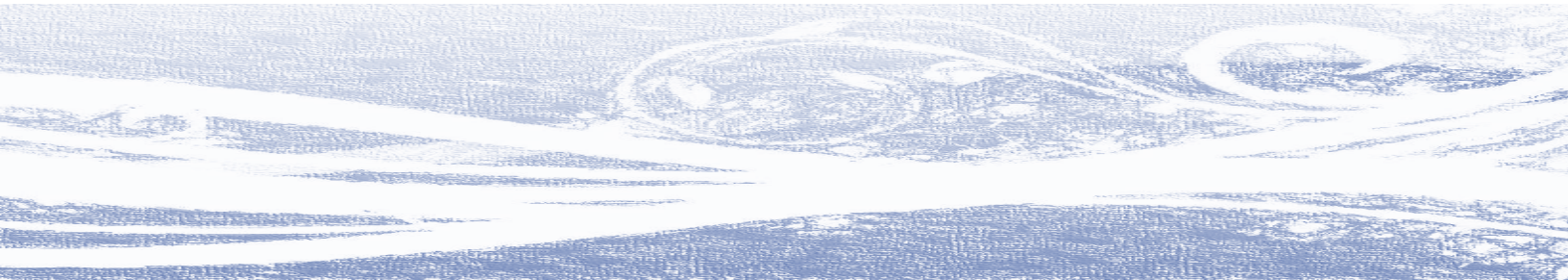

QRBD

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FROM THE EDITORS

This issue of *Quarterly Review of Business Disciplines*, begins with the research of Yi Karnes, California State University – East Bay, which examines the choice and consequences of MNEs’ organizational forms – adaptive or maladaptive. Daniel Boylan and Aaron Mastriani, Widener University, & Cavan Boylan, Purdue University, explore a clash in portrayals between characteristics that accountants believe are desirable from a professional perspective and portrayals of accountants in movies.

Pingying Zhang and Dana Hart, University of North Florida, & Ying Guo, California State University – East Bay, investigate the temporal aspect of entrepreneurial intention on students in southern universities in the U.S. and China. The longitudinal study of Carl Case, Darwin King, and Todd Palmer, St. Bonaventure University, examines how undergraduate students utilize the Internet for leisure activities with some interesting results. And our final paper by Liqiong Deng, University of Georgia, proposes a conceptual framework of the emotional and behavioral consequences of IT paradoxes. It highlights the mediating role of emotional ambivalence in the relationship between IT paradoxes and technology use patterns.

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

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

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DECONSTRUCTING ORGANIZATIONAL FORMS AND INSTITUTIONAL LEGITIMACY OF MNEs IN AFRICA

Yi Karnes, California State University, East Bay

ABSTRACT

Multinational enterprises (MNEs) employ various organizational forms when entering foreign countries. In this study, our focus on institutional legitimacy allows us to examine the choice and consequence of MNEs' organizational forms. Are the adopted organizational forms adaptive or maladaptive? While the question is applicable to any MNE, it is of particular importance to MNEs investing in the complex environment in Africa. Drawing from institutional theory and transaction cost economics (TCE), we first explore how MNEs secure legitimacy in formal institutions by conforming to accepted organizational forms, and then discuss how MNEs face challenges of maintaining legitimacy in informal institutions. We find that MNEs prefer internal and hybrid organizational forms that engage in host country state-owned enterprises (SOE) involvement. We also find that MNEs' adopted organizational forms intensify misaligned interests of MNEs and SOEs and decrease MNE legitimacy in informal institutions, therefore, are more likely to distress the investment. This study contributes to the literature by positing organizational form as drivers of institutional legitimacy and inter-partner relationships to account for unexplored questions in foreign direct investment in Africa.

Keywords: MNE-SOE relationship, Organizational form, FDI in Africa, Institutional legitimacy, Transaction cost

INTRODUCTION

The economic climate in Africa has improved significantly since the implementation of economic reforms in the 1990s. Under the watchful eyes of International Monetary Fund (IMF) and the World Bank, reforms in African countries have reduced barriers of foreign direct investment (FDI) and encouraged privatization of state-owned enterprises (SOEs) (Babarinde, 2009). Africa offers abundant growth opportunities for multinational enterprises (MNEs) in many sectors such as natural resources, agriculture, banking, and telecommunications (Chironga, Leke, Lund, & van Wamelen, 2011). FDI has a dramatic impact on African economies under initiatives that aims to attract MNEs and improve governance (Kamoche & Harvey, 2006). Nevertheless, Africa, particularly sub-Saharan Africa, is still a challenging terrain for MNEs due to its unstable and unpredictable context (Collier & Gunning, 1999). MNEs also face competition from SOEs that play critical roles in the local community (Budiman, Lin, & Singham, 2009). Research on investing in Africa needs the attention from management scholars to extend management theory and add to our understanding of developing organizations in complex environments (Jackson, 2004; Zoogah, Peng, & Woldu, 2015).

MNEs face formal and informal institutions when investing in Africa. The formal institutional factor that have the most significant influence on MNEs is the economic liberalization that

establishes property rights through which foreign investors can acquire and use property (Mbaku, 2004). Economic reforms in many African countries have opened investment opportunities to MNEs in traditionally state owned industries, which is encouraged by the World Bank (Cook & Kirkpatrick, 1995). For instance, in the traditionally state owned energy sector, Suez Gulf power plant in Egypt was invested in 2003 by Tanjong from Malaysia. CEPSA and Iberdrola from Spain invested in the Medgaz Pipeline in Algeria in 2006. The Orange Tunisie project in Tunisia was invested in 2009 by France Telecom. Successful compliance of institutional factors, however, depends not only on the formal contractual form, but also on the informal practices in inter-partner relationships (Contractor, Woodley, & Piepenbrink, 2011; Iriyama & Madhavan, 2014; van Kranenburg, Hagedoorn, & Lorenz-Orlean, 2014).

There has been some research investigating the relationship between MNEs and SOEs in a host country, but most of the research has focused on East Asia (Bruton, Peng, Ahlstrom, Stan, & Xu, 2015; Carney & Child, 2012; Ralston, Terpstra-Tong, Terpstra, Wang, & Egri, 2006). Research on MNE-SOE relationship tends to study SOEs seeking to operate more as private entities (Bruton *et al.*, 2015). In this study, our focus on institutional legitimacy of MNE-SOE relationship allows us to examine the choice and consequence of MNEs' organizational forms in Africa. First, we explore how MNEs secure legitimacy in formal institutions by conforming to accepted organizational forms. Second, we examine inter-partner transaction costs in MNEs' investments and discuss challenges of maintaining legitimacy in informal institutions. In the MNE literature, the MNE-host country relationship has been an important research issue for decades (e.g., Kobrin, 1979; Vernon, 1971). We advance the literature on MNE in developing countries, and MNE in Africa particularly, by deconstructing MNE organizational forms from the perspective of institutional legitimacy.

Drawing from institutional theory and transaction cost economics (TCE), we ask the research questions: What organizational forms do MNEs employ when they invest in Africa? Are MNEs' adopted organizational forms in Africa adaptive or maladaptive? This study contributes to the literature by positing organizational form as drivers of institutional legitimacy and inter-partner relationships to account for unexplored questions in FDI in Africa.

THEORY AND HYPOTHESIS

Gaining Legitimacy in Formal Institutions

Some scholars argue that institutional theory is the most applicable paradigm for explaining firm behavior in developing economies (Shenkar & Von Glinow, 1994), especially in Africa (Zoogah *et al.*, 2015). The effectiveness of FDI in Africa depends on the institutional environment. As discussed by Williamson (1985) and North (1990), institutions are developed by societies to create order and reduce uncertainty in promoting economic exchange and coordination. Institutional theories have emphasized that many dynamics in the organizational environment stem from regulations, norms, and rituals (DiMaggio & Powell, 1983; North, 1990; Powell & DiMaggio, 1991).

A key proposition of institutional theory is that organizations seek legitimacy within a socially constructed value system (Suchman, 1995). Legitimacy from institutions is grounded in the

assessments of stakeholders. Organizations secure legitimacy and support from stakeholders by conforming to existing practices (Scott, 1995). Institutional legitimacy is especially complex in the case of MNEs in Africa due to the challenge of establishing and maintaining legitimacy in the host country (Kostova & Zaheer, 1999).

Institutional theorists depict that organizations gain legitimacy from external institutions and the environment construct the organization (DiMaggio & Powell, 1983; Meyer & Rowan, 1991). Institutional considerations favor organizations that "play by the rules". As such, MNEs gain legitimacy in formal institutions by conforming to formal requirements and prevailing standards (Scott, 1995).

The challenge of gaining legitimacy applies to new entrants since formal institutions establish the permissible range of entry choices (Meyer, Estrin, Bhaumik, & Peng, 2009). Institutional reforms of deregulation and privatization in Africa have opened investment opportunities to MNEs. World Bank and IMF imposed structural adjustment programs (SAPs) requiring privatization of SOEs in Africa (Babarinde, 2009; Jackson, 2013). Nevertheless, host governments often retain ownership of divested SOEs (Doh, Teegen, & Mudambi, 2004), and SOEs continue to play a major role in many privatized firms (Bortolotti & Faccio, 2009). Compared with greenfield investments, acquisition of SOEs promises an organizational form that internalizes transactions between MNEs and SOEs and involves host government decision-making. MNEs implicitly agree to partner with the host government through acquired SOEs, hence signal accepted behavior. By acquiring all or part of SOEs, MNEs adopt institutionally prescribed entry choice and also convey the message that they are acting in a proper and adequate manner (Meyer & Rowan, 1991).

MNEs may also invest in a joint venture project with host country SOEs. MNEs and the host government maintain autonomy but are bilaterally dependent in this hybrid organizational form. (Bruton *et al.*, 2015; Emmert & Crow, 1988; Inoue, Lazzarini, & Musacchio, 2013). A joint venture investment with SOEs presents a power-dependence relationship between the MNE and the host government. By forging partnerships with SOEs, MNEs respond to the concerns and interests of the host government by providing up-front payments, management skills, and technology (Chironga *et al.*, 2011).

To achieve legitimacy in formal institutions, organizations must demonstrate endeavors to conform to principals to involve stakeholders into organizational decision making (Pfeffer, 1981; Suchman, 1995). Among the most common of these approaches are efforts to embed practices in networks of the host government. Extending these arguments, we propose that formal institutional legitimacy has a profound impact on MNEs' choice of organizational form in Africa. In the context of MNEs' investments in Africa, permission to entry is based on the conformity of MNEs' organizational forms that support economic reforms but also offer decision-making access to the host government. Accordingly, we hypothesize as follows:

Hypothesis 1a: MNEs are more likely to acquire from SOEs than make greenfield investments in Africa.

Hypothesis 1b: MNEs are more likely to form joint ventures with host country SOEs when making greenfield investments in Africa.

Maintaining Legitimacy in Informal Institutions

There has been little research into the performance problems of MNEs' collaboration with local firms in developing countries (Beamish, 1994), in particular in Africa (Kamoche & Harvey, 2006). MNEs that adopt legitimate organizational forms may be granted entry to invest, because it is "the right organization for the job"; however, this sense of rightness has more to do with a good-faith effort to conform organizational identity than with demonstrations of capability (Suchman, 1995). Pursuing legitimacy in a narrowly instrumental way may result in unexpected consequences.

Maintaining legitimacy in informal institutions depends on informal practices and tacit social skills (Kamoche & Harvey, 2006; Rolfe & Woodward, 2004). MNEs make choices on how much effort they invest in social groups to earn social legitimacy (Darendeli & Hill, 2016). Economic reform in Africa has left gaps to be filled by social institutions (Cheru, 2002). In African industries that are newly open to foreign private investments, contribution to the social needs of the stakeholders are salient to gain successful relations with the host country (Luo, Shenkar, & Nyaw, 2002). MNEs face the liability of foreignness, due to their lack of indigenous knowledge of informal institutions (Zoogah *et al.*, 2015). An interesting informal institution in Africa is Ubuntu. Ubuntu is a pattern of behaviors that integrate members of the society into cohesive in-groups (Mbigi & Maree, 1995). Members share resources and create networks of social obligations within organizations (Mangaliso, 2001). With more than 1,000 ethnic groups, Africa has diverse organizational groups which may generate favoritism along ethnic lines (Nyambegera, 2002). Ethnic beliefs and identities derive from tribal practices (Zoogah *et al.*, 2015), which presents significant challenges to MNE managers negotiating tensions and conflicts among various organizational groups (Michalopoulos & Papaioannou, 2015). Creating cohesive in-groups is difficult, if not impossible, in MNE-SOE collaborated investments.

MNEs and SOEs represent different institutional logics. SOEs may be charged with achieving goals other than measures of market value such as employment generation or social stability (Battilana & Dorado, 2010; Bruton *et al.*, 2015). Community-based issues such as employment of local staffs (Wood, 2011), housing (Cheru, 2002), and orientation to local markets (Dartey-Baah & Amponsah-Tawiah, 2011) are of particular concern to African SOEs. Indigenous communities are determined to preserve their own cultural and social systems (Jackson, 2013). Therefore, it is challenging for MNEs to align interests and form cohesive social obligations with SOEs in these systems (Contractor & Reuer, 2014; Kogut & Zander, 1993; Williamson, 1991).

