host organization based in the United States and, consultants from one offshore location were asked to anonymous participate in an online survey. Fluency of the English language was deemed adequate to participate in this online survey, including the offshore consultants. For anonymous participation in this

online survey, couple of emails were sent to workforce who were not in any leadership or managerial roles. To ensure fully confidential participation, a link was included in the invitation email to all participants. Once the link was clicked, a randomly generated Participation-ID was provided to access and complete the online survey within 72 hours. Although general information was collected, (such as age-range, gender and location), no personal names or Employee-ID numbers were collected. Moreover, at the beginning of the online survey, participants were instructed to exit the survey if they were officially working in a leadership or managerial capacities. Overall, around 77% of home employees participated, while the offshore participation rate was a whopping 96%. See Table 1 for details.

**Table 1.**  
*Side-by-side Participant Comparison*

Offshore	Count	Home	Count
Total Offshore anticipated	70	Total Home anticipated	42
Total Offshore responded	67	Total Home responded	32
Survey Response Rate ~ %	96	Survey Response Rate ~ %	77
Self-identified Male	46	Self-identified Male	14
Self-identified Female	21	Self-identified Female	18
No gender Information	0	No gender Information	0
Identified Age Range 18 - Under 23	25	Identified Age Range 18 - Under 23	8
Identified Age Range 23 - Under 28	26	Identified Age Range 23 - Under 28	7
Identified Age Range 28 - Under 33	11	Identified Age Range 28 - Under 33	5
Identified Age Range 33 - Under 38	3	Identified Age Range 33 - Under 38	4
Identified Age Over 38	2	Identified Age Over 38	8

Table 1 indicates higher participation of offshore consultants compared with the home employees. Whereas gender participation and identified age range seems relatively balanced for the home employees, such is not the case for the offshore workforce. Comparatively, a higher percentage of male participants and a higher percentages of offshore workforce under the age of 33 years was noted. The offshore workforce is comparatively younger than the home employees based in the United States.

Once logged into the system, each participant was presented with an online survey regarding perceptions of AL, one question at a time. Each participant was presented one question at a time. Each participant was required to answer each question before moving on to the next question. For example, the response for Question 1 must be recorded before Question 2 can be displayed. Moreover, being categorical in nature, only one response (and not multiple) response can be picked from the available choices for each question. As participants responded and moved from one question to the next, their sequential responses were recorded automatically in the background. The survey consisted of both multiple choices, as well as open ended questions. The survey began with multiple choice questions, and consisted of two parts, Part-1 and Part-2. The Part-1 section of the multiple-choice questions gauged employees' general perception of AL. Part-2, in contrast, challenged participants in gauging specific responses for AL constructs, such as employee trust, engagement and future with the company. For Part-2, the workforce read detailed personalized scenarios of

conflicting AL behaviors before picking one choice. In order to maintain the required focus for this paper, only the multiple-choice portion (both Part-1 and Part-2) of the survey appropriating exploratory KDC analyses are reported.

To discern sequential patterns of recorded survey responses, KDC models (also refers to ‘wiring’ in connectionist interpretation) were generated to unravel sequential statistical regularities in participant responses. For KDC confirmatory or exploratory analyses, each sequential pattern of survey response is considered a unique instance which are mapped to KDC models in order to validate hypothesized pattern of phenomena. Such sequential statistical regularities result in the generation of Beta-weights ( $\beta$ ). KDC confirmatory beta-weights are high and positive when the sequential pattern closely reflects the model wiring; otherwise negative beta-weights are returned indicating the absence of sequential patterns and statistical regularities. However, for exploratory analyses, all possible sequential patterns are assigned equal likelihood and thus, multiple beta-weights are generated based on the observed sequential patterns in the data. Consider next paragraphs for three steps as a simple synthetic example.

*First*, as an example assume that there are 3 multiple choice questions for participant to respond presented in the following order:

**Qs. 1.** It is cold in the state of Minnesota during the month of March?

Pick ONE:    **(1a)** Strongly agree    **(1b)** Agree  
                    **(1c)** Disagree                **(1d)** Strongly disagree

**Qs. 2.** It is cold in Chicago, IL during the month of March? Pick ONE:  
**(2a)** Strongly agree    **(2b)** Agree    **(2c)** Disagree    **(2d)** Strongly disagree

**Qs. 3.** It is cold in Houston, TX during the month of March? Pick ONE:  
**(3a)** Strongly agree    **(3b)** Agree    **(3c)** Disagree    **(3d)** Strongly disagree

*Second*, assume that following sequential pattern was set in a KDC model (or KDC wiring) for confirmatory (not exploratory) analysis of the 3 questions listed above:    **1a → 2b → 3d**

*Third*, on one hand, if the majority of sequential pattern of responses reflect the KDC model wiring as shown above, the larger positive beta-weight would be generated, confirming presence of such statistical order or regularities. On the other hand, a large negative beta-weight will be generated if sequential patterns are everything but order specified in the KDC model.

