IMPACT OF ETHICS ENVIRONMENT AND ORGANIZATIONAL TRUST ON EMPLOYEE ENGAGEMENT

Christie Hough, Southern Arkansas University
Kenneth Green, Southern Arkansas University
Gerald Plumlee, Southern Arkansas University

ABSTRACT

Employee engagement has become a highly researched topic of late due to the belief that higher engagement translates into higher performance. To help with understanding of employee engagement, this study looks at antecedents to this engagement including ethical environment and organizational trust. This is the first empirical research effort to combine measures of Ethical Environment (EE), Organizational Trust – Human Resource Management Practices (OT-HRM), Organizational Trust – Communication (OT-C), Organizational Trust – Values and Moral Principles (OT-VM), and Employee Engagement in a comprehensive model. This research will break new ground in studying the impact of trust as a mediator of an ethical environment and employee engagement. The most significant finding is that organizational trust fully mediates the relationship between an ethical environment and employee engagement. This significant positive relationship indicates employees’ and managers’ perception of how ethical or unethical an organization’s environment is, directly correlates to their trust or mistrust in the organization. In addition, we show that this trust or mistrust is positively and significantly related to whether employees and managers are engaged or disengaged with the organization for which they work. This adds powerful understanding to the ethical environment – employee engagement relationship.

INTRODUCTION

Does being ethical pay? Most firms are in business to make money, but in today’s society reports of unethical or illegal behavior abound (Alleyne & Elson, 2013). Those guilty of unethical behavior may do so in hopes of getting ahead, but does it work? Are firms that try to do the right thing lagging behind or actually building their worth? During a small lunch meeting, Ron LeMay, former COO of Sprint and managing director of Open Air Equity Partners, was asked if ethics pays. Without hesitation, Mr. LeMay stated that ethical behavior is imperative! He believes that due to today’s technology, unethical and illegal behavior is a very risky venture and will have a high cost for both individuals and organizations (LeMay, personal communication 2012). Others would agree. Regarding the current lack of ethical behavior, Bishop (2013) stated, “Although our country has experienced such failures in the past, the advent of technology and the interconnectivity associated with globalization have provided a platform from which the world can view these debacles at the same time citizens are affected” (637). This dialog led to the current research.
In light of several decades of numerous ethical and legal scandals, it is “apparent that “bad ethics” can lead to catastrophic outcomes and reinforced arguments that “good ethics” is also “good business”” (Prottas, 2013, p.51). Current research does appear to indicate that employee engagement is significantly related to employee performance (Anitha 2014; Dalal, Baysinger, Brummel, & LeBreton 2012; Medlin & Green 2009). This study seeks to examine the antecedents to employee engagement, specifically ethical environment and trust. Amine, Chakor, and Alaoui (2012) offered an interesting framework positing that an ethical climate affects productivity through four mediating variables: “communication, organizational trust, job satisfaction, and organizational commitment” (p. 68). This research began in order to empirically test a similar framework that includes employee engagement and the relationship of the ethical environment and employee engagement with trust being a mediator of the relationship. This study is the result of that research.

This is the first empirical research effort to combine measures of Ethical Environment (EE), Organizational Trust – Human Resource Management Practices (OT-HRM), Organizational Trust – Communication (OT-C), Organizational Trust – Values and Moral Principles (OT-VM), and Employee Engagement in a comprehensive model. Currently, most related research is either theoretical or anecdotal. Many people believe operating ethically builds trust and leads to higher personal and organizational performance, but little empirical research has been conducted to prove or disprove this theory. While much research has been completed on some of the variables used, this research will break new ground in studying the impact of trust as a mediator of an ethical environment and employee engagement.

**LITERATURE REVIEW**

This study uses both stakeholder theory and social exchange theory concepts to examine the effects of an ethical environment on employee trust and employee engagement.

**Ethics Environment**

To understand an ethics environment, one must first look at ethics. McDaniel (1997), the author of the ethics environment instrument used in this study, understood ethics to “examine one’s moral life and contributes to an understanding of what ought to be done” (904). The environment, then, is “the social system…and organization in which [industry] takes place” (McDaniel 1997, 905). She concludes that “it is important to obtain an opinion about the organization and its constituent features that frame ethical practice as well as the process contributing to the practice” of the industry being evaluated (McDaniel 1997, 905). Further support is provided by Vitell and Singhapakdi (2008) who wrote, “we would expect the institutionalization of ethics by organizations to have a positive impact on marketing professionals – not only in terms of higher moral standards but also in terms of higher job satisfaction, organizational commitment, and esprit de corps” (344). Kaptein (2010) studied specific virtues they felt identified an ethical culture. Many of the virtues they propose are studied within the McDaniel (1997) survey instrument used in the current study.