Research integrating TCE and institutional theory (Argyres & Liebeskind, 1999; Martinez & Dacin, 1999) has focused on the diversity of organizational forms across institutional environments. Traditional TCE theorists argue that high uncertainty increases the relative attractiveness of internal transactions and hybrids (Williamson, 1985). More recent research on inter-partner transaction costs, however, recognizes that internal transactions and hybrids can generate high costs depending on the inter-partner involvement (Contractor *et al.*, 2011; Iriyama & Madhavan, 2014; van Kranenburg *et al.*, 2014). While TCE posits that mutual consent (Williamson, 1991) and information disclosure (David & Han, 2004) absorbs misalignments in internal or hybrid organizational forms, research on inter-partner transaction has focused on coordination costs and appropriation concerns of relational-based collaborations (Gulati & Singh, 1998). Extending research on inter-partner transactions, we postulate that MNE-SOE collaboration in internal

transactions or hybrids suffer from high inter-partner transaction costs due to the difficulty of creating cohesive in-groups. Transaction uncertainty exists to the degree that transactions are unstandardized or unpredictable. In developing economies, the level of uncertainty is magnified because stable institutions have not yet fully developed, while the old order is being eroded at the same time (Peng, 2003). The weak enforcement of property rights in Africa (Michalopoulos & Papaioannou, 2015) and politically sensitive nature of private ownership (Vernon, 1971) creates substantial transaction uncertainties and coordination challenges between MNEs and SOEs. We argue that the internal and hybrid organizational forms intensify misaligned interests of MNEs and SOEs and decrease MNE legitimacy in informal institutions, hence, are more likely to distress the investment.

Studies often argue that foreign managers can learn from local partners (Quelch & Austin, 1993; van Kranenburg *et al.*, 2014), and research tends to assume incentives of collaboration in joint venture agreements (Contractor & Reuer, 2014). However, carefully chosen organizational forms that are conformed to the local environment may amount to little more than window dressing and circumvent substantive changes (DiMaggio & Powell, 1983; Meyer & Rowan, 1991). Moreover, host governments may only desire a symbolic response from MNEs, in order to further their own political objectives, which makes it more difficult to transfer knowledge within the multicultural and complex systems (Kogut & Zander, 1993).

Acquisition from SOEs exposes a firm to major challenges in managing the purchased business (Capron, Mitchell, & Swaminathan, 2001; Meyer *et al.*, 2009). The host government has to satisfy multiple political and social claims in managing SOEs (Zahra *et al.*, 2000). This template may still be deeply embedded in the former SOEs after acquisition. MNEs may associate their organizations with local stakeholders through acquisition or joint venture projects without incorporating the pragmatic concerns of exchange partners in the informal institution (Oliver, 1991). Therefore, acquisitions or joint ventures that internalize transactions between MNEs and SOEs and engage in host government involvement in Africa may intensify objective conflicts within the organization. We propose the following hypotheses:

Hypothesis 2a: In MNE's investments in Africa, acquisitions from SOEs are more likely to fail than greenfield projects.

Hypothesis 2b: In MNE's greenfield investments in Africa, joint ventures with SOEs are more likely to fail than investments without SOEs.

METHODOLOGY

Data

We test our hypotheses on a sample of private investment projects in the telecommunication industry in Africa. Mobile telephony has grown faster in Africa than any other region of the world in the late 1990s and early 2000s, with an average growth rate of 78% a year (Cuervo-Cazurra & Genc, 2008; White, 2003). The African telecommunication sector presents lucrative business opportunities and continues to develop with growing demand from “bottom of the pyramid” (Babarinde, 2009). Data is obtained from the Private Participation in Infrastructure database

collected by the World Bank. Investments in the data set occurred during the period 1992–2009. Investment occurs when private entities agreed to a legally binding agreement to invest funds or provide services. We apply a binomial regression model in the analysis.

A total of 159 out of 1,153 projects in the database have missing data and are excluded. We have 964 private investment projects in 47 African countries in the data set. We distinguish various organizational forms of the investments. In acquisition, private entities acquire ownership and control rights of the SOE through an asset sale, public offering, or mass privatization program. For example, France Telecom acquired part of MobiNil in Egypt in 1998. In greenfield investments, private investors build and operate a new facility. For instance, Vodafone from UK made a greenfield investment in Vodafone Egypt in 1998. There are 127 acquisitions and 837 greenfield investments in the data set. Among MNEs' greenfield investments, 209 of them are MNE-SOE joint ventures. For example, France Telecom and Investec Tunisia's greenfield investment in Orange Tunisie in 2009 is a joint venture. With 67 investment projects, Nigeria hosts the highest number of investments.

Dependent and Independent Variables

Our hypotheses associate various organizational forms with MNEs' investments in Africa, and then predict the consequence of these organizational forms. *Acquisition* and *MNE-SOE joint venture*, representing two organizational forms, are dependent variables in hypotheses 1a and 1b; but independent variables in hypotheses 2a and 2b.

Acquisition. Acquisition is coded '1' if the investment is an acquisition, and '0' if it is a greenfield investment.

MNE-SOE joint venture. MNE-SOE joint venture (MNE-SOE JV) is coded '1' if an MNE forms a joint venture with an SOE in a greenfield project, and '0' if no SOEs are involved in the greenfield investment.

MNE. Private investments in the telecommunication industry in Africa come from all over the world. MNE is coded '1' if there are investors from a foreign country and '0' if all investors are domestic.

Failure. The dependent variable in hypotheses 2a and 2b represents the performance of the investments. The data set recognizes the status of the investment projects. Investments that are under construction, operational, or concluded are considered as survived projects. Distressed and canceled projects are considered as failed projects. In distressed projects, the government or the operator has either requested contract termination or are in international arbitration. In canceled projects, private investors have existed by removing all management and personnel. The dependent variable, *failure*, is coded '1' if the investment project is cancelled or distressed, and '0' otherwise.

Control Variables

It is crucial to control for unobserved heterogeneity. Market-supporting institutions may become stronger over time because of cumulative reforms undertaken with individual privatization

transactions (Ramamurti, 2000). Given the institutional development over time, recent privatization projects may be less likely to fail. There is a possibility that newly privatized projects, although still under construction now, might have problems in the future given enough time of observation. Since we only observe the status of projects till 2009, there might be a failure bias towards earlier privatized projects. It is also possible that new technologies arise over time that lower the transaction costs present in markets (David & Han, 2004). We control for the year lapsed (*Year*) from when the projects were set up till 2009 to reduce this problem.

Private investments make payments to the government to acquire SOEs, secure rights to provide services or use specific radio spectrums. We control for payments to the host government and total investment, recorded in hundreds of millions of US dollars. Dummy variables are included to indicate whether or not the project is supported by a bank (*bank supported*) and are traded publicly (*publicly traded*).

RESULTS

Table 1 presents the descriptive statistics and the correlation matrix. The values of variance inflation factor (VIF) are all below 3, indicating that multicollinearity is not a problem.

Table 1. Descriptive Statistics and Correlations for All Variables (N=964)

* Significant at 5% level

Variables	Mean	s.d.	1	2	3	4	5	6	7	8
1. MNE	0.90	0.30								
2. Acquisition	0.13	0.34	0.11***							
3. MNE-SOE JV	0.33	0.50	0.09**	0.43***						
4. Failure	0.06	0.23	0.05	0.09**	0.16***					
5. Payments to host gov	0.23	1.73	-0.01	0.16***	0.12***	-0.01				
6. Total investment	0.95	2.38	-0.06	0.12***	0.14***	-0.06	0.77***			
7. Year	10.87	3.34	0.08*	-0.08*	0.12***	0.13***	-0.14***	-0.08**		
8. Bank support	0.27	0.44	0.12***	-0.02	-0.06	-0.10**	-0.04	-0.02	0.12***	
9. Publicly traded	0.06	0.25	-0.16***	0.36***	0.18***	-0.03	0.17***	0.30***	0.13***	-0.05

** Significant at 1% level.

*** Significant at 0.1% level.

A logit model is employed to relate MNEs' investments to the organizational forms. Table 2 provides the results for the analysis. The chi-square tests for the variables are significant at p-value of 0.001. The coefficients in Model 1a are interpreted as affecting the odds of acquisition investments, relative to greenfield investments. The results in Model 1a show that MNE investments are significantly associated with acquisitions. This suggests that MNEs, compared with domestic companies, are more likely to acquire from SOEs than make greenfield investments. We further investigate organizational forms of MNEs in greenfield investments in Model 1b. The

coefficients in Model 1b are interpreted as affecting the odds of MNEs' investments taking the form of MNE-SOE joint ventures in greenfield projects. The results show that MNEs, compared with domestic companies, are more likely to form joint ventures with SOEs in greenfield investments. Hypotheses 1a and 1b are both supported.

Table 2. Results of Logit Models Predicting MNEs' Preferences

Variable	Model 1a	Model 1b
MNE	3.51***	0.70*
Payments to host government	0.44**	0.01
Total investment	-0.36**	0.17**
Year	-0.10**	0.16***
Bank support	-0.17	-0.20
Publicly traded	4.03***	0.64
Constant	-4.34***	-3.74***
N	964	837
Pseudo R2	0.19	0.07

*p<0.05 **p<0.01 ***p<0.001

Model 1a: MNE's preference for acquisition versus greenfield investments.

Model 1b: MNE's preference for MNE-SOE joint venture versus non joint venture greenfield investments.

The performance of MNEs adopting various organizational forms is examined in Table 3. We predicted that organizational forms that engage in SOEs involvement, either in the form of acquisition or through MNE-SOE joint venture, have a negative impact on firm performance. Our results support this prediction. Acquisition is significantly associated with investment failure in Model 2a and MNE-SOE joint venture is significantly associated with investment failure in Model 2b. Hypotheses 2a and 2b are both supported.

Table 3. Results of Logit Models Predicting Failure of MNEs' Investments

Variable	Model 2a	Model 2b
Acquisition	1.02**	
MNE-SOE JV		1.03**
Payments to host government	0.52	-2.50
Total investment	0.62*	-1.05*
Year	0.27***	0.23**
Bank support	-1.47**	-1.93**
Constant	-5.61***	
N	827	735
Pseudo R2	0.14	0.17

*p<0.05 **p<0.01 ***p<0.001

Note: Variable *publicly traded* predicts survival of MNE investments perfectly, and is dropped.

In the context of investments in Africa, our results suggest that MNEs tend to adopt organizational forms necessitating cooperation with former SOEs or current SOEs. These chosen organizational forms may be well intended for gaining legitimacy and acquiring local knowledge. Nevertheless, solutions in African countries may have been maladaptive. Our findings show that MNEs' preferred organizational forms are more likely to end up in failure.

DISCUSSION AND CONCLUSION

There is a lack of study that addresses the effectiveness of various legitimacy strategies in institutional theory (Suchman, 1995). The deficiency of research on organizational effectiveness in the African context is heightened by the increasing influx of diverse private and state-owned organizations (Zoogah *et al.*, 2015). In response to the call for research on investing in Africa, we deconstruct MNEs' organizational forms and their effectiveness in Africa primarily through two theoretical building blocks: institutional legitimacy and transaction costs. This study extends current understanding of MNE legitimacy in Africa by focusing on the relationship between MNEs and host country SOEs. We argue that inter-partner transaction costs in the informal institutional environment are significant when MNEs collaborate with SOEs in Africa. Our results show that MNEs tend to enter Africa with organizational forms that gain legitimacy in the formal institutional environment. Nevertheless, the legitimate organizational forms in formal institutions may lack the organizational competence to successfully manage inter-partner relationships in informal institutions. There is need for MNEs to gain knowledge of institutions in Africa within which the business interactions with SOEs are shaped (Kamoche & Harvey, 2006).

This study also contributes to the international management literature by integrating institutional theory and TCE in the setting of developing economies. Research has recognized transaction costs when foreign investors negotiate with government authorities (Meyer *et al.*, 2009). We focus on the MNE-SOE relationship and apply it to a spectrum of organizational forms. MNEs face the complexity of transactions and post-entry conditions in developing economies (Hoskisson *et al.*, 2000). MNEs in Africa suffer from high costs of managing different ethnic groups or SOEs with drastically different cultural and social obligations. We find that inter-partner transaction costs are high when MNEs collaborate with host country SOEs and their investments are more likely to end up in distress. This result is in line with the findings of van Kranenburg *et al.* (2014) who found high transaction costs in equity-based partnerships.

Managerial implications are evident for MNEs seeking for investments in Africa. First, our findings suggest that acquisition of SOEs and MNE-SOE joint ventures are likely to result in disputes or termination. Perhaps non-equity based collaborations with SOEs present less risk to inexperienced MNEs, since non-equity based collaborations require less inter-partner involvement than equity-based alliances (Gulati & Singh, 1998; van Kranenburg *et al.*, 2014). Second, gaining legitimacy in the African market is an encouraging first step. But there is still a long way to go for MNEs to maintain legitimacy by developing capabilities to effectively manage MNE-SOE relationships.

Our study has a number of limitations. First, research has recognized ownership changes after the inception of international joint ventures (Chung & Beamish, 2010; Folta & Miller, 2002). This study does not focus on the transformations of organizational form, therefore, does not capture possible impact from longitudinal changes. Second, this study investigates the challenges of MNEs maintaining legitimacy in Africa. Although indicating possible solutions for improving legitimacy in the informal institution, we do not provide empirical tests of mechanisms to repair legitimacy. Darendeli & Hill (2016)'s suggestion of a social path to MNEs' legitimacy in Libya may be applicable to MNEs in countries with significant political risk. Third, the country of origin of MNEs may have critical impact on MNEs' investments in Africa. MTN, Africa's largest cellular service operator from South Africa, has made frequent acquisition and greenfield investments in many African countries. MTN invested projects are all operational in our dataset. The country of origin effect is beyond the scope of this study, but may provide insights to research on MNE legitimacy in Africa. Many research opportunities exist to probe deeper into international collaborations (Williamson, 1991).

Institutional factors in Africa such as regulations, culture, and norms continue to interact with industry and foreign investments to influence legitimacy of organizational forms (Collier & Gunning, 1999). The need to study MNEs in Africa and their relationship with local stakeholders is growing in importance within international management. With countries in Africa becoming more integrated into the global economy, business in Africa is shaped by a changing environment. Future research examining organizational forms in Africa that are legitimate in economic, political, and social terms will continue to extend our understanding of doing business in Africa within a dynamic context.

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DEFENDING PROFESSIONALISM: EXPLORING ACCOUNTING STEREOTYPES IN AMERICAN MOVIES

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ABSTRACT

American moviemakers strive to create shows that attract the movie viewing population. This creation often includes intensive story lines, interesting topics, and popular characters or actors. Often, the dramatization overemphasizes commonly-held beliefs the audience expects. By contrast, the accounting profession wants to portray the most professional manner possible. Often the profession highlights characteristics the profession believes desirable, such as integrity. This clash in portrayals is a phenomenon studied by researchers. Little research exists today on this subject. Researchers developed a list of eight common stereotypes portrayed in American movies based on profession expectations, the view the public has of accountants and portrayal of accountants in American movies. This research studied 17 American movies released since 1982 featuring strong accounting characters. Researchers measured movies against eight common accounting stereotypes. This research found; American movies glamorize the profession. It also found that American movies heighten professional traits and American filmmakers manipulate the accounting professional's greatest strength of integrity into a weakness for individual accountants.

Keywords: accounting, stereotypes, profession, social class, accountants

INTRODUCTION

Life isn't always entertaining. Movies can be entertaining. To earn a \$7-\$15 ticket price moviegoers want to see something entertaining. What do audiences want in a movie? Though little research exists on this topic specifically, much research occurred on movies that viewers have already seen. One main attraction is the "movie star." Another reason is the viewer's "personal reasons." One goal for filmmakers is to match a viewer's personal reasons with the characteristics of the movie star (Papadopoulos, 2001). One-way to achieve this match is to reinforce viewer expectations of the main character with expectations of the movie star. Though it is normal to expect actors to have similar traits to the occupations they represent, it is an industry best practice to "heighten" those traits (Barrett & Van Buuren, 2015).

Professionalism is important in the business world. Professionalism is also important to accountants. Since accountants handle an organization's financial information, an agency relationship exists. This success of this agency is dependent on the profession having integrity (Gunz, & Thorne, 2017). Intentionally misstating financial records or engaging in fraud can lead to criminal prosecution and jail time. Shareholders of the entities also rely on accountants to ensure the financial statements they receive accurately portray business operations. Accounting is a detail-

oriented profession that needs adherence to accounting standards. Displaying professionalism is considered symbolic of the accounting profession itself. Often common traits include: neat and tidy, detailed, serious, prompt, competent, and ethical (Gunz, & Thorne, 2017).

Professions survey stereotypes for several reasons. Stereotypes funnel individuals into categories. Often stereotypes both positive and negative, are untrue. Every individual is different and comes with varying sets of skills; stereotyping removes the individual of the profession and lumps everyone into the same mold (Widad, 2015). Stereotypes linger and create an inaccurate depiction.

Accountants should be aware of common stereotypes. One reason would be to distance oneself from negative stereotypes. For example, when accountants are viewed as “crooks,” a conscious effort should be made to highlight ethical behavior. With knowledge of stereotypes, accountants can strive to reverse negative stereotypes. Possibly the most important reason would be to educate young people who are deciding if they want to enter the profession. Stereotypes influence college students resulting in many students feeling like they do not belong. Many students have felt a calling and aptitude for accounting but stayed away from the profession as a result of stereotypes. Removing negative stereotypes will benefit the profession in the long-term (McGrath, & Murphy, 2016).

Many stereotypes about accountants exist. Stereotypes can be positive or negative. Portrayal often includes accountants as boring and socially awkward individuals. Many assume accountants lack social skills, this comes across as if the accountants are nerdy and conservative, staying away from risky, adventurous behavior. Many people consider accountants introverts. This stereotype comes from accountants spending a significant time sitting behind a desk, not socializing. Other stereotypes portray accountants as corrupt and discreditable. Since accountants handle money, the public assumes accountants are a large part of the 2008 financial crisis. With much of an accountants time spent crunching numbers, they are also seen as lacking critical thinking skills (Richardson, Dellaportas, Perera, & Richardson, 2015).

A growing and increasingly important trend in professionalism is the portrayal of a member's competence to the public (Tsetsura, Bentley, & Newcomb, 2015). Portrayals come from many sources including television, movies, jokes, social media and by the profession itself (Farrow, 2012). The profession's need for accurate portrayal serves as the theoretical framework for this research. Teachers in accounting have found that many students have an interest and an aptitude for accounting, the highest paid profession in business schools (Payscale, 2018). Unfortunately, some shy away because of fear of being labeled a “bean counter” or a “nerd” by other students (Richardson, Dellaportas, Perera, & Richardson, 2015).

Media images influence self-identity, affecting the way we see others. An example would be a person's view of gender roles and those beliefs connect to gender identity. Through social media, identifying with others and adopting different perspectives molds self-identity and attitudes while experiencing social reality. (Erikson, 1968). Interpreting identification can be done in a few ways. A character's qualities and feelings are focal, but, identification is sharing qualities, feelings, and perspective with the character, rather than simply spectating (Cohen, 2001).

Movie directors complete audience identification through their communication of character qualities. The film viewer's act of identification comes from specifically watching the movie and projecting characteristics. Identification does not occur based on the character itself. As a result, several reasons influence a character's identification. These include camera positions, clothing, personality characteristics, and so forth (Cohen, 2001).

Similarly, perceived realism of a character will promote identification. As Press (1989) showed, views are an important part of character development. Personality portrayal is effective when the director matches the character to viewer stereotypes. It is unnecessary for the character's behavior to match real-life situations (Cohen, 2001).

Without the best available young talent entering programs that suit their professional interests and personal skill strengths, society is hindering these young people and failing to use talent in ways that benefit society. With an expanded body of knowledge on this subject, the accounting profession can work to mitigate the effects of inaccurate stereotyping. Mitigation can occur several ways. These include: public service announcements, educational outreach, continuing professional development and leadership conferences (Parker & Warren, 2017).

The researchers believe it is important to understand portrayal of accountants in movies. Understanding views enables the profession to take focused action. The profession can either improve that portrayal or work to reduce harm. Also, individuals working in the profession can take action. Firm marketing efforts or volunteer efforts can seek to enhance not only the organization but also the industry.

The remainder of this work is organized into the following four sections. First, there is a literature review looking at prior literature that informs this study. The next section includes methodology, including both the research question and experiment design. The third section includes the research findings. Finally, the research ends with conclusions, including limitations and future research.

REVIEW OF LITERATURE

Moviegoers want to see films that are entertaining. Professionals want to be viewed as positively as possible. The challenge is when these two items clash. To better understand this clash, it is important to understand the profession's expectations of membership and moviegoer's expectation of filmmakers. The accounting profession has a well-defined professional structure. This structure was created and is maintained by the American Institute of Certified Public Accountants (AICPA) (About the AICPA, 2017).

Founded in 1887, the AICPA is the central representation of over 386,000 members in 128 countries. The AICPA is a rule-making and standard-setting body that oversees and enforces its membership. The body ensures competence and ethics are practiced in the profession (About the AICPA, 2017). The profession also has a goal of portraying its membership in the best light available (AICPA Code of Professional Conduct, 2015).

The View the Accounting Profession wants to Portray (AICPA)

The AICPA is a membership-driven organization. With this membership, the profession regulates the application of the accounting roles commonly referred to as Generally Accepted Accounting Principles (GAAP) and enforces its Code of Professional Conduct. The AICPA Code of Professional Conduct provides expectations for members to follow when performing professional responsibilities. Public opinion is important to the accounting profession. The Code of Professional Conduct has several items of expected behavior related to meeting the public's trust. These items include; acting in the public interest, integrity, objectivity and independence, due care and acts discreditable to the profession (AICPA Code of Professional Conduct, 2015).

Public Interest

Section 0.300.030.01 of the AICPA Code of Professional Conduct references the profession's expectation for acting in the public's interest. This Code communicates the expectation that accountants must be committed to the profession. With this the profession expects accountants to act in the public's best interest. Alternatively, this means accountants cannot use their position to act in their own interest. This concept includes enabling accountants to use personal creativity on-the-job. Instead, accountants must use professional guides and best practices. Specific language from the Code is: "The public interest principle" (AICPA Code of Professional Conduct, 2015).

Integrity

Section 0.300.040.01 of the AICPA Code of Professional Conduct references the profession's expectation about the integrity of accountants. Specific language from the Code includes: "Integrity principle. To preserve and broaden public confidence, members should perform all professional responsibilities with the highest sense of integrity" (AICPA Code of Professional Conduct, 2015). This means that a member must conduct themselves with honesty and sound moral judgment.

Objectivity and Independence

Sections 0.300.050.01 and 0.300.030.02 of the AICPA Code of Professional Conduct references the profession's expectation about required objectivity and independence. This means that a public accountant must act as a third-party agent rather than for the financial statement disseminator or financial statement user (Boylan & Boylan, 2017). The specific language from Section 01 of the Code is: "Objectivity and independence principle. A member should preserve objectivity and be free of conflicts of interest in discharging professional responsibilities. A member in public practice should be independent in fact and appearance when providing auditing and other attestation services" (AICPA Code of Professional Conduct, 2015) and Section 02 reads: "Independence precludes relationships that appear to impair a member's objectivity in rendering attestation services" (AICPA Code of Professional Conduct, 2015).

Due Care and Acts Discreditable

Section 0.300.060.01 of the AICPA Code of Professional Conduct references the profession's expectation in regards to due care (0.300.060.01) and Acts Discreditable to the profession (1.400.001.01). This means professionals must act in a competent, passive manner that uses the profession's rules as a guide rather than personal opinion or goals. For due care, the Code reads: "Due care principle. A member should follow the profession's technical and ethical standards, strive continually to improve competence and the quality of services and discharge professional responsibility to the best of the member's ability" (AICPA Code of Professional Conduct, 2015). On the acts discreditable mandate to Code states: "A member shall not commit an act discreditable to the profession" (AICPA Code of Professional Conduct, 2015).

The AICPA also works to dispel negative views of the profession. Working with two partners, Robert Half and Accountemps, they created five stereotypes to minimize. These stereotypes include accountants being; nerds, boring, only able to do taxes, hermits and tightwads (Half, 2017).

Nerds

Accountants typically are good at math. Though accountants are good at math, this stereotype is used to belittle the profession's members by projecting an image that public accountants cannot do other tasks (Half, 2017).

Boring

Many stereotype accountants as boring. This stereotype fails to recognize the variety of tasks completed and the array of interests' professionals possess. These traits range from introverted to extroverted, from quiet to loud and from serious to funny, to name a few (Half, 2017).

Only Do Taxes

One stereotype that exists is accountants only complete the task of "doing taxes." This oversimplification provides a shallow perspective many have of the profession (Half, 2017). In reality, accountants perform various tasks including financial statement preparation, white-collar crime analysis, price setting, auditing and investing in securities (Plumlee, Rixom, & Rosman, 2015).

Hermits

Many feel accountants are inherently introverted. In fact, accountants need to work with both clients, and third parties such as banks and other accounting firms to complete their duties (Half, 2017). Uncovering white-collar crime and fraud is a task that relies on strong social skills. Additionally, both accounting firms and the profession encourage community engagement through volunteering. The service ranges from remodeling homes to serving as financial coordinators on boards of directors (Laffie, 2007).

Tightwads

A common assumption about public accountants is they are tightwads (Half, 2017); perhaps a remnant of the classic story “a Christmas Carol.” This tale portrayed the greed of accountants by its main characters Ebenezer Scrooge, Jacob Marley and Bob Cratchet (Dickens & Mayer, 1986).

Table 1. Summary List of Professional Expectations or Stereotypes of the Accounting Profession and an Identifier or whether the item is Positive or Negative

Professional Expectation or Stereotype	Trait Type
Public Interest	Positive
Integrity	Positive
Objectivity or Independence	Positive
Due Care or Acts Discreditable	Positive
Nerds	Negative
Boring	Negative
Only Do Taxes	Negative
Hermits	Negative
Tightwads	Negative

Table 1 shows the list of professional expectations (AICPA Code of Professional Conduct, 2015) or stereotypes of the accounting profession (Half, 2017). The Table also labels the trait positive or negative. This list includes four positive traits and five negative traits. These traits range from professional, by exercising due care or avoiding from acts considered discreditable to the profession, to personality. Some of the personality traits include the label of nerd and tightwad.

The Perception the Public has of Accountants (Stereotype)

This research examines how both the business world and popular media perceive accountants. Many stereotypes are based on physical characteristics and personality. The accounting profession is also judged by its job-specific responsibilities and ethics. Traits accountants hold are both positive and negative. Positive labels from the business world include honest, ethical, and trusted professionals. The negative opinions gain emphasis as media portrays accountants as dull, deceptive, and lifeless (Richardson et al., 2015).

This research also examines the perspectives university students have of auditors in today's world. A traditional view of auditors is they are trustworthy. This opinion changed when several corporate scandals erupted. Many of the scandals highlighted auditor failure. These included failure to issue a Going Concern for bankrupt firms, negligence in reporting negative information, and a general feeling of bias. From this stereotype rose labeling auditors as deceitful and fraudulent. Measures are being taken to change the view of up and coming auditors. College students are being asked to shadow the daily operations of auditors. Surveys then discover if views have changed. This study is hoping to preserve the bright, young talent that negative stereotypes within the profession are disillusioning (Begoña, Cristina del & María-del-Mar, 2017).

Table 2. Summary List of Common Stereotypes of Accountants in Public Perception from Peer-Reviewed Articles

Stereotype			
dull	uncreative	trusted	boring
socially inept	obsessive	accurate	weak
precision	detailed	managerial	passive
conservative	vigilant	prudent	corrupt
disciplined	shallow	articulate	ethical
critical judgment	analytical	introverted	honest

Table 2 Summary List of Common Stereotypes of Accountants in Public Perception from Peer-Reviewed Articles. Common stereotypes include 24 items of professional and personal traits (Begoña, Cristina del & María-del-Mar, 2017). Table1 includes many of these items. Table 2 also includes additional items such as accuracy, articulate and critical judgment.

The Portrayal of Accountants in American Movies

Out of all the popular media (music, advertisements, stories, likenesses of jokes, books, business press, and film), movies portray accountants in the most negative light. Movies are the single most influential visual media and have a large ability to influence prevalent views. In movies, accountants are typically cast as the main character. When accountants are characters they are often comedic and portrayed as nerdy, socially awkward, passive individuals. When accountants are main characters, they often display negative stereotypes including corruption and deceit with immoral motives (Richardson et al., 2015). A list of those common stereotypes is presented in Table 3.

Table 3. Summary List of Common Stereotypes of Accountants Portrayed in the Movies

Stereotype			
dull	unimaginative	aloof	boring
socially inept	Nerd	having integrity	fraudulent
physically awkward	Incompetent	lifeless	passive
conservative	Confident	pathetic	corrupt
misleading/liar	Shallow	deceitful	callous
deceptive	Sociable	obsessive	honest

Table 3 Summary List of Common Stereotypes of Accountants Portrayed in the Movies. Common stereotypes include 24 items of both professional and personal traits (Barrett & Van Buuren, 2015). Table 1 and Table 2 include many of these items. This list includes some added items such as callous, pathetic and physically awkward.

METHOD

This research focused on discovering impact of portrayed stereotypes of accountants in American movies. Researchers searched Google.com and the IMDb.com databases to discover American movies that featured an accountant as the main character or a supporting character. Identifying seventeen movies featuring accountants occurred. Researchers then developed a detailed list of movies, the character researched, the actor that played the character and the movie release date (or first shown in theaters).

Table 4. List of Movies with an Accountant as the main character
(including actor name) by Year

Movie	Character Name	Actor Name	Year Released
The Accountant	Christian Wolf	Ben Affleck	2016
Central Intelligence	Calvin Joyner	Kevin Hart	2016
The Other Guys	Allen Gamble	Will Ferrell	2010
Stranger than Fiction	Harold Crick	Will Ferrell	2006
Hitch	Albert Brennaman	Kevin James	2005
The Producers	Leo Bloom	Matthew Broderick	2005
The Royal Tenenbaums	Henry Sherman	Danny Glover	2001
Office Space	Milton Waddams	Stephen Root	1999
Dead Man	William Blake	Johnny Depp	1995
Nick of Time	Gene Watson	Johnny Depp	1995
The Shawshank Redemption	Andy Dufresne	Tim Robbins	1994
Schindler's List	Itzhak Stern	Ben Kingsley	1993
Midnight Run	Jonathan Mardukas	Charles Grodin	1988
Moonstruck	Loretta Castorini	Cher	1987
The Untouchables	Oscar Wallace	Oscar Martin Smith	1987
Ghostbusters	Louis Tully	Rick Moranis	1984
Night Shift	Chuck Lumley	Henry Winkler	1982

Table 4 shows the list of movies with an accountant as the main character (including actor name) by Year. Researchers created a list of eight stereotypes to judge public views of accountants. Frequently the movie did not distinguish between a licensed CPA and a non-CPA.

Researchers needed to merge several stereotypes into one manageable list. The consolidation was completed to avoid survey respondent fatigue by limiting the number of rating needed to be completed. For example, both the list created by using peer-reviewed articles about the view the public has of accountants and the list of stereotypes portrayed by accountants in American movies contained 24 items. Many terms described stereotypes. As a result, researchers need to identify descriptive phrases that were similar. The list developed is:

Table 5. List of Stereotypes Measured in this Research

Measured Stereotype	Trait Type
Ethical / Honesty / Integrity	Positive
Corrupt / Acts Discreditable	Negative
Physically Awkward / Nerd	Negative
Socially Awkward	Negative
Conservative / Tightwad	Negative
Uncreative / Shallow / Public Interest	Negative
Boring / Dull	Negative
Introvert / Passive/Due Care/Hermit	Negative

Table 5 shows the list of the research’s measured stereotypes. As the Table above shows, the list of stereotypes measured encompasses several related items. One such example is ethics using the traits of; ethical, honesty and integrity. Two categories specifically used language from the AICPA Code of Professional Conduct, including “uncreative” and “corrupt.” For the “uncreative” trait, “public interest” was added meaning the accountant may be uncreative because of following the rules of the profession’s Acting in the Public Interest expectation. Similarly, the “corrupt” trait also used the profession’s need of not performing “acts discreditable” to the profession.

Respondents were asked to score of each stereotype by watching YouTube.com trailers of each movie. After watching the trailers, respondents were asked to rank the eight stereotypes. On occasion the movie trailer was inadequate by not including the character playing the accountant. In this situation, researchers found short snippets of the movie to stream that included the accountant.

The survey respondents were two research seminar classes, fall, and spring, of senior accounting majors at an East Coast private university. There were 38 respondents including 14 in the fall and 24 in the spring. Students rated all 17 movies identified against all eight stereotypes. Researchers engaged a Likert Scale ranging from 1 to 5. Five represented the stereotype was “very strong” while 1 represented the trait was “very weak.” A score of 3 would identify the trait was average.

Researchers asked respondents one final question “have you met anyone in accounting that this person reminds you of?” Researchers used this question as a reasonableness check on whether movie characters resembled real life professionals. This question had the following available responses; “yes,” “no” or “not sure.” Descriptive statistics identified how the traits rate. Also, each movie was rated based on an overall score.

FINDINGS

This section provides the results of the research. The research measured eight traits with seventeen American films depicting accountants. Also, the question “have you met anyone in accounting this person reminds you of?” was asked as a “reasonableness check.” These findings are completed by first reviewing the key items necessary in the data collection process. Advanced analytics through descriptive statistics was conducted on the data with Microsoft Excel. Output was summarized by stereotype and movie. A summary of stereotype with the overall rating is included in Table 6 below:

Table 6. List of Stereotypes Measured in this Research by Rating

Measured Stereotype	Overall Mean Rating
Ethical / Honesty / Integrity	3.47
Corrupt / Acts Discreditable	2.93
Physically Awkward / Nerd	3.37
Socially Awkward	3.14
Conservative / Tightwad	3.15
Uncreative / Shallow / Public Interest	2.79
Boring / Dull	2.83
Introvert / Passive/Due Care/Hermit	2.74
Total	3.05

From Table 6, it can be seen the raters gave an overall total of over 3.05. This score is slightly above the average rating of 3.00. The stereotype with the highest score was "ethical/honesty/integrity" with a score of 3.47. The stereotype with the lowest score was "introvert/passive/ due care/hermit" with a rating of 2.74.

When considering the question "have you met anyone in accounting that this person reminds you of?" the researchers compiled the following results from those evaluating. The raters ranked the American movies with a mean value of 1.71. This included a low value of 1.56 and a high value of 1.89. The 95% Confidence Interval included the range from 1.65 to 1.82.

Table 7. List of Movies Measured in this Research by the Total of all Eight Ratings

Movie	Total Rating
The Accountant	3.01
Central Intelligence	2.71
The Other Guys	3.45
Stranger than Fiction	4.29
Hitch	3.80
The Producers	2.50
The Royal Tenenbaums	2.73
Office Space	2.38
Dead Man	2.28
Nick of Time	2.90
The Shawshank Redemption	2.88
Schindler's List	3.92
Midnight Run	2.44
Moonstruck	2.36
The Untouchables	3.31
Ghostbusters	4.04
Night Shift	2.86
Total	3.05

Table 7 shows the list of the research's reviewed American movie by rating. This information finds the raters gave an overall total of over 3.05. This is above the average rating of 3.00. The movie

with the highest score was the 2006 movie *Stranger than Fiction* where Will Ferrell played the head case Harold Crick with a score of overall score of 4.29. The movie with the lowest score was *Dead Man*. The movie was released in 1995 with Johnny Depp playing the accountant William Blake. This show scored 2.28.

One item that appeared is the use of extreme values. Researchers set a scale of 1 to 5. One represented “not at all” like this trait, 3 was equal to this character being average with the rest of society, and 5 representing a strong stereotype correlation. Considering raters tend to have a central tendency towards the average rather than extreme values, this research found raters did not shy away from the extreme values. The most frequently used score was 5. Raters used it 30% of the time. Interestingly the score 1 was used 23% of the time. This means the extreme values were used a combined 53%. In contrast the numbers: 2, 3 and 4 were used 47% of the time.

CONCLUSIONS

Overall, this research determined the portrayal of accountants in American movies did several things. These included over-glamorizing the profession, enhancement of professional traits, and belittlement of the professions hallmark characteristic, integrity. Additionally, the portrayal of accountants in movies goes to the point of being inconsistent with reality.

First, American movies glamorize the profession. For example, in the daily completion of financial tasks, accountants typically will perform the entry and posting of journal entries (Plumlee, Rixom, & Rosman, 2015). In none of the films reviewed did the actors perform these tasks. An example includes a character portrayed by Danny Glover in *The Royal Tenenbaums*. Here the description “extraordinary” and “geniuses” is used. A second example of this conclusion is the movie *Schlinder's List*. In this film, though a genuine film, portrays the work of an accountant as saving thousands of lives. Typical accountants rarely save people's lives or become war heroes.

Second, American movies enhanced professional traits. It is understood moviegoers are looking for something different from reality when attending a movie. Unfortunately, when characters did not portray “real life” professionals they became unrecognizable to accounting professionals. Often improvement took mundane concept like having a strong work ethic and turning it into a more extreme trait of being “dull.” One example included such as using “due care” or being a consciences employee and twisting to “passive” and “socially awkward.” Another involved being “conservative” or not overstating financial condition to reflecting “tightwad” characteristics. Other times this enhancement took a positive professional characteristic and turned it into a negative trait. For example, often “integrity” turns into “nerdy.” This conclusion is evidenced by the extreme values raters used.

Third, filmmakers belittle the profession's focus on integrity. Being a profession entrusted with other peoples' or organizations' money, the accounting profession understands professionals must be honest and ethical. Survey respondents felt that American filmmakers manipulate the professions strength into a weakness for typical accountants. In the movie *Hitch*, Alex “Hitch” Hitchens, played by Kevin James, plays a “bumbling client” with hopes to win the heart of “glamorous” Allegra Cole. Also, this research found the highest stereotype portrayed negatively

is that accountants are "physically awkward." The fast-moving profession of accounting relies on strong cognitive skills. No specific body type suits the profession.

Last, the portrayal of accountants in the movies is inconsistent with the traits professionals display. Researchers conclude the use of extreme personality types positively reinforced negative stereotypes. This study found those ranking stereotypes used extreme values, to describe accountants. This can be evidenced by raters using a ranking of either 1, 23% of the time, or 5, 30% of the time. An example of extreme portrayal can be seen in the movie *The Accountant*. In this show the portrayal of Christian Wolff, played by Ben Affleck is a "mathematical savant who fights dangerous criminal organizations with more of a liking for numbers than humans." Only seven percent of raters felt they knew someone like Christian Wolff. Considering the hundreds of professionals one meets in life, this shows an inaccurate portrayal. Another important conclusion is that accountants were either portrayed as extremely positive such as the saving of a city from evil portrayed in *Ghostbusters* or the scamming of a group of elderly women as portrayed in *The Producers*.

This research has several benefits. First, the accounting profession can review this information for possible self-perception bias. It would aid accountants to understand the nature of both negative and positive bias. The profession can then examine for accuracy, completeness, and misinformation. Accuracy is to find out if the actor traits match the traits professionals hold. Completeness entails the knowledge that a broad range of traits is displayed. In this range significant traits are not missing. When traits are not missing, viewers need not assume those traits. Often, in an attempt for transparency, the accounting profession provides a high-level of disclosure. It may be possible that transparency discloses too much information causing the user to generalize rather than take the time to understand. Likewise, disclosure materials should be reviewed to ensure misinformation is not communicated.

Second, the profession can watch public view bias. The profession may find that a small adjustment in message delivery could result in a large decrease in stereotypes. For example, when selecting an accountant to present the results of the Academy Awards show, an accountant with a small visible tattoo or piercing could decrease the stereotype of conservatism.

Last, the profession should understand the importance of creating a "halo effect" for membership. Individuals portrayed falsely run the risk of being labeled inaccurately. In this situation, the profession can develop a critical stance on the true profession by a marketing campaign. The lowest stereotype for the profession was "corrupt / acts discreditable." The profession can find satisfaction that the portrayal of accountants as "corrupt" is not entertaining.

This study included several limitations. One limitation includes individual actor characteristics could be more dominant than professional stereotypes. For example, viewers know Ben Affleck for his good looks and lifestyle while Johnny Depp for being typecast as a "pirate" and playing "antisocial" roles. Researchers weighted each movie equally regardless of box office revenues or impact. This fact kept researchers from making value assessments to the stereotyping. This limited the researcher's ability to decide a value to impact. A third limitation was the use of perceptions of the survey respondents. The use of opinions is subject to inconsistent interpretation.

This study has many opportunities for future research and research should continue full steam ahead. One such topic could focus research on the portrayal of accountants in television shows. Surveying stereotypes in television could garner important information because of the prolonged exposure of a long-running series and a perception of more extreme stereotyping that can occur. For example, reviewing the roles of Angela Martin (Angela Kinsey) and Kevin Malone (Brian Baumgartner) of *The Office* or Skyler White (Anna Gunn) from *Breaking Bad*. The accounting profession is relatively balanced male and female split. Of 17 movies researched, 16 of the accountants were male. As a result, future research could focus on why the profession is stereotyped as male dominated.

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A STUDY OF TEMPORAL DIMENSION OF ENTREPRENEURIAL INTENTION

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ABSTRACT

The temporal dimension of entrepreneurial intention is a less-studied but exciting research field. This paper examines the temporal aspect of entrepreneurial intention of university students between the U.S. and Chinese university students. Using the framework of planned behavior, we developed a model, in which the construct of entrepreneurial value and the construct of entrepreneurial involvement both positively influence short-term and long-term entrepreneurial intention. However, the impact is different. Entrepreneurial value is more positively associated with the short-term intention than the long-term intention. At the same time, entrepreneurial involvement produces a stronger impact on the long-term intention than the short-term one. When the temporal dimension of intention is examined between the U.S. and Chinese university students, the model suggests that Chinese university students are less likely to embark on the long-term intention than the U.S. university students. The survey method was applied. Students of one large university from a southern state of the U.S. and one large university from a southern province of China participated in the survey. Structural equation modeling was performed, results were examined, and discussions were presented.

Keywords: Entrepreneurial intention, temporal dimension, cultural effect

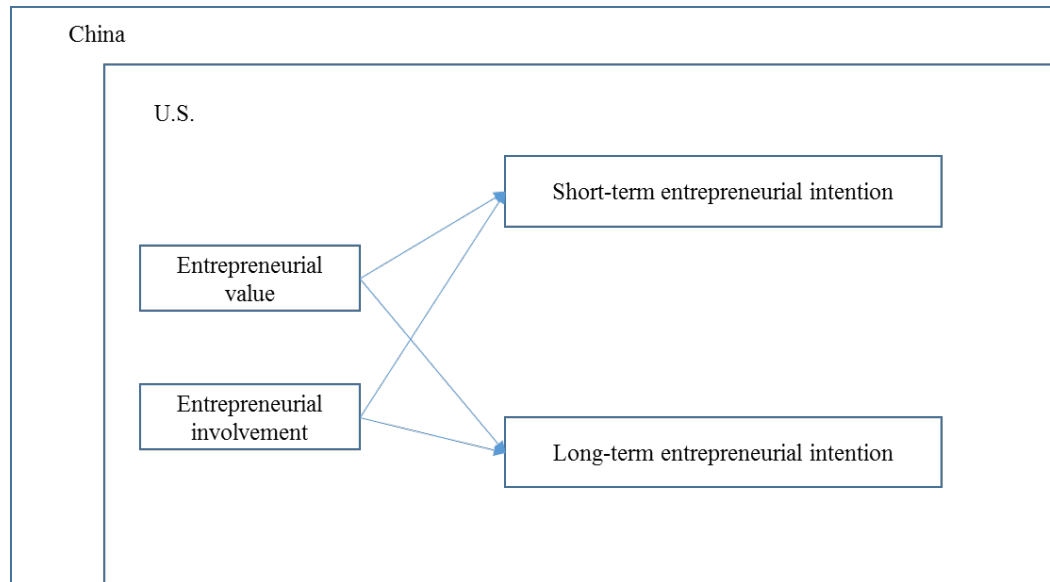
INTRODUCTION

Researchers pointed out that time plays a critical role in shaping risk-taking behavior (Das & Teng, 1997), and the intention to start a business is likely to be influenced by time. However, the entrepreneurial intention is often measured by the degree of the eagerness of individuals to start a business (Krueger, Reilly, & Carsrud, 2000), and thus the measurement does not reflect the time aspect of the intention. This paper aims to explore the temporal dimension of intention empirically.

The underlying argument of the two core constructs – *entrepreneurial value* and *entrepreneurial involvement* – is rooted in the framework of planned behavior (Ajzen, 1987, 1991). The planned behavior theory has been applied to understand entrepreneurial intention in various contexts (Bae, Qian, Miao, & Fiet, 2014; Lee, Wong, Foo, & Leung, 2011; McGee, Peterson, Mueller, & Sequeria, 2009; Zhang & Cain, 2017; Zhao, Seibert, & Hills, 2005). In our study, entrepreneurial value draws support from the importance of attitude according to planned behavior theory, and entrepreneurial involvement benefits from the core mechanism of the controlled behavior of the same theory. At the same time, research shows that national culture affects entrepreneurial

intention (Kreiser, Marino, Dickson, & Weaver, 2010; Shinnar, Giacomini, & Janssen, 2012; Siu & Lo, 2013), and we continue this line of inquiry by investigating how culture affects the temporal dimension of entrepreneurial intention between the U.S. and Chinese university students. The framework of this paper is presented in Figure 1.

Figure 1. The Framework



The contribution of this paper is twofold. First, it empirically explores the temporal dimension of entrepreneurial intention, and the results enhance our understanding of how time affects the likelihood of starting a venture. Second, this paper shows that national culture matters when we investigate the temporal dimension of entrepreneurial intention.

DRIVERS OF THE TEMPORAL DIMENSION OF ENTREPRENEURIAL INTENTION

Venture creation is a risky project. How individuals understand the effect of time shapes their risk-taking behavior (Lopes, 1996). Das and Teng (1997) have theoretically presented a framework of the temporal dimension of risk-taking among entrepreneurs. They argue that some entrepreneurs are averse to a type of risk known as “missing-the-boat”. These entrepreneurs will grab any opportunity to start a venture right away. Other entrepreneurs are averse to a type of risk known as “sinking-the-boat”, and will spend time validating their ideas before any action is taken. The former is referred to as the short-term venture creation and the latter as the long-term venture creation. Similarly, the intention to start a venture could also be defined as short-term intention and long-term intention. The short-term intention describes individuals who plan to start a business shortly, while the long-term intention describes individuals who consider venturing after an extended period.

How short-term or long-term entrepreneurial intention is linked to the actual behavior of starting a business is, however, less explored. It is tempting to argue that individuals with an intention to

start a business in the near future perhaps are more likely to do so than those with an intention in a five or ten-year horizon. The behavioral factors that could contribute to the short-term and long-term intention thus become interesting to explore.

The framework of planned behavior presents an argument for three behavioral factors represented by individual attitude, the perception of controlled behavior, and social norm (Ajzen, 1987, 1991). At the same time, modification of three factors is recommended to better understand a behavioral intention in a specific context (Ajzen, 1991). In the context of examining the temporal dimension of entrepreneurial intention in university students, we focus on two factors, attitude and a perception of controlled behavior, which support the two core constructs: *entrepreneurial value* and *entrepreneurial involvement*.

Attitude – Entrepreneurial Value

As one fundamental predictor of any future behavior, attitude describes a degree of a positive feeling toward that action, which supports further investigation of value underlying the emotional aspect of attitude (Ajzen, 1991). In the context of entrepreneurial intention, we thus examine entrepreneurial value that shapes and forms the positive attitude toward startups. Entrepreneurial value is based on a set of outcomes desired by individuals who plan to start a venture. There are five of them.

The first outcome is to what degree a startup could boost autonomy-seeking behavior in a working environment. Research shows that maximizing autonomy seems to be a typical behavioral trait of entrepreneurs (Bird & Jelinek, 1988; Brockhaus, 1982; McClelland, 1961). Individuals who prefer to start a venture, therefore, value the autonomy of running a business. Starting a business means entrepreneurs will perform multiple tasks in the business operation; they are the CEO of the firm, and at the same time, they are also the designer of the product, the accountant, and the sales manager. As a result, venturing is likely to create more responsibilities in what one does than working for somebody else.

Second, entrepreneurs desire more significant accomplishment than non-entrepreneurs, whether it be financial gains, reputation, operational control, or others (McClelland, 1965). In particular, impressive financial results from a venture are perhaps the most obvious outcome that sets the entrepreneur apart from other individuals. It is reasonable to suggest that individuals who plan to start a business embrace the idea of realizing greater financial gains. The degree of achieving more significant economic benefits is another critical part of the entrepreneurial value.

The third venture outcome concerns the level of personal satisfaction. Satisfaction could be achieved in the process of creating a sustainable market demand or conquering a challenging problem (Bird & Jelinek, 1988; Brockhaus, 1982; McClelland, 1961). Personal dissatisfaction in companies leads to individual employees' quitting the job and starting a business on their own (Lee et al., 2011). To realize personal satisfaction in the process of venturing is valuable for entrepreneurs.

The fourth outcome describes the degree to which one can enjoy his/her personal life while running a business. It is noticed that entrepreneurs' working schedule can adapt to their private time need,

such that the flexible schedule allows them to better enjoy their personal life (Bird & Jelinek, 1988). As a result, the degree to which one can enjoy the quality of personal life is also a valuable outcome.

Last, starting a business creates a self-employment opportunity when there are no available or suitable jobs around. Unemployment risk is, therefore, under control. The degree to which individuals could reduce unemployment risk by starting a business is thus desirable.

The construct of entrepreneurial value is supported by the claim that individuals' entrepreneurial intention needs to include specific and measurable values such that the clarity of the outcome makes the desire to start a business strong enough to face any interruption in the process of venturing (Bird, 1988; Shapero, 1982). The perception of the five outcomes can strengthen the characteristics of persistence and perseverance when entrepreneurs prepare for venturing that could be long and weary.

Regarding the impact of entrepreneurial value on the temporal dimension of intention, we argue that the construct of entrepreneurial value could be instrumental for short-term and long-term intention. Running a startup could be a long and weary process, but with a strong desire for entrepreneurial value presented earlier, this process becomes endurable (Bird, 1988; Shapero, 1982). Students who score high on entrepreneurial value are likely to start a business in both short-term and long-term horizons.

The degree of risk involved, however, differs between the short-term and long-term intention. Particularly, risk increases when the time spent waiting for an unknown action becomes longer (Lopes, 1996). Implicitly, the perceived risk of a long-term intention can be higher than that of a short-term one. Studies show that entrepreneurs are rational decision-makers who are likely to select a less risky alternative and, as a result, the desire to start a business becomes weaker when risk increases (Brockhaus, 1982; Palich & Bagby, 1995). The short-term intention, thus, is likely to gain more attractions than long-term intention. It leads to the first two hypotheses in the following:

Hypothesis 1.1: Entrepreneurial value is positively associated with both short-term and long-term entrepreneurial intention.

Hypothesis 1.2: The positive impact of entrepreneurial value on short-term intention is stronger than that on long-term intention.

Perception of Controlled Behavior – Entrepreneurial Involvement

Perception of control behavior describes confidence in performing the future action and supports constructs that focus on building abilities to carry out the future plan (Ajzen, 1991). Entrepreneurial involvement describes to what extent students participate in entrepreneurial activities designed to improve their startup skills, underscoring the core idea of the perception of controlled behavior. Moreover, entrepreneurial involvement connects the ability to what students can to hone their startup skills on campus.

There are various entrepreneurial activities for students to pick on campus. They could attend a business plan competition, join an incubator, and take seminars and workshops associated with specific entrepreneurial issues. The involvement can increase the perceived controlled behavior to start a business. For example, attending idea pitch or business plan competition could help students improve the quality of planning, and it may also increase chances to meet potential angels or VCs who show interests in their ideas. Similarly, attending a business incubator could guide individuals regarding how to start a business. Joining a business incubator can provide resources entrepreneurs need such as office space, business mentors, management training programs, etc. The high involvement could significantly enhance the ability to screen ideas, craft strategies, analyze business models, network with resource providers, and mitigate business risks.

The degree of entrepreneurial involvement reflects an internal locus of entrepreneurial intention (Katz & Gartner, 1986), where students who show active participation in entrepreneurial activities are likely to favor entrepreneurship. It is thus not difficult to establish the link between entrepreneurial involvement and entrepreneurial intention in the long-term and short-term horizon.

Regarding the effect of entrepreneurial involvement on the temporal dimension of intention, it is stronger for the long-term intention than for the short-term one. First, venturing involves a decision-making process, which evolves into a more complicated model after entrepreneurial learning (Minniti & Bygrave, 2001). A comprehensive understanding of entrepreneurship encourages students to spend the time to evaluate the opportunity instead follow their impulses to start a venture. Good luck helps, but learning is instrumental in a planned action. Second, researchers point out that entrepreneurial intention can be weakened by negative emotions like fear of loss (Gelderens, Kautonen, & Fink, 2015). Startups face a high level of failure rate, and careful planning such as market research and piloting at a small scale could reduce the failure rate. Long-term intention becomes more favorable than the short-term one. Put it differently, the risk of “sinking-the-boat” is likely to be perceived as higher than “missing-the-boat” for learners.

Hypothesis 2.1: Entrepreneurial involvement is positively associated with entrepreneurial intention.

Hypothesis 2.2: The positive impact of entrepreneurial involvement on long-term intention is stronger than that on short-term intention.

Role of Culture

Cultural values vary from country to country, explaining, in part, why different groups of individuals behave in specific ways (Hofstede, 1984). Hofstede has offered several cultural dimensions to evaluate the potential differences of cultural impact on behavior. Among the different cultural dimensions, power distance has shown a profound effect on the intention of starting a business (Mitchell, Smith, Seawright, & Morse, 2000; Shinnar et al., 2012; Siu & Lo, 2013).

Power distance describes that the extent to which individuals accept inequality in power and using it to guide behavior in the society (Hofstede, 1998; Hofstede, Hofstede, & Minkov, 2010). Venture creations demand access to resources, and scholars argue that power distance of a society matters

for resource acquisition. Individuals with power are perceived as having been blessed with access to more and better resources to start a venture, and while those without such a linkage may face less and poorer opportunities (Mitchell et al., 2000). The perception of the linkage thus varies between the few who are the elite of society and the mass population. The resources at the disposal of the mass with little social power to create ventures are comparatively inadequate, which can affect the type of business opportunities they pursue. For the mass population, it would be better off to jump at opportunities than to wait for the quality and quantity of opportunities are unlikely to improve over time. The advantage is more tuned to quick action to an opportunity. The group with social power, on the other hand, has little concern for the constraint of resources. The perception of the degree of inequality in power, therefore, influences the temporal tension of entrepreneurial intention.

In our context, it is noticed that the score of the perceived power distance in the U.S. is half the score in China (Hofstede, 1998), suggesting that Chinese are much more aware of the impact of power than their counterparts on resource accessibility and the ultimate choice between the long-term and short-term venture decision. The impact of power distance on the temporal tension of intention is two-fold. First, the heightened awareness of power is more likely to drive Chinese students away from the prospect of a long-term venture plan; they are more keenly aware of the disadvantage of resource accessibility if they choose to wait. Second, regarding the short-term intention, the advantage compared to the long-term is the ability to develop a quick response. Speed perhaps is more critical for those with little access to resources as the scope of advantages excludes the resource accessibility. Chinese students are less drawn to the prospect of a long-term venture plan than the U.S. students.

It is also noticed that “pleasure seeking”, “enjoying life”, and “becoming rich” are viewed as highly desirable (Faure & Fang, 2008), and being rich through entrepreneurial endeavors is even encouraged by the government (Huang, Liu, & Li, 2016). Younger generations are more likely to be inspired by stories of becoming rich overnight that could lead to a behavior avoiding “missing-the-boat” type of risk. These changes indicate that Chinese university students are less vigorous about a long-term venture plan than their U.S. counterparts.

Hypothesis 3: When examining entrepreneurial value, U.S. university students are more likely to start a venture in the long-term than Chinese university students.

Hypothesis 4: When examining entrepreneurial involvement, U.S. university students are more likely to start a venture in the long-term than Chinese university students.

METHODOLOGY

Data

This study has applied the survey method of data collection. Our subjects are undergraduate students from the business school of a large university from one southern state of the U.S. and one southern province of China. Using student samples in the field of entrepreneurship has been a practical approach (Shinnar et al., 2012). A self-administered questionnaire was used to collect data on a volunteer basis. The questionnaires were first developed in English, they were translated

into and verified by Chinese natives. To ensure the survey quality, a pilot study was conducted targeting students from these two countries. Wording and format were adjusted to reduce response errors (Fowler, 2002). Extra credit in the US and a small amount of monetary reward in China were used to entice volunteers taking the survey with good faith. The time of data collection spans a one-month period. 184 U.S. students received the survey, and 160 responded, giving a response rate of 89%. There were 141 Chinese students who received the survey, 98 responded for a response rate of 69%. This response rate is considered acceptable for the survey method.

Among the 258 responses collected, we have missing data under gender and entrepreneurial intention. The data size was therefore reduced to 222. In the final data, 64% of the respondents were American, and 54% were male students. Regarding the type of business majors, 31% of all students majored in accounting and finance, 23% in management, 16% in marketing, and 30% in other majors. Eighty percent of the respondents were between the age of 21 and 26, and 57% of them perceived their socioeconomic background to be the middle class. About half of the respondents finance their education using loans. The Kurtosis value for age is 2.4, indicating little variation in this variable, which is acceptable for this analysis as the survey targets a sample of senior university students. The values of Kurtosis and Skewness of the remaining variables are below 2, which is acceptable for further analysis.

Constructs

A seven-point Likert-type scale was used to capture the perception of agreement of statements regarding entrepreneurial intention in the short-term and long-term, entrepreneurial value, and entrepreneurial involvement.

Entrepreneurial intention measures the likelihood to start a business in the future. It examines the intention regarding the temporal aspect of the long-term and short-term plan (Das & Teng, 1997). Specifically, the construct of the short-term entrepreneurial intention indicates to what extent respondents would like to start their ventures in the short-term through three items: 1) soon after graduation from school, 2) within one to two years, and 3) in the near future. The construct of long-term entrepreneurial intention indicates starting a venture will be 1) several years down the road, 2) long-term plan, and 3) between five to ten years.

Entrepreneurial value is a latent construct that is measured by five items. Individuals were asked how agreeable they believe starting a business can, 1) maximize autonomy in what I do, 2) achieve better financial gains than otherwise, 3) realize personal satisfaction, 4) enjoy the quality of my personal life, and 5) reduce the risk of unemployment after graduation.

As a measure of entrepreneurial involvement, students indicate how many activities they have participated in within the past five years: 1) attending "starts your own business" seminar or conference, 2) writing a business plan, 3) putting up a startup team, 4) looking for building or equipment for business, 5) saving money to invest in business, and 6) developing a product or service. A single value is developed based on these activities. No activity is recorded as value one, one activity is recorded as value two, two activities as value three and all the way up to six activities as value seven.

Under the exploratory factor analysis, the value of Kaiser-Meyer-Olkin is 0.790 for the whole sample, indicating the sample size is sufficient. Total variance explained is 62%. Nevertheless, the item “reduce the risk of unemployment after graduation” has factor loading of 0.415, which indicates a low level of reliability (Guadagnoli & Velicer, 1988), leading to the conclusion of deleting this specific item.

Reliability and Validity of Latent Constructs

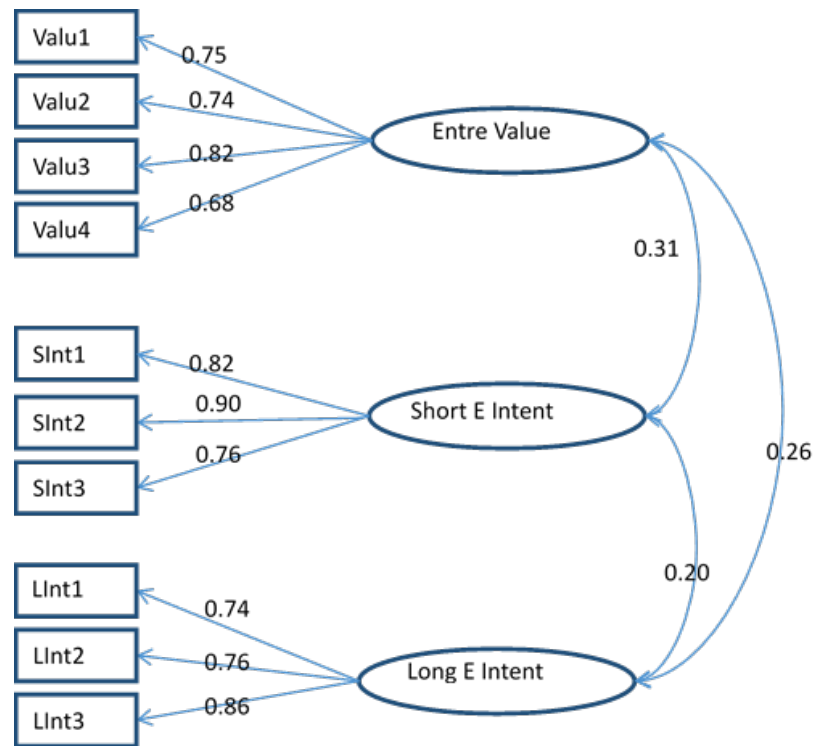
The validity test indicates that the construct measures what it is supposed to measure (Nunally, 1978). Extant literature on related constructs was reviewed, and items that are suitable for the constructs of this paper were adopted. We also examine the items' convergence, measured by the index of Average Variance Extracted (AVE) (Hair, Black, Babin, & Anderson, 2010). An AVE value above 0.5 indicates good convergence, which is the case for this study. There is no convergence validity concern.

Reliability is checked by measuring Cronbach's alpha value (Bollen, 1989). An alpha value between 0.2 and 0.4 is considered reliable (Briggs & Cheek, 1986); however, Bollen (1989) suggests that the higher the value, the better the reliability would be. A value of 0.70 is considered satisfactory for most studies (Nunally, 1978). The reliability of the three latent constructs in this study exceeded 0.82. There is no reliability concern.

Measurement model fit is evaluated by using CFI, RMSEA, where CFI is above 0.98, and RMSEA is below 0.05 (Hair et al., 2010). The partial matrix invariance is observed. Common method bias was also tested using Common Latent Factor among all observed variables, and no bias was observed (Aiken & West, 1991).

The data were also divided into two samples, one by Chinese students and the other by U.S. students. The latent constructs from the two sub-samples were the same as the total sample. Confirmatory factor analysis is conducted for the whole sample (see Figure 2). The result is consistent with earlier tests, suggesting that the items of latent constructs hold strong together, we have achieved a good internal consistency (Nunally, 1978).

Figure 2. Confirmatory Factor Analysis



Control Variables

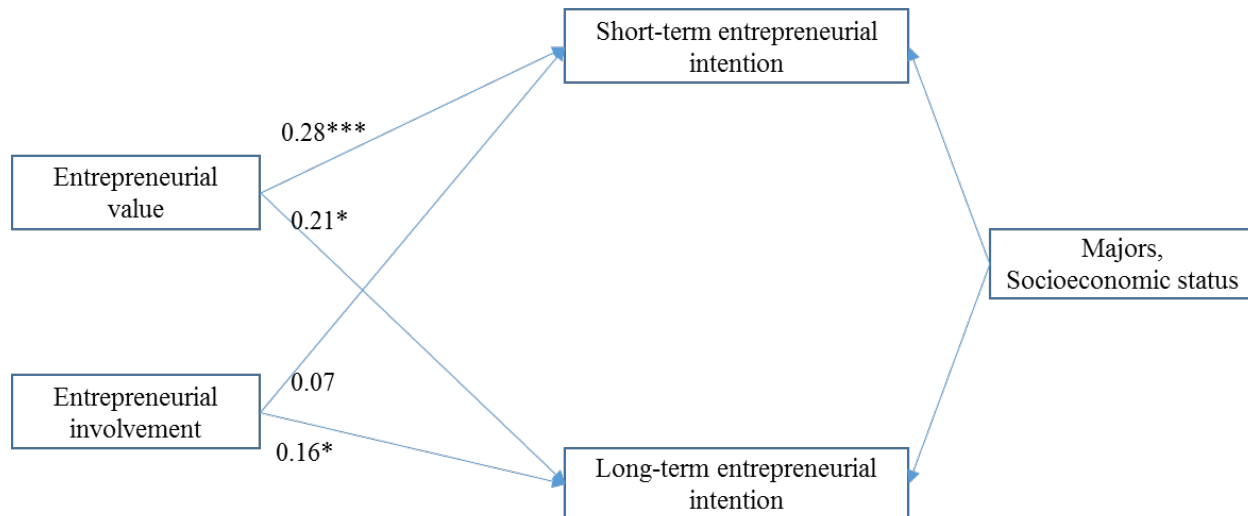
Socioeconomic status is a variable measuring the perception of the social economic background of the family. Individuals use a seven-point scale from extremely poor to extremely rich to describe their perception of socioeconomic status. It is reasonable to suggest that individuals who come from a vibrant social economic background are likely to have more resources to start a venture. Therefore, they also exhibit a stronger inclination for startups than otherwise. We control for socioeconomic status in this study.

Different majors in business school have various exposures to the entrepreneurship education. Research shows that students majored in entrepreneurship indicate a stronger belief in themselves to start a business than students of other majors (Chen, Greene, & Crick, 1998). We control for majors.

Results

Factor analysis is used to record the factor loadings for long-term entrepreneurial intention, short-term intention, and entrepreneurial value. These loadings are used in the following regression analysis to identify potential relationships among the constructs in the structural modeling process. The structural model fit indexes suggest the model is robust, where CFI is 0.975 (>0.95), RMSEA is 0.045 (<0.05) (Hair et al., 2010). We present the primary structural model and report the results for hypothesized relationships in Figure 3.

Figure 3. Structural Equation Modelling



*** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10

The first two hypotheses examine the link between entrepreneurial intention and entrepreneurial value. The results show that entrepreneurial intention is significantly associated with entrepreneurial value at 0.28 for short-term and 0.21 respectively for long-term. The higher the perception of entrepreneurship value, the more likely the students will start a business with both a short-term and long-term intention. More importantly, the coefficient for short-term entrepreneurial intention is higher than for long-term intention. Hypothesis 1.1 and 1.2 receive support.

Hypotheses 2.1 and 2.2 predict that entrepreneurial involvement is positively associated with entrepreneurial intention, more so for long-term entrepreneurial involvement than short-term. In the finding, the coefficient of the link between entrepreneurial involvement and long-term entrepreneurial intention is significantly positive at 0.16; however, the coefficient between involvement and short-term intention is not significant, though positive. Both hypotheses receive partial support.

Hypothesis 3 examines the moderating effect of culture on the link between entrepreneurial value and long-term intention. In particular, the relationship is stronger for U.S. students than for Chinese students. We use the z-score to test the significance of the group difference between the Chinese and U.S. students (Hair et al., 2010). The coefficient between entrepreneurial value and long-term intention for the U.S. students is significant at 0.54, and while the coefficient for the Chinese students is not significant. The z-score is significant at 3.407, suggesting that U.S. university students are more willing to start a long-term venture than their Chinese counterparts. Hypothesis 3 receives support.

Hypothesis 4 posits that the relationship between entrepreneurial involvement and long-term entrepreneurial intention is stronger for the U.S. students than for the Chinese students. We also

used the z-score to test the significant difference between groups. Nevertheless, the z-score is not significant. We rejected Hypothesis 4.

DISCUSSION AND CONCLUSION

This paper examines the role of culture in the temporal dimension of entrepreneurial intention. The model is derived from the theoretical framework of planned behavior (Ajzen, 1987; Krueger et al., 2000). This study contributes to the research area of entrepreneurial intention by examining the temporal dimension of intention across cultures. In the model, entrepreneurial value and involvement can predict entrepreneurial intention; however, their impact on short-term and long-term entrepreneurial intention varies. Also, the cultural difference moderates the relationship between entrepreneurial value and intention, but not between entrepreneurial involvement and intention.

The study suggests that it is meaningful to separate the long-term intention from the short-term one. If the ultimate goal of entrepreneurship intention is to start a venture, then the inquiry of time span on intention becomes important. One recent study on entrepreneurial intention found that entrepreneurial intention can wear off over time (Gielnik et al., 2014), and studies of behavioral conditions that are conducive to taking actions are thus desirable (Gelderen et al., 2015). Our study results underscore a similar idea. That is, there is a difference between the short-term and long-term intention. The behavioral aspects that are positively associated with the short-term intention thus deserve attention as these behavioral aspects are more likely to induce actions to start a business. In our sample, the behavioral aspect exemplified by entrepreneurial value-centered attitude could be viewed as one such drive, since attitude has a profound impact on the short-term intention. In comparison, entrepreneurial involvement is less likely to turn the intention into actions as it only influences the long-term intention.

Another finding that the Chinese university students are less likely to start a long-term business venture than the U.S. university students is consistent with the observation of Chinese economic reform in the past decades as well. The phenomenal economic growth took place in China has not only enriched many Chinese but also created a sense of eagerness to become rich overnight (Edith, 2015). Specifically, taking advantage of the evolving social and economic structure of Chinese society, many have shown an extraordinary ability to create wealth, inspiring others to follow suit quickly in order to grasp opportunities and become rich (Huang et al., 2016).

There are several limitations to our study. First, only one university from each country was sampled in the study; this leaves room for future improvement by including more universities to verify our results. Second, there are other variables shown to be valuable in predicting entrepreneurial intention such as entrepreneurial self-efficacy (McGee et al., 2009). Future studies can incorporate the additional variables in the modeling process to achieve a more robust analysis of entrepreneurial intention. Overall, the paper has offered some interesting findings regarding the difference between short-term and long-term entrepreneurial intention and the role of culture in the temporal aspect of intention.

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RECREATIONAL USE OF THE INTERNET: AN EXAMINATION OF UNDERGRADUATE BUSINESS STUDENTS

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ABSTRACT

The Internet offers a plethora of recreational opportunities beyond the realm of social media. Given that university students have discretionary time, Internet access, and recreation needs, this longitudinal study was conducted to empirically examine how undergraduate business students utilize the Internet for leisure activities. Although this research examined nine online recreation activities, results demonstrate that students participate primarily in five activities. These include non-school related surfing, shopping, downloading music, playing games other than gambling, and instant messaging. While nearly all business students participate in at least one activity, activity participation and activity time have been trending downward during the five-year study for nearly all activities. Overall, participation decreased slightly to 94% of students and total activity minutes per week declined by 16% per student. Findings also suggest that gender and academic class are factors with respect to the time spent on individual online recreation activities for undergraduate business students. Seven of the recreation activities were statistically correlated with males. Moreover, if academic class is used as a proxy for age, it appears that possibly maturation and/or education may affect the level of recreation engagement for this student population.

Keywords: Online Recreation, Gambling, Shopping, Music Downloading, Empirical Study

INTRODUCTION

An Associated Press-NORC Center for Public Affairs Research survey of U.S. teens age 13-17 found that nearly 60% have taken a break from social media, typically a week or longer (Ortutay, 2017). The reasons for voluntary breaks include social media getting in the way of work or school (38% of respondents), tired of the conflict and drama (nearly 25% of respondents), and tired of having to keep up with what is going on (20% of respondents). Interestingly, males were more likely to feel overloaded with information on social media and more likely to take longer breaks.

Fortunately, there are a variety of other forms of recreation on the Internet available to online users. Options include gambling, gaming, shopping, listening to music, viewing visiting chatrooms, pornography, and so on. Revenue and usage statistics illustrate the size and growth of each of these activities. For example, according to statistica.com (2016), the online gambling market will be approximately \$47 billion in 2017 and reach \$52 billion in 2018. A 2013 survey by SuperData Research further found that 57% of online gamblers in the U.S. are female and that online gamblers tend to be young, with well over 40% ranging in age from 21-34 (Gambling.net, 2017). In terms

of game content viewers, 54% are male, have an average age of 33, and have an average annual personal income of \$58,000 (SuperData, 2017).

Relative to shopping, the second quarter 2017 U.S. retail e-commerce sales were \$111.5 billion, an increase of 16% from the second quarter of 2016 (U.S. Census, 2017). This amounted to \$419 billion in e-commerce during the 12-month period and accounted for nearly 9% of all retail sales, a percentage expected to reach 17% by 2020 (Keyes, 2017). Overall, a Pew Research Center survey of U.S. adults found that 79% of individuals are now online shoppers (Smith & Anderson, 2016). This is a dramatic increase from their June 2000 survey in which just 22% of Americans had made a purchase online.

In addition, digital global recording music industry revenues were \$7.8 billion in 2016, an 18% increase in just one year (ifps.org, 2017). Although digital download revenue decreased by 20%, streaming revenue increased by 60%. With respect to downloading, research conducted by the global market research firm IPSOS in 2016 found that 30% of all Internet users and 49% of individuals age 16-24 had engaged in the practice of stream ripping during the previous six months. ‘Ripping’ or creating a downloadable file from music that is available to stream online has become the most common method of illegally downloading music.

In terms of chat rooms, there are several sites. Anonymous chatrooms, for example, include enterchatroom, zobe, chatforfree, teenchat, rockchat, and so on (codeablemagazine.com, 2017). To give a size perspective, one free site, talk.chat (2017), has 661 chat rooms with 8,585 lines of chat.

Finally, pornography is available for recreation. Juniper Research estimated that by 2017, a quarter of a billion people will be accessing mobile adult content from their phones or tablets, an increase of more than 30% from 2013 (Juniper, 2013). A Barna Group study further found that in the U.S. in 2014, 79% of men and 76% of women age 18-30, 67% of men and 16% of women age 31-49, and 49% of men and 4% of women age 50-68 view pornography at least once a month (Covenanteyes.com, 2015). A Maire Claire survey found that 31% of women watch porn every week or so (De Cadenet, 2015). For those watching porn, 90% watch Internet porn, 75% use free sites, and 62% use a smartphone.

As previously described, there are several alternatives on the Internet for the recreation seeker. Because undergraduates have discretionary time, readily available access to the Internet, and recreational needs, this empirical study was conducted to investigate how business students have utilized online recreational activities from a longitudinal perspective. In addition, the study examines if gender and age affect usage. Results will be useful in determining if there are trends and/or problematic behaviors that may need to be addressed from a pedagogical perspective.

PREVIOUS RESEARCH

Previous research has explored several online recreation activities. Researchers have studied non-productive activities, leisure time behavior, Internet gaming, online auctions, music downloading, instant messaging, and recreation time.

In an exploratory study conducted in 2003, Case and King (2003) found that undergraduates spend a considerable amount of time in non-productive Internet activities. Instant messaging and non-school related surfing were the most prevalent and time-consuming behaviors with 88% of respondents (spending 4.5 hours per week) using instant messaging and 83% (spending nearly 2 hours per week) surfing. Moderate incidence behaviors included downloading music/movies (64% of respondents), shopping (44% of respondents) and playing games (43% of respondents). The least common behaviors included downloading and/or viewing pornography (14% of respondents), chatroom participation (4% of respondents), gambling (4% of respondents), and cybersex (2% of respondents). Overall, 98% of students indicated at least one behavior with students spending an average of 434 minutes, or 7 1/4 hours per week, using the Internet for non-school purposes.

Beutel et.al (2011) also examined Internet leisure behavior, specifically that of online users in Germany. Results show that 55% of the respondents used the Internet in their leisure time with users likely to be younger and higher in socioeconomic status (education, employment, and income). Leisure-time use included emails (93% of subjects), information research (92% of subjects), shopping (76% of subjects), chatting (62% of subjects), online communities (36% of subjects), games (34% of subjects), sex (11% of subjects), and gambling (9% of subjects). Chatting, online communities, games, and sex were domains of young, mostly male adults. In addition, 9% indicated at least one negative consequence of Internet use, especially neglect of recreational activities and problems with family/partner, work or education, and health.

Dong et.al (2017) studied Internet gaming. The researchers found that recreational (non-problematic) game users, as compared to those with Internet gaming disorder, show greater executive control and greater activations of brain regions implicated in motivational processes during reward processing and greater cortical activations during loss processing. Overall, the findings suggest that neural and behavioral features distinguish these two types of Internet gamers.

Wu, et.al (2009) explored purchasing via online auction sites. The purpose of the study was to develop a theoretical model regarding bidding strategy and its influence on bidder satisfaction. The researchers found support for the intermediary roles of price and hedonic value in the relationship between quality strategy and bidder satisfaction. Moreover, results suggest that the online bidder is inclined to adopt a higher-price-oriented bidding strategy at the beginning of the auction.

Plowman and Goode (2009) examined the intention to illegally download music from the Internet. The researchers found that individuals' attitude, ability to download online music, and the price of legitimate music were the most significant factors affecting one's downloading behavior. Moreover, price was significant for light downloaders but price and quality were important for heavy downloaders.

Glass and Li (2010) empirically investigated technology acceptance model factors, social influence factors, and demographic factors on instant message adoption in the workplace. The technology acceptance model factors include perceived ease of use and perceived usefulness. Social influence factors include subjective norm and perceived critical mass. Demographic factors include gender and age. Results found that social influence was more important than technology

acceptance model factors in determining instant message adoption. In addition, gender and age did not impact the adoption of instant messaging.

Finally, in a recent study, Merve, Senol, and Suat (2016), examined the recreational use of the Internet by research assistants in Turkey. Recreational use includes gaming, social media, e-mailing, websites, chat room, forums, and so on. Results suggest that as leisure time insufficiency increases, recreational use of the Internet increases. Thus, those who perceived their leisure time as insufficient or very insufficient spent more time on the Internet for recreational purposes. Moreover, the study found that research assistants' levels of recreational Internet usage increased as duration of leisure time decreased.

RESEARCH DESIGN

This study employs a survey research design. The research was conducted at a private, northeastern U.S. university. A Student Internet Recreational Activity IRB-approved instrument was developed by the authors and administered to undergraduate students enrolled in a School of Business course. The courses included a variety of subjects such as Business Information Systems, Introduction to Financial Accounting, Microeconomics, Macroeconomics, and Business Policy. A non-probability convenience sample of class sections and faculty members was selected. The surveys were collected during a five-consecutive year or 10 semester period (from Fall 2012 until Spring 2017).

The survey instrument was utilized to collect student demographic data such as gender and academic class. In addition, the survey examined student Internet behavior by prompting respondents to estimate the number of minutes per week they spent in various electronic behaviors such as visiting chatrooms, gambling, and so on. Results were summarized by activity for each academic year and correlations were calculated to determine potential relationships between the various activities and the study variables of gender and academic class. A copy of the survey instrument may be obtained by contacting the authors.

Participants were informed that all responses are anonymous and will be used solely for research correlation purposes and that by filling in this survey, he/she was giving his/her consent to act as a respondent. In addition, the participant was informed that he/she could choose not to answer any questions in the survey that he/she did not feel comfortable answering, that he/she must be 18 years of age or older to participate, and that he/she may opt out of the survey at any time. All surveys were anonymous and completed in an academic classroom. The response rate was nearly 100 percent. Finally, students were informed that results would have no effect on their course grade.

STUDY DEMOGRAPHICS

A sample of 1,609 usable surveys was obtained. Table 1 indicates that, overall, 61% of the respondents were male and 39% were female.

Table 1. Gender Response Rate by Academic Year

	2013	2014	2015	2016	2017	Total
Male	58%	63%	60%	63%	59%	61%
Female	42%	37%	40%	37%	41%	39%
Count	383	382	352	260	232	1609

Table 2 illustrates the response rate by academic class. Overall, 16% of respondents were freshmen, 32% were sophomores, 23% were juniors, and 29% were seniors.

Table 2. Academic Class Response Rate by Academic Year

	2013	2014	2015	2016	2017	Total
Freshmen	23%	6%	18%	22%	10%	16%
Sophomore	28%	37%	34%	28%	28%	32%
Junior	24%	23%	20%	21%	31%	23%
Senior	25%	34%	28%	29%	31%	29%

RESULTS

Responses were first analyzed with respect to the participation level of various Internet activities that could be considered entertainment or recreation for the student subjects. Table 3 shows that for all study years, the highest percentage of students participated in non-school related surfing and shopping. In 2013, for example, 91% of respondents used the Internet for non-school related surfing and 62% used the Internet for shopping. By 2017, non-school related surfing decreased to 81% but shopping increased to 68% of respondents. Other activities were also common. In 2013, 55% of respondents downloaded music, 38% played games (other than gambling), and 31% used instant messaging. By 2017, downloading music decreased to 41%, playing games decreased to 32%, but instant messaging increased to 56%. All other activities had much less participants. In 2013, only 16% downloaded/viewed pornography, 5% visited chatrooms, 4% gambled, and 2% participated in cybersex. Similarly, in 2017, only 15% downloaded/viewed pornography, 6% visited chatrooms, 5% gambled, and 0% participated in cybersex. Overall, nearly all students participated in at least one of the entertainment activities. From 2013 to 2017, participation was 97%, 98%, 97%, 98%, and 94%, respectively per year.

Table 3. Internet Activity (Percentage of Students)

Internet Activity	Academic Year				
	2013	2014	2015	2016	2017
Non-school related surfing	91%	93%	91%	90%	81%
Shopping	62%	69%	70%	72%	68%
Downloading music	55%	55%	52%	52%	41%
Playing games (other than gambling)	38%	39%	35%	42%	32%
Instant messaging	31%	41%	48%	55%	56%
Download/view pornography	16%	20%	24%	24%	15%
Visiting chatrooms	5%	5%	4%	10%	6%
Gambling	4%	5%	5%	10%	5%
Cybersex	2%	2%	3%	3%	0%
Overall	97%	98%	97%	98%	94%

Next, participation volume was examined. Table 4 provides a breakdown of minutes per week for subjects indicating participation in each Internet activity. The analysis is segmented by academic year. In 2013, respondents indicating spending 176 minutes in non-school related surfing, 50 minutes shopping, 55 minutes downloading music, 103 minutes playing games (other than gambling), 99 minutes instant messaging, 65 minutes downloading/viewing pornography, 84 minutes visiting chatrooms, 84 minutes gambling, and 241 minutes participating in cybersex. By 2017, non-school related surfing decreased to 114 minutes, shopping decreased to 35 minutes, downloading music decreased to 48 minutes, playing games (other than gambling decreased to 100 minutes), instant messaging increased to 102 minutes, downloading/viewing pornography increased to 70 minutes, visiting chatrooms increased to 135 minutes, gambling decreased to 35 minutes, and participating in cybersex decreased to 10 minutes. Overall minutes per respondent from 2013 to 2017 were 324 minutes, 301 minutes, 310 minutes, 335 minutes, and 271 minutes, respectively.

Table 4. Internet Activity (Minutes Per Week for Those with Activity)

Internet Activity	Academic Year				
	2013	2014	2015	2016	2017
Non-school related surfing	176	163	151	144	114
Shopping	50	42	41	52	35
Downloading music	55	39	38	45	48
Playing games (other than gambling)	103	85	115	89	100
Instant messaging	99	114	121	139	102
Download/view pornography	65	40	46	57	70
Visiting chatrooms	84	81	43	44	135
Gambling	84	33	36	32	35
Cybersex	241	26	56	82	10
Overall	324	301	310	335	271

Finally, Spearman Rho correlations were calculated to determine if there are correlations between activity participation minutes and the demographic variables of gender and academic class. Table 5 demonstrates that with respect to gender, all activities, except for instant messaging, had

statistically significantly correlations with gender. Males were correlated with non-school related surfing (significant at the .01 level), downloading music (significant at the .01 level), playing games (significant at the .01 level), downloading/viewing pornography (significant at the .01 level), visiting chatrooms (significant at the .05 level), gambling (significant at the .01 level), and cybersex (significant at the .01 level). Females were correlated with shopping (significant at the .01 level). With respect to academic class, four activities were significantly correlated. Freshmen were more likely to shop (significant at the .01 level), download music (significant at the .01 level), and instant message (significant at the .01 level) than seniors. Seniors, however, were more likely to gamble (significant at the .05 level).

Table 5. Spearman Rho Correlations Between Activity Minutes and Study Variables

Internet Activity	Gender	Academic Class
Non-school related surfing	.149**	.025
Shopping	-.239**	-.078**
Downloading music	.068**	-.077**
Playing games (other than gambling)	.283**	.019
Instant messaging	.043	-.137**
Download/view pornography	.340**	.040
Visiting chatrooms	.051*	.002
Gambling	.174**	.062*
Cybersex	.069**	-.006

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

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

CONCLUSIONS AND FUTURE RESEARCH

Results indicate that there are five primary non-social media Internet recreation activities. Non-school related surfing and shopping activities had the highest percentage of student users during each year of the five-year study period. Non-school related surfing ranged from 81% to 93% of undergraduates per year. Shopping had a range of 62% to 72% of undergraduates per year. The other primary activities include downloading music (41% to 55% per year), playing games other than gambling (32% to 42% per year), and instant messaging (31% to 56% per year). The lowest participation activities are downloading/viewing pornography (15% to 24% per year), visiting chatrooms (4% to 10% per year), gambling (4% to 10% per year), and cybersex (0% to 3% per year). Overall, 94% to 98% of students indicated engaging in at least one of the recreational activities each academic year.

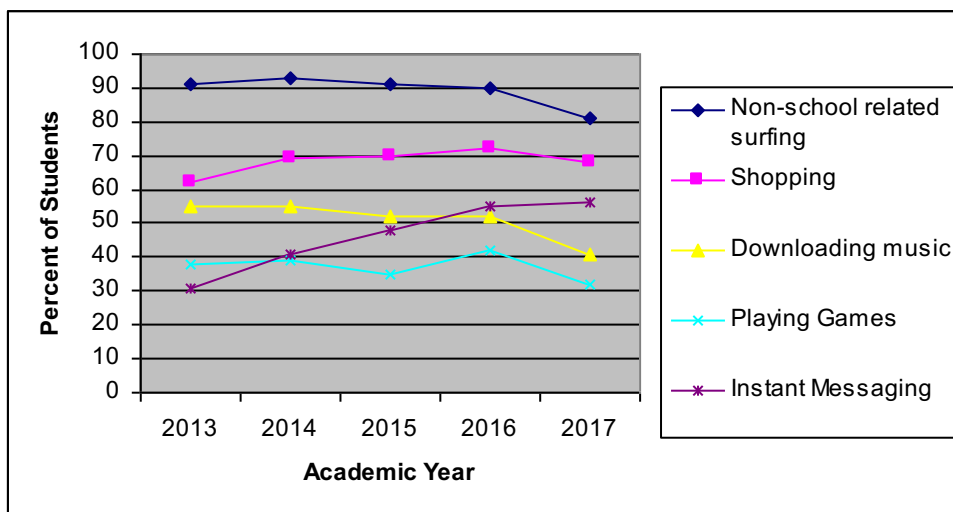
In terms of non-social media Internet recreation activity per student, volumes vary per activity per year. Non-school related surfing accounted for the most minutes per week (114 to 176 minutes per week per year) during four of the five study years. Instant messaging (99 to 139 minutes per week per year) and playing games other than gambling (85 to 115 minutes per week per year) were consistently the next most time intensive activities. Other activity ranges include shopping (35 to 52 minutes per week per year), downloading music (38 to 55 minutes per week per year),

downloading/viewing pornography (40 to 70 minutes per week per year), visiting chatrooms (43 to 135 minutes per week per year), gambling (32 to 84 minutes per week per year), and cybersex (10 to 241 minutes per week per year). It should be noted that the extremes of 135 minutes for visiting chatrooms in 2017 and 241 minutes for cybersex in 2013 are likely anomalies and are not representative of the general business student population given that only 6% of students visited chatrooms and 2% participated in cybersex during those years, respectively.

When examining study variables, gender was statistically significantly correlated with eight of the nine recreational activities. Females were more likely to engage in shopping while males were more likely to engage in non-school related surfing, downloading music, playing games other than gambling, downloading/viewing pornography, visiting chatrooms, gambling, and cybersex. Instant messaging, however, was not correlated to gender. In terms of academic class, shopping, downloading music, and instant messaging were significantly negatively correlated. In other words, freshmen, relative to seniors, were more likely to engage in these activities. Gambling, on the other hand, was more correlated with seniors rather than freshmen. No other activities were statistically correlated with academic class.

There are three important implications from the study. One finding is that with respect to three of the primary recreational activities, the percent of students engaging in these activities has decreased (Figure 1). Non-school related shopping, downloading music, and playing games decreased as a percent for undergraduate business students from 2013 to 2017. Conversely, two activities, shopping and instant messaging, have increased. In fact, the percent of students instant messaging increased by 80% from 31% to 56% of students. This suggests a dramatic change in recreation participation and a greater interest in instant communication. This trend is consistent with prior research that has found nearly 100% of college students are participating in social media communication, with over three hours of communication per student per day (Case & King, 2017). Overall participation in any activity decreased slightly from 97% to 94% of students.

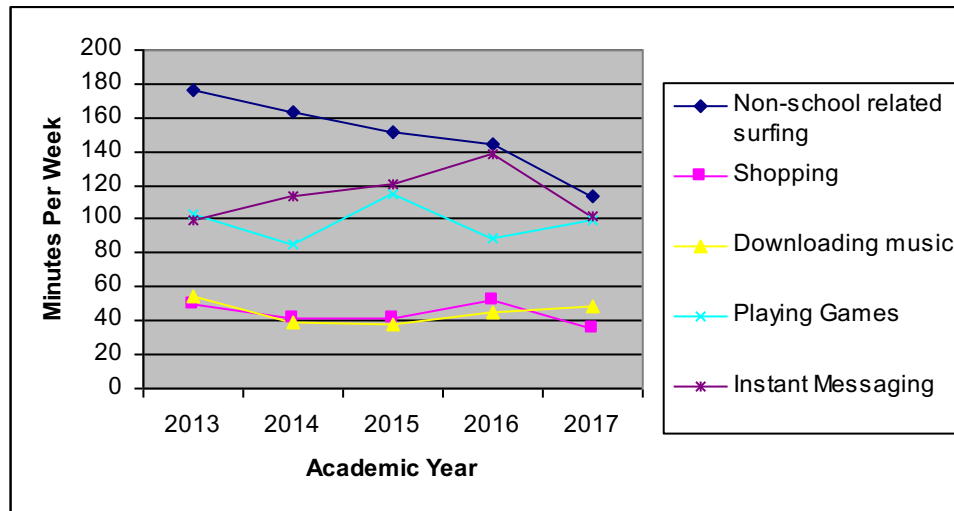
Figure 1. 2013-2017 Percentage of Students by Activity



Moreover, Figure 2 further illustrates this change in behavior and downward trend. When examining minutes per student per week, it is evident that undergraduates are also spending less

time in each of these traditional primary recreation activities. Total minutes have decreased by 16% from 324 minutes (nearly 5.5 hours per week) to 271 minutes (4.5 hours per week). This is a 163 minute or 38% decrease from the exploratory study conducted by Case and King in 2003.

Figure 2. 2013-2017 Minutes Per Week by Activity



A second implication relates to gender. Seven of the recreation activities were statistically correlated with males while one activity, shopping, was correlated with females. Instant messaging minutes, on the other hand, were not gender related and are consistent with the findings of Glass and Li. It is possible that males are more forthcoming and/or proud of recreational activities. Conversely, females may perceive recreation activities while in college as a personal negative reflection and thus underreport participation. Moreover, it could be that females do not value recreation as much as males and engage more in other activities such as social media communication and/or academic endeavors. In any event, results imply that educators may need to implement different approaches with males versus females if there is a desire to steer students more towards academic interests and away from Internet recreation activities.

Finally, results suggest that academic class is a factor with respect to recreation. Shopping, downloading music, and instant messaging minute levels were less likely to occur as the student progressed from freshmen to senior years. However, gambling minutes increased, likely a result of the student achieving the legal gaming minimum age of 21. If academic class is used as a proxy for age, it appears that possibly maturation and/or education may affect the level of recreation engagement. This finding, however, is contrary to Glass and Li's research that age did not impact the adoption of instant message. Results also suggest the further need for educational efforts directed at upperclassmen so that these students may be better able to minimize the negative aspects of gambling such as addiction.

The limitations of this study are primarily a function of the nature of the research methodology and sample. The instrument was developed by the researchers and relies on self-reporting so there could be recency effects and underreporting of activity. Moreover, the research was conducted using a sample of one university. Finally, although academic class was relatively equally distributed, there were less freshmen surveyed. As a result, replication at multiple universities and

the inclusion of more freshmen would increase the research robustness. Future research needs to examine if there is a relationship between recreational use of the Internet and student academic performance variables such as study time, class engagement, ability to focus, and so on. These results research would be helpful in determining if these are indeed trends and if educational efforts can be effectively employed to mitigate negative recreation activities. The study does, however, further clarify the state of student Internet recreation among undergraduate business students.

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TECHNOLOGY PARADOXES, EMOTIONAL AMBIVALENCE AND USE PATTERNS

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ABSTRACT

Due to the paradoxical nature of information technology (IT), technology users often find themselves confronted with both positive and negative aspects of technology usage (e.g., fulfills needs / creates needs, control / chaos, engaging / disengaging, empowerment / enslavement, freedom / dependence, assimilation / isolation, efficiency / inefficiency, competence / incompetence, and etc.), leading to conflicting evaluations of IT, mixed emotions toward IT, and distinct IT use patterns. This paper proposes a conceptual framework of the emotional and behavioral consequences of IT paradoxes. The framework suggests that technology users' individual differences (i.e., need for cognition, construal level, and tolerance for ambiguity) moderate their feelings of emotional ambivalence (the experience of different emotions of opposite