In a similar vein, for the exploratory KDC analyses, as appropriated for this article, various positive beta-weights of different magnitude will be generated based upon the presence and statistical regularities of all sequential patterns. Furthermore, negative beta-weights will be generated identifying the absence of certain sequential patterns not observed in the collected data.

## RESULTS AND DISCUSSIONS

For this article, an exploratory KDC analyses (interpretation of Artificial Neural Network), was considered for the categorical sequential analyses of workforce online survey data. In particular and as stated previously, the

scope of this paper is limited to the sequential analyses of multiple-choice portion (Part-1 and Part-2) of the workforce survey. The efforts were made to unravel latent sequential patterns for nuanced understanding of Authentic Leadership (AL) from the employees' point of view. Both US and offshore workforce who did not hold leadership or managerial positions participated in this survey.

Recall that positive KDC beta-weight indicates the presence of statistical regularities, negative beta-weights, in contrast, indicate the absence of such regularities. Moreover, all presented results were statistically significant with  $p \leq 0.05$  or lower.

As expected and in agreement with AL literature, Part-1 of the survey indicated favorable employee perceptions of AL, both for home and offshore employees. High positive beta-weights were generated for employees' trust, organizational engagement and for the future outlook with the company. Moreover, there are effects of age and gender between the home and offshore employees for the trust and future outlook variables. See Figure 1 and Figure 2a & 2b.

Figure 1. KDC beta-weights indicate favorable employee's perceptions of AL in Part-1 of the multiple-choice survey. Findings agree with the vast AL literature. Comparatively, home employees' exhibit more trust in the AL while offshore exhibit more commitment to organizational engagement.

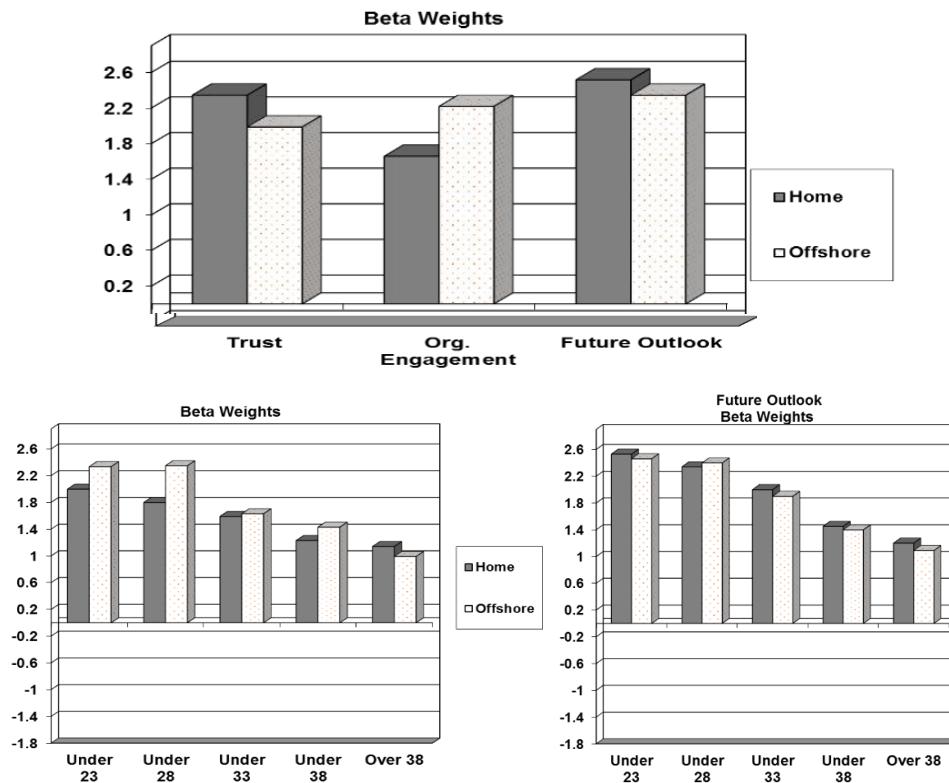


Figure 2a & 2b. Side by side comparison of KDC beta-weights showing effects of age on trust and future outlook variables. For trust, Figure 2a (on left) depicts younger employees in general, and the offshore workforce in particular show more trust in AL leadership. Figure 2b (on the right) depicts the future outlook decay as a function of age for offshore and home employees.

KDC findings for Part-1 converges with the AL literature in generating positive perceptions of AL constructs, particularly for employees' trust, organizational engagements and for the future outlook variables (Walumbwa et al., 2011; Walumbwa et al., 2008; Gardner et al., 2005; Kernis, 2003; Avolio, Walumbwa, & Weber, 2009; Walumbwa et al, 2010; Quraishi & Aziz, 2018). Having said that however, this author is not aware of any studies confirming the positive effects of AL as a function of employees' age, for the 'trust in leadership' and for the 'future outlook' with the company variables. Comparatively, younger generations tend to exhibit more trust in percepts of AL leadership and better future outlook.