Ardichvili, Mitchell, and Jondle (2009) cited Trevino, (1990) and others when discussing the characteristics of an ethical business culture. In their research, ethical cultures foster an environment of shared values, employees “go beyond the minimum to explore and implement ethical decisions” (445), and ethical values of fairness and justice are modeled throughout the
Ardichvili, et al. 2009). Jondle, Ardichvili and Mitchell (2014) point out that “ethical business cultures are...based on an alignment between formal structures, processes, policies, training and development programs, consistent value-based ethical behavior of top leadership, informal recognition of heroes, stories, and the use of rituals, metaphors and language that inspire organizational members to behave in a manner consistent with high ethical standards” (30). Smith, Gruben, Johnson and Smith, Jr. (2013) found on a multinational scale, a more ethical culture (lower corruption) led to better performance (lower unemployment). Several authors have found ethical/unethical behavior within the corporate culture and leadership to have a significant impact on employee ethical behavior (Douglas, Davidson & Schwartz 2001; Smith 2003; Tervo, Smith & Pitman 2013). And though a host of authors identify the importance of an ethical environment (Baglini 2001; Bobek, Hageman, & Radtke 2010; Choudhary, 2013; Cole, Schaninger, Jr., & Harris 2002; Keller, Smith, & Smith 2007; Martin & Cullen 2006; Trevino 1990; Trevino & Weaver 2001), much research is still needed to study the details of an ethical environment and the outcomes it may produce.

Organizational Trust

Audi (2008) states that “Without trust, business as we know it is impossible” (97). Integrating previous research from various disciplines, Mayer, Davis, and Shoorman (1995) developed a definition of trust which is “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trust or, irrespective of the ability to monitor or control that other party” (712). Cummings and Bromiley (1996) define organizational trust “as an individual’s belief that others (individual or group) will make a good faith effort to keep commitments, be honest, and not take advantage of another.” (303). Organizational trust is reflected by the degree to which employees trust in their organization and its leaders (Kim & Mauborgne 1998). Cohen and Dienhart (2013) understand “trust [as] a form of strategic behavior or rational economic decision making in situations that involve risk and vulnerability” (1).

Other authors see trust as multi-dimensional and seek an understanding of both interpersonal and impersonal trust (Zaheer, McEvily, & Perrone 1998; Vanhala, Puulaininen, & Blomqvist 2011). Greenwood & Van Buren, III (2010) proposed that organizational trustworthiness includes “behaviors of predictability, benevolence, and integrity” and should be studied further (435). Cohen and Dienhart (2013) felt strongly that “distinguishing between the moral and the epistemological conceptions of trust requires more precision than found in everyday use. And this is essential because – by reducing trust to confidence – the epistemological approach obscures the moral nature of trust and also the presence of substantive obligation in trust relationships, rather than mere expectations or beliefs held by the trusting party” (9). Vanhala et al. (2011) see “a need for complementary forms of organizational trust [and] believed that the impersonal element of organizational trust is a useful concept and should be incorporated into the measures” (485). This study uses their scale that incorporates both impersonal and interpersonal elements of trust. Vanhala et al., (2011) also recommend research that would “test the causal relationships between impersonal trust and other organizational parameters” (506). This study tests this empirically as well.
Employee Engagement

A relatively new concept, employee engagement has become a significant topic in human resource management research and literature in recent years. According to Lockwood (2007), employee engagement is “the extent to which employees commit to something or someone in the organization, those who are loyal and productive” (2). Kahn (1990) developed the term personal engagement as “the harnessing of organization members selves to their work roles” and explained that “in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (694). Building upon that definition, Sahoo and Mishra (2012) define employee engagement as “the level to which employees are fully involved in and committed to their work, careful about their organization and colleagues, and are willing to extend themselves and go the extra mile for their company to ensure its success” (95). It is the degree of commitment towards the job which an employee performs and is reflected in how long he or she remains with the organization as a result of their commitment (Mahendru & Sharma 2006). An organization’s performance and success is closely related to that organization’s ability to effectively manage employee engagement, and several advantages of engaged employees include profitability, more motivated employees and higher levels of performance, and an increase in employees’ trust in the organization (Sahoo & Mishra 2012).

THEORETICAL MODEL

The proposed theoretical model is displayed in Figure 1. The model illustrates the theorized relationships among the study constructs: ethics environment, organizational trust, and employee engagement. Ethics environment is hypothesized as directly impacting employee engagement as well as indirectly impacting engagement through organizational trust.
HYPOTHESES

Ethics Environment and Employee Engagement

Den Hartog and Belschak (2012) conducted two studies in which they surveyed employees and supervisors. Employees rated their supervisor’s ethical behavior along with their own level of work performance, while supervisors reported the employees’ work behavior. Results indicated that “ethical leadership was significantly related to both employee initiative and counterproductive work behavior and that these relationships were mediated by work engagement” (Den Hartog & Belschak 2012, 43). Employees who perceived their leaders to be more ethical had more engagement and less counter productivity. Much study of ethical leadership and its’ outcome on human resource management has been completed recently (Demirtas 2015; Den Hertoz & Belschak 2012; He, Zhu & Zhang 2014; Sharif & Scandura 2014).

H1: Ethics environment directly and positively affects employee engagement.

Ethics Environment and Trust

Castaldo, Premazzi and Zerbini (2010) cited several authors when stating: Trust is even more crucial when addressing ethical issues in business, because it provides the cultural basis and the “glue” that promote ethical behavior, and discourages deviation from ethical norms (e.g., Brien, 1998; Small & Mallon, 2007; Svensson, 2001; Vigoda-Gadot, 2007; White, 1998). Accordingly, scholars have recently begun to unpack the link between trust and ethics by exploring several domains, ranging from human resource management and job relationships’ intra-organizational dimension (e.g., Pucetaite & Lamsa, 2008) to marketing management and market relationships’ inter-organizational dimension (e.g., Choi et al., 2007; Gustafsson, 2005). At Rutgers Business School’s First Annual Ethical Leadership Conference in 2010, Keith T. Darcy “discussed the role of ethical leadership, the need for strong ethical culture, the importance of trust and the ethical challenges facing our future leaders” (198). Cohen and Dienhart (2013) suggested future research should be carried out to determine “the way that culture affects trust relationship” (12). Previous studies have examined the theoretical relationship between an ethical environment and trust (Caldwell, Hayes, Karri, & Bernal 2008; Castaldo, Premazzi, & Zerbini 2010). These and others suggest ethics is important to trust but little empirical work exists.

H2: Ethics environment directly and positively affects organizational trust.

Trust and Employee Engagement

Mone, Eisinger, Guggenheim, Price, and Stine (2011) cited that Mone and London (2009) “found that having a manager employees can trust is a primary driver of engagement” and recommended further study on this relationship (209). “A high level of employee engagement reflects a greater trust and loyal relationship between the individual and the organization. This suggests the building up of higher degree of commitment by the employee towards their employing organization” (Biswas & Bhatnagar 2013, 27). Lin (2010) surveyed 428 employees from 20 large firms in northern Taiwan to test several hypotheses related to corporate
citizenship, organizational trust and work engagement. The data were analyzed using a two-step structural equation modeling approach and resulted in seven of nine hypotheses being supported. Two relevant hypotheses were developed based on the premise that:

...employees’ perceptions about their firm’s ethics and social responsiveness play a significant role in motivating employees to engage with their work and foster their organizational trust. When employees perceive that their firm conducts business in accordance with morality and ethics beyond the basic legal requirements, they are positively stimulated by the firm and its assigned work, leading to a positive relationship between ethical citizenship and work engagement. (Lin, 2010, p.521)

In Lin's study, the data analysis resulted in an unexpected insignificant relationship between perceived ethical citizenship and work engagement, therefore not supporting the hypotheses that perceived ethical citizenship is positively related to work engagement. However, the hypothesis that perceived ethical citizenship is positively related to organizational trust was supported (Lin 2010). Additional result from this study found that “perceived corporate citizenship affects work engagement directly and indirectly via the mediation of organizational trust” (Lin 2010, 525). The literature suggests that employees who have developed a high level of trust are more likely to be engaged in their work and studies have found that employees will go above and beyond their normal job duties if they trust the organization (Dirks & Ferrin 2000) or if they believe the organization cares about them (Eisenberger, Armeli, Rexwinkel, Lynch & Rhoades 2001). Higher levels of trust are expected to result in more positive attitudes, higher levels of cooperation and other forms of workplace behavior, and superior levels of performance (Dirks & Ferrin 2001).

H3: Organizational trust directly and positively affects employee engagement.

Ethics Environment, Trust, and Employee Engagement

In Otken and Cenkei (2012) “partial support was found for the moderating effect of trust in leader on the relationship between PL and ethical climate.” (525). Literature supports that “ethical leaders inspire high levels of commitment and trust and foster desirable behaviors among followers (Brown et al. 2005; Den Hartog & De Hoogh 2009; Kalshoven et al. 2011; Piccolo et al. 2010)” (Den Hartog & Belschak 2012, 35).

H4: Ethics environment indirectly affects employee engagement through organizational trust.

METHODOLOGY

Sampling Process

Using data from a national sample of approximately 375 employees and managers, a structural equation modeling methodology was used to assess the impact of EE, OT-HRM, OT-C, and OT-VM on EmpEng. Participants included managers and employees of private (non-governmental) organizations with email availability. Any age, sex, or race were eligible for participation. A random survey was conducted among managers and employees of private (non-governmental) organizations using SurveyMonkey.com. Survey Monkey assisted in determining participants using their database, and emails were sent to prospective participants who completed them by clicking a link provided in the email. Of the participants, 66 percent were full-time
employees and 33 percent were part-time employees. Sixty-seven percent of the respondents were female. Sixty percent were hourly workers, 31 percent were salaried, and about eight percent were paid on commission. Table 1 indicates the demographics of the respondents.

| Male – 32.7% | 121 |
| Female – 67.3% | 249 |
| Full time – 66.5% | 250 |
| Part time – 33.5% | 126 |
| Hourly – 60.4% | 227 |
| Salaried – 31.4% | 118 |
| Commission – 8.2% | 31 |
| Industry Category: |
| Agriculture, Forestry, Fishing – 0.8% | 3 |
| Mining – 0.2% | 1 |
| Retail Trade – 14.7% | 55 |
| Construction – 5.9% | 22 |
| Finance, Insurance, Real Estate – 6.7% | 25 |
| Manufacturing – 7.8% | 29 |
| Local, State, or Federal Government – 1.9% | 7 |
| Trsp., Com., Elec., Gas, & San. Serv. – 5.6% | 21 |
| Lodging, Personal, & Business Serv. – 12.9% | 48 |
| Wholesale Trade – 2.7% | 10 |
| Healthcare – 20.9% | 78 |
| Education – 10.2% | 38 |
| Technology – 4.3% | 16 |
| Other – 5.4% | 20 |
| Mean (St. Dev.) Years in Current Position | 7.79(8.22) |

Measurement Scales

Measurement scales for all study constructs are currently available from the related literature. The scales are presented in the survey displayed in the appendix. The scales used in this study were validated in previous research. The scales were incorporated into an on-line survey form and administered by an on-line data collection service. The measurement scales were assessed fully for unidimensionality, reliability, and validity. The measurement model and structural models were assessed using a structural equation methodology.

The employee engagement scale consisted of a previously validated scale by Buckingham and Coffman (1999). The scale included twelve items measured on a seven point Likert scale where one indicated strongly disagree and seven indicated strongly agree.

Organizational Trust was assessed using the scales created by Vanhala et al. (2011). This scale has three sub-scales: Trust – HRM Practices which included five items measured on a seven point Likert scale as above; Trust – Communication which included seven items measured
on a seven point Likert scale as above; and Trust – Values and Moral Principles which included four items measured on a seven point Likert scale as above.

Charlotte McDaniel (1997) developed the ethical environment scale and has validated it in her research. This scale included twenty items measured on a seven point Likert scale as above. Interestingly, McDaniel (1997) developed the scale for use in a healthcare environment and twenty percent of our respondents indicated they work in some area of healthcare. The scale proved valid and reliable in this and other industries.

Statistical Analysis

A partial least squares (PLS) structural equation modeling (SEM) statistical methodology is used to assess the relationships in the model. PLS/SEM is selected because the model tested includes a second-order construct and because the focus is on hypothesis testing and prediction rather than theory development (Hair, Ringle, & Sarstedt 2011). The general process recommended by Wetzels, Odekerken-Schroder, and van Oppen (2009) for PLS models with second-order constructs is followed. Specifically, SmartPLS 2.0 software developed by Ringle, Wende, and Will (http://SmartPLS.de) is used to conduct the PLS analysis.

RESULTS

Measurement Scale Validity and Reliability

Because the measurement scales were previously developed (Buckingham & Coffman 1999; McDaniel 1997; Vanhala et al. 2011), the scales are assumed to exhibit sufficient content validity. Convergent validity is assessed by reviewing the standardized loadings for each of the first order constructs with loadings greater than .70 indicating sufficient convergent validity (Chaing, Kocabasoglu-Hillmer, & Suresh 2012). It was necessary to remove several items from the employee engagement and ethics environment scales to achieve sufficient convergent validity. The remaining standardized factor loadings are displayed in Table 2 with all exceeding the .70.

To assess for discriminant validity, the square root of the average variance extracted value for each construct is compared to the correlations with other constructs with square root values greater than the correlations signifying sufficient discriminant validity (Wetzels et al. 2009). Square root of average variance extracted values and construct correlations are displayed in Table 3. The square root values for each of the constructs exceeds correlations with other constructs.

Scale reliability is assessed based on Cronbach’s alpha, composite reliability, and average variance extracted values (see Table 2). All alpha, composite reliability, and average variance extracted values exceed the respective minimums of .70, .70, and .50 recommended by Garver and Mentzer (1999) indicating that the measurement scales exhibit sufficient reliability.
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RELIABILITY SCORES AND CORRELATIONS AMONG FIRST-ORDER LATENT CONSTRUCTS
(square root of AVE in bold on diagonal)

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Common Method Bias

Lindell and Brandt (2000) recommend that the smallest correlation among the variables be used as a proxy for common method variation. The data collection for this study included a measurement scale for organizational performance that is not included in this study. The smallest correlation among all of the variables in the larger dataset is .28 between organizational performance and ethics environment. The smallest correlation among the relationships specified in the structural model is .67 for values and moral principles and ethics environment. Substituting these correlations into the formulas provided by Malhotra, Patil, and Kim (2007), the computed z-score is 10.09 indicating significant at the .01 level. Adjusting for common method variance using the smallest correlation (.28) from the dataset, the smallest correlation among the hypothesized relationships (.67) remains significantly different from zero at the .01 level. Based on the results of the proxy test, problems associated with common method bias are not considered significant (Lindell & Whitney 2001).

Structural Model Assessment

Structural model results are presented in Figure 2. Hair et al. (2011) recommend that all PLS-SEM evaluations rely on resampling techniques such as bootstrapping to generate the significance levels of the standardized coefficients. The bootstrapping technique generates a large number of samples from the observed sample and generates a bootstrap distribution that approximates the sampling distribution for each of the path coefficients within the structural model (Henseler, Ringle, & Sinkovics 2009). These distributions provide information necessary to assess the significance of each of the path coefficients within the structural model (Henseler et al. 2009). As Hair, Sarstedt, Ringle and Mena (2012) recommend for the bootstrapping procedure, the minimum number of samples for the bootstrapping procedure was set at 5,000 with the number of observations set to 375.

Hypothesis 1 (EENV→EENG) is not supported with a non-significant standardized coefficient of .096. The standardized coefficient of .890 for hypothesis 2 (EENV→TRUST) is positive and significant at the .01 level. The standardized coefficient of .696 for hypothesis 3 (TRUST→EENG) is positive and significant at the .01 level. Hypothesis 4 is designed to assess the mediating impact of organizational trust on the relationship between ethics environment and
employee engagement. It is important to establish a positive, significant relationship between ethics environment and employee engagement without the mediating variable (organizational trust) in the model (Baron and Kenny 1986). In this case, the standardized coefficient between ethics environment and employee engagement is .75 establishes the positive significant relationship prior to the test for mediation. Introducing organization trust into the structural model reduces the positive, significant coefficient of .75 to a non-significant coefficient of .096. The standardized coefficients (.890 and .696) along the hypothesis 4 path (EENV→TRUST→EENG) are both positive and significant at the .01 level indicating an indirect effect (Kline 2011) of ethics environment on employee engagement through organizational trust. The indirect effect computed as .619 (.890x.696) is significant at the .01 level based on a Söbel test. Organizational trust fully mediates the relationship between ethics environment and employee engagement. An ethics environment leads to organizational trust which results in enhanced employee engagement.

![Diagram](https://via.placeholder.com/150)

**Figure 2: PLS STRUCTURAL MODEL RESULTS**

(** significant at the .01 level, ns non-significant)

**COMM**: Trust – Communication; **HRM**: Trust – HRM Practices; **VALMOR**: Trust – Values and Moral Principles; **EENG**: Employee Engagement; **EENV**: Ethics Environment

**CONCLUSIONS**

**Discussion of the Findings**

Some research has suggested that when an organization creates an ethical environment it may lead to higher employee engagement (Demirtas 2015; Den Hartog & Belschak 2012; Lin 2010; Sharif & Scandura 2014). While this study does support a correlation between the two variables, it also shows this only represents a limited understanding of the relationship. To
further explain this relationship, data was collected to examine these variables using organizational trust as a mediator of the two. As Baron and Kenny (1986) explain, a mediator "accounts for the relation between the predictor and the criterion… [and] explain[s] how external physical events take on internal psychological significance" (1176). This clearly enlightens this particular study, as the internal psychological variable, organizational trust, noticeably affects the more physical relationship between an ethical environment and employee engagement.

Having an ethical environment is an antecedent to organization trust. This significant positive relationship indicates employees and managers perception of how ethical or unethical an organizations environment is, directly correlates to their trust or mistrust in the organization. In addition, we show that this trust or mistrust is positively and significantly related to whether employees and managers are engaged or disengaged with the organization for which they work. This adds powerful understanding to the ethical environment – employee engagement relationship.

**Limitations of the Study**

While this study is a significant expansion of previous literature, there are several substantial limitations. The study is cross-sectional instead of longitudinal. While longitudinal data is helpful, a momentary look at the relationships we need to understand is certainly a beginning point.

Some would insist that examining an employee’s perception of an ethical environment is a limitation. Behavior is often determined by ones’ perception of a situation. Also, organizational trust is a perception leading to the behaviors of engagement and performance. Therefore, in this research, studying the perception of organizational trust of both employees and managers is very important. The use of reverse scaled questions and questions regarding others behaviors have been found to give greater reliability for these variables.

A limitation in any study of human perception is the concern of social desirability bias. Those completing the surveys may believe that there is a correct or more right answer. While this is a legitimate concern, using online surveys and assuring respondents of their anonymity and confidentiality decreases the likelihood of this limitation. In spite of recent allegations that all online activities are traceable, most people still feel anonymous behind the computer screen.

Another possible limitation of this study was the length of questionnaire. Due to the extent of information being sought, the online survey averaged about fifteen to twenty minutes to complete. Again, reverse scaled questions were included to help identify any issue. There appeared to be no serious problem with the length of the questionnaire and only a minimum of respondents who started the survey did not complete it.

**Future Research**

Future research should extend this study to determine how this relationship affects organizational and employee performance. Other antecedents of performance, specifically organizational communication, job satisfaction and work optimism, should be examined as correlated to an ethical environment and organizational trust.

The research on employee engagement is relatively infantile. Longitudinal study of employee engagement and trust should be undertaken in addition to the examination of these variables on performance. If organizational trust wanes over time, does correlated employee
engagement decrease? The study should be extended to include individual performance in the empirical research.

Theoretical and managerial implications

Theoretically, this study expands the current research on employee engagement to include organizational trust as a mediator of the relationship of an ethical environment. While more empirical research is needed, it is a significant determination. Researchers and managers alike have indicated a logical and empirical relationship between an ethical environment and employee engagement, but this research shows a great need for building organizational trust in employees.

Management practitioners are provided with information necessary to determine organizational conditions under which organizational outcomes are most likely to be successful and the impact of organizational outcomes on both the employee and organization’s performance. Specifically, this study indicates that while managers focus on building an ethical environment, they can only do so by building employees’ organizational trust. Employees are more engaged when they perceive that the environment is ethical and this is dependent on their trust in the organization in which they work.

REFERENCES


## APPENDIX
Measurement Scales

**Employee Engagement** (Buckingham and Coffman, 1999)
*Please indicate the extent to which you agree or disagree with each statement as it relates to your workplace (1 = strongly disagree, 7 = strongly agree).*

1. I know what is expected of me at work.
2. I have the materials and equipment I need to do my work.
3. At work, I have the opportunity to do what I do best every day.
4. In the last seven days, I have received recognition or praise for doing good work.
5. My supervisor, or someone at work, cares about me as a person.
6. There is someone at work who encourages my development.
7. At work, my opinions seem to count.
8. The mission/purpose of my organization makes me feel my job is important.
9. My co-workers are doing quality work.
10. I have a best friend at work.
11. In the last six months, someone at work has talked to me about my progress.
12. This past year, I have had opportunities at work to learn and grow.

**Trust - HRM Practices** (Vanhal et al., 2011)
*Please indicate the extent to which you agree or disagree with each statement as it relates to your workplace (1 = strongly disagree, 7 = strongly agree).*

1. I receive a fair salary in comparison with other employees in our organization who do the same work.
2. The people rewarded for the success of our organization are those who deserve to be rewarded.
3. My employer offers me opportunities to educate myself and develop myself in my profession.
4. Skilled employees have the possibility of taking up more responsible positions.
5. My employer has kept promises made with regard to my career.

**Trust – Communication** (Vanhal et al., 2011)
*Please indicate the extent to which you agree or disagree with each statement as it relates to your workplace (1 = strongly disagree, 7 = strongly agree).*

1. I receive sufficient information on the state of the organization.
2. I receive information on changes in the organization that are important to me.
3. The information that is distributed in our organization is valid.
4. The information that is distributed in our organization is up-to-date.
5. The information that is distributed in our organization can be trusted.
6. Information on matters important to me is communicated openly in our organization.
7. Our organization’s internal communication functions well.

**Trust - Values and Moral Principles** (Vanhal et al., 2011)
*Please indicate the extent to which you agree or disagree with each statement as it relates to your workplace (1 = strongly disagree, 7 = strongly agree).*

1. I accept the prevailing values in our organization.
2. In my opinion, our organization functions ethically.
3. I do not have to compromise my ethical principles in order to succeed in this organization.
4. Top management has made it clear that unethical action is not tolerated in our organization.

**Ethics Environment** (McDaniel, 1997)
*Please indicate the extent to which you agree or disagree with each statement as it relates to your workplace (1 = strongly disagree, 7 = strongly agree).*

1. The administration of this organization is concerned with ethical practice.
2. Although I know that costs are a concern, most of the time I think the administration of this facility is more concerned with making money than with ethical care.
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>3.</td>
<td>Administrators at all levels of this organization work to build shared ethical practices.</td>
</tr>
<tr>
<td>4.</td>
<td>Personnel decisions in this organization reflect ethical considerations.</td>
</tr>
<tr>
<td>5.</td>
<td>Administration provides their employees with ethics guidance as needed.</td>
</tr>
<tr>
<td>6.</td>
<td>Ethics accountability is not rewarded in this organization.</td>
</tr>
<tr>
<td>7.</td>
<td>When ethics violations occur, this organization has procedures to identify and to deal with them.</td>
</tr>
<tr>
<td>8.</td>
<td>The organizational culture of this institution is ethical.</td>
</tr>
<tr>
<td>9.</td>
<td>If I were to have an ethical concern, I know it would be supported in this organization.</td>
</tr>
<tr>
<td>10.</td>
<td>Communication about ethical concerns in this organization is open between employees and administration.</td>
</tr>
<tr>
<td>11.</td>
<td>Procedures and policies for employees in this organization do not support ethical practice.</td>
</tr>
<tr>
<td>12.</td>
<td>Sometimes I think this organization has different goals than mine, especially regarding ethical practice.</td>
</tr>
<tr>
<td>13.</td>
<td>Personnel policies in my work unit are consistent with what I would call ethical.</td>
</tr>
<tr>
<td>14.</td>
<td>When I need it, there are opportunities for employees to engage in ethical deliberations in my unit.</td>
</tr>
<tr>
<td>15.</td>
<td>If I reported one of my fellow unit employees for an ethics violation, my immediate supervisor would support me.</td>
</tr>
<tr>
<td>16.</td>
<td>In my opinion, employees’ concerns about ethics issues are not “heard” in my work.</td>
</tr>
<tr>
<td>17.</td>
<td>If I reported a colleague for an ethics violation, there would be retaliation against me.</td>
</tr>
<tr>
<td>18.</td>
<td>Employees are unsure where we stand on ethics dilemmas that we encounter in our work.</td>
</tr>
<tr>
<td>19.</td>
<td>There is an ethics committee in this organization available to me if I need it.</td>
</tr>
<tr>
<td>20.</td>
<td>I am involved in deliberations addressing ethics concerns at my work.</td>
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TWO ISSUES TO CONSIDER IN DIGITAL PIRACY 
RESEARCH: THE USE OF LIKERT-LIKE QUESTIONS 
AND THE THEORY OF REASONED ACTION IN 
BEHAVIORAL SURVEYS

Darryl J. Woolley, University of Idaho

ABSTRACT

In this paper, I discuss two related characteristics of research on digital piracy: 1) the use of Likert-like questions to measure digital piracy and 2) the preferred method in piracy research of surveys based on theories that relate piracy behavior to consumer attitude and social norms. I suggest that further research developing behavioral models that are tested using surveys will not provide useful information, and that future research should be experimental and test how piracy behavior can be modified.

I also find that a model that uses a construct based on the aggregation of Likert-like survey questions is much more powerful than the same model using continuous identifiers of the amount of software piracy performed by consumers. This suggests that results found in prior research overstate the relationship between their independent variables and the construct of digital piracy.

Furthermore, I ask about the value prior research findings. No one would be surprised that attitude and social norms regarding piracy would be associated with intent to pirate. Future research should ask more insightful questions, such as whether or how attitudes can be changed.

DIGITAL PIRACY

One effect of the advent of the information economy is the ease with which consumers can access digital products without purchase. People are able to borrow product media for copying or download digital products without paying a licensing fee. This has undoubtedly hurt producers of digital products. The Business Software Alliance estimates that piracy cost the software industry $59 billion in 2010 (BSA, 2011). The Recording Industry Association of America estimates that music sales dropped 53 percent from 1999 to 2010 (RIAA, 2011). Some have asserted that piracy of digital products has the potential to completely restructure their industries (Dvorak, 2003).

The impact of digital piracy has motivated intense academic research. Some of this research has been economic (Shin, Gopal, Sanders, & Whinston, 2004) or demographic (Sims, Cheng, & Teegen, 1996), but much of it has been behavioral and rooted in the study of ethics. Although occasionally a paper may be based on another paradigm such as moral development (Logsdon, Thompson, & Reid, 1994), by far the most papers are based on the Theory of Reasoned Action (TRA) (Christensen & Eining, 1991) or its child, the Theory of Planned Behavior (TPB) (Cronan & Al-Rafee, 2008). These papers support the application of the theories, finding that attitudes toward digital piracy and social norms perceived toward piracy are associated with the intent to pirate or piracy behavior. This research has been conducted through administration of surveys that are analyzed using either regression or path analysis. The variables, both independent and dependent, are latent factors or variables constructed from multiple questions on the surveys. In this paper, I evaluate what I believe to be the state of research in digital piracy based on TRA
using surveys constructed with latent variables. I will make several propositions regarding what I believe to be the state of research, and I will test one proposition.

THE USE OF THE THEORY OF REASONED ACTION THE THEORY OF PLANNED BEHAVIOR

TRA states that people's intent to embark upon some action is a function of their attitude and of social norms (Ajzen, 1991). Theoretically, attitude is the interaction of how important an outcome of the behavior is and how likely that outcome is perceived to be. In practice in digital piracy research, attitude may be a measure of people's opinions about the morality of the behavior, expected benefits, or perceptions of fairness. Social norms is the interaction of what people perceive to be the attitudes of other people toward the behavior and how important those attitudes are. In research it is usually tested as opinions about the attitudes of other people.

I have written a couple of papers myself using this model, finding that social norms only has an effect when norms from peers are queried but not norms from authority figures (Woolley & Eining, 2006), that attitude and social norms are correlated to each other, and that attitudes toward music piracy are more favorable than attitudes toward software piracy (Woolley, 2010).

Upon reflection, however, I cannot help but ask, "So what?" Indeed, I believe it is time for a new research paradigm to dominate research on digital piracy.

Proposition 1: Future research on digital piracy should not be based on determining the fit of the Theory of Reasoned Action or similar theories to piracy behavior.

The motivation for most for the research into digital piracy is that piracy is expensive, and understanding the behavioral antecedents to piracy will inform the development of strategies to combat or ameliorate piracy. Several quotes from applicable research are shown:

The success of any strategy to combat [piracy], however, depends upon how well we understand processes that underlie the acts of software piracy (Bhal & Leekha, 2008).

... a deeper understanding of the reasons of piracy behavior can help develop more effective preventative measures ... (Jyh-Shen, Ghien-yi, & Hsin-hui, 2005).

A more effective approach to curtailing software piracy may be to gain a fuller understanding of how the roots of that behavior ... are formed ... (Goles et al., 2008).

All of the quotes are from the paper introductions and motivate the research. However, none of the papers state how their findings can be used in developing strategies to combat piracy.

Although the research has advanced our understanding of piracy, the main finding, that people's attitudes toward piracy determines whether they pirate, is not very insightful or helpful, thus explaining the lack of useful recommendations to the practice of limiting piracy.

To be useful, I think that piracy research should go in new directions. One direction would be to experimentally test how interventions can change piracy behavior. By changing the research method from survey development and gathering to controlled experiments, specific factors can be manipulated to test their effects and determine what interventions are effective. Other methods, such as archival, may also provide useful information. The research on digital piracy is mature and ready to progress.
USE OF LIKERT-LIKE QUESTIONS TO MEASURE PIRACY

Research on piracy is usually conducted using surveys consisting of questions with answers given by selection a number on a five or seven point scale indicating the extent of the answer. For example, an item may state "I have copied software in the past" with end points labeled as very infrequently to very frequently (Goles et al., 2008). Sets of questions describe a latent variable, such as piracy behavior, attitude, or social norms. Questions are usually assigned to a latent variable on the basis of factor analysis and the model is tested using regression or path analysis. This method has the advantage of being relatively inexpensive to gather data while allowing powerful analysis in linking factors. However, it also has some weaknesses.

Likert scales can result in overuse of the endpoints of a scale, leading to scores that are biased high or low (Rocereto, Puzakova, Anderson, & Hyokjin, 2011) but respondents tend to use a midpoint when unsure of an answer or to indicate that a question does not apply (Kulas, Stachowski, & Haynes, 2008). Using different endpoints beginning with 0 or using 0 as a midpoint obtain different answers (Hartley & Betts, 2010). Reverse-scaled questions often exhibit unexpected relationships to their paired questions (Swain, Weathers, & Niedrich, 2008).

Respondents may be biased toward a certain side of the response scale without attending to the wording of the questions (Nicholls, Orr, Okubo, & Loftus, 2006). Likert scales may be too coarse when examining continuous data (Russell & Bobko, 1992). Respondents may have difficulty deciding on what their answers mean on a Likert scale measuring their extent of piracy.

For example, what does it mean to say that you have pirated software or music frequently in the past? Does it mean multiple-times daily for years, or does it mean several items over the past few months?

Because the measures of the dependent variable and the independent variables are on the same scale, their correlation may be overstated as measured as opposed to the actual correlation of the underlying factors. A person answering six or seven on attitude questions on a seven-point scale may easily decide that the extent of their piracy measures a six or seven on the scale, whereas to another student the first student's extent of piracy may be much lower.

Proposition 2: Attitude and Social Norms will be more predictive of Piracy behavior when piracy is measured using Likert-scale items than when Piracy is measured by continuous variables measuring the actual extent of piracy.

TEST OF A CONTINUOUS DEPENDENT VARIABLE VERSUS A LIKERT DEPENDENT VARIABLE

Students in a sophomore level university class were given a survey with questions measuring attitude, social norms, and piracy regarding music. The survey was approved by the university human subjects committee. Of the seventy-seven participants, 53 percent were male and 70 percent were business majors. Almost all of the participants indicated that they have portable music players, and 95 percent indicated that some of their owned music was pirated.

In the survey, the participants were presented a scenario in which they could download music without paying for it. They then completed Likert-like questions about whether they would download the music and their attitudes and perception of social norms toward music piracy. In addition to completing Likert-like questions, the participants also indicated how many titles they had obtained from different sources. The extent of piracy was measured by the log of the total count of pirated songs they owned and by the percentage of their owned songs that were pirated.
The questions were evaluated with principal components and assigned to four different components that had an Eigenvalue of greater than 1. All of the questions had a loading of at least .697 on their components, and the Chronbach Alpha score of each component was greater than .80, indicating high validity within the components. Three of the components measured aspects of participants’ attitudes toward piracy: Morality measured participants’ opinions about whether piracy was wrong or not; Punishment measured participants’ perceptions of possible negative consequences of pirating; and Benefit measured participants’ perceptions of whether piracy is advantageous. Social Norms was measured as the perceived attitudes of participants' peers, and Piracy was measured by whether the respondents would download the music if faced in the scenario.

Proposition 2 was tested using Morality, Punishment, Benefit, and Social Norms as independent variables predicting three different measures of piracy: 1) the component measured with Likert-like questions, 2) the count of pirated songs that students stated that they owned, and 3) the percentage of their complete music collection that had been pirated. Gender, age, and major were included as controls. The results are shown in Table 1. Non-significant variables are left blank.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Morality</th>
<th>Punishment</th>
<th>Benefit</th>
<th>Social Norms</th>
<th>Gender</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likert Measure of Piracy</td>
<td>-.327</td>
<td>-.161</td>
<td>-.357</td>
<td>-.339</td>
<td></td>
<td>.677</td>
</tr>
<tr>
<td>Number of Songs Pirated</td>
<td></td>
<td></td>
<td>-.257</td>
<td>-.195</td>
<td>.069</td>
<td></td>
</tr>
<tr>
<td>Percent of Songs Pirated</td>
<td></td>
<td></td>
<td>-.383</td>
<td>-.237</td>
<td>.163</td>
<td></td>
</tr>
</tbody>
</table>

Non-significant coefficients are left blank.
Dependent variables are coded so that larger values are indicative of an aversion to piracy

The model created based on Likert-like questions appears to be much more powerful than the models based on the actual extent of piracy. However, I think that the model based on the Likert-like questions does not really ask about the extent of piracy, but is just another measure of attitude. The model also misses the effects of gender: males and females may interpret the Likert-like questions differently. The results show that attitude and social norms are not in fact very powerful in measuring the actual extent of piracy.

CONCLUSION

I have proposed that research of digital piracy has reached a point where it must change direction to provide useful information. Current research based on models predicting the intent to pirate is not able to suggest or evaluate specific recommendations based on their research, and the research method probably overstates the ability of existing models to explain piracy behavior. If research is to find ways to have people voluntarily cease or at least lower their pirating, a new research methodology, possibly experimental or archival, must be used to evaluate strategies.
REFERENCES