Interestingly, Part-2 of the survey, (where participants read personalized scenarios depicting negation of AL constructs by leadership), generated fascinating results. For example, one scenario for Part-2 discussed violation and mismatch between leader's words and the leader's actions. With the help of KDC, the discerned latent patterns indicated cross-cultural differences, along with gender effects for the employees' trust in leadership and future outlook variables. See Figure 3 and 4 for more.

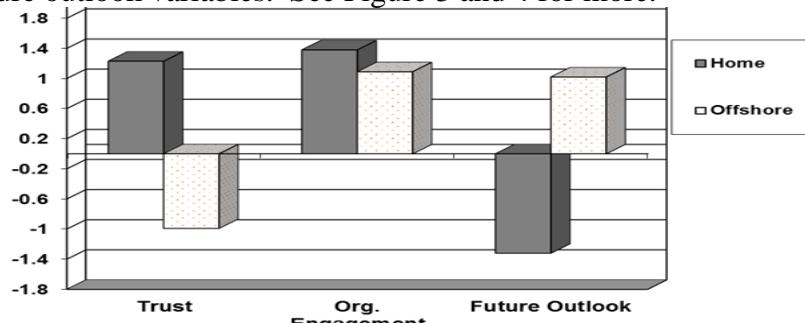


Figure 3. Differential effects are significant between the home and the offshore workforce. The offshore employees are more affected by the Part-2 exercise, excluding organizational engagement, which is positive for both workforces, but is significantly lower in magnitude compared with Part-1, all other indicators are troubling. Interestingly, due to the mismatch of AL constructs, (for e.g., leadership actions not aligned with authentic words), the offshore consultants tend to lose more faith in their leaders than the home-based employees. Moreover, perceptions of inauthenticity effects home-based employees' comparatively more when it comes to future outlook with a company.

To further untangle embedded effects in Figure 3, nuanced KDC discernment of latent patterns for Part-2 depicts (see Figure 4), that both offshore genders exhibit a lack of trust in leadership due to perceived AL violations – Females comparatively more than their male counterparts. Moreover, while home-based male employees are less hopeful for the

future, however, females' future outlook with a company is highly negative (or unlikely) for both the home-based and offshore employees.

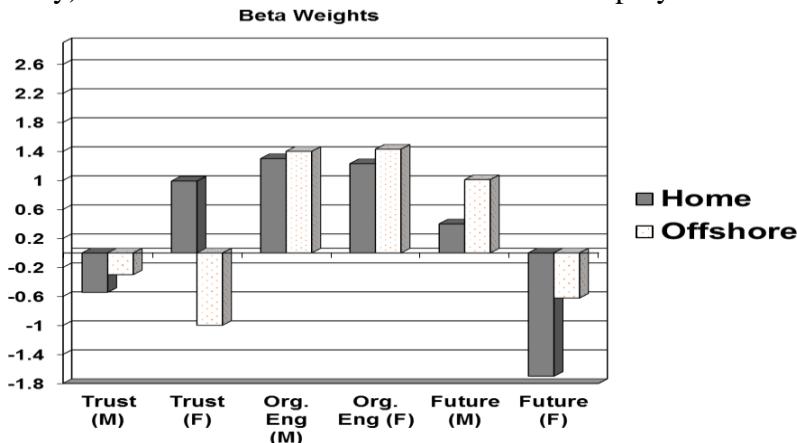


Figure 4. For Part-2, the unraveled latent patterns show that offshore employees are generally more impacted due to inauthentic leadership. Moreover, both offshore males and females indicate loss of trust in AL leadership, while the females from both locations show strong negative perceptions of the company's future outlook. The organization's engagement is not impacted, compared to other factors.

Unveiled KDC latent patterns holds both the strategic and operational significance for organizations. Although AL being considered as a 'gold standard' of leadership styles, generating multitude of positive effects, however, it must be cautiously and consistently implemented. Without a doubt, the younger workforce is optimistic, and holds a favorable perception of AL, which must be maintained at any cost. In a contemporary society, any inconsistency or discrepancy between the construct of AL or between the leadership's words and actions may do more harm than good in the long run. Failure to practice what leaders preach is an equal opportunity destroyer. The revealing patterns using KDC show that both home and offshore workforces hold a positive perception of AL, particularly younger employees, however, such perceptions quickly dissipate when the perceived violations are experienced. Although both workforces and genders are affected, however it seems that offshore employees and females in particular are impacted by perceived disparities.

Although more empirical research is required, this study contributes to the AL literature by providing a new way in exploring complex phenomena. The fine-grained analyses using KDC revealed latent patterns of both strategic and operational significance. KDC findings based on sequential patterns of employees' response are unique, since the perceived impacts of workforce age and gender, not specifically explored in vast AL literature, has come to light.

To this author, Authentic Leadership is a *double-edged sword* – It needs to be managed carefully and consistently in order to grow leaps and bounds; failure may very likely lead to a slippery slope into oblivion.

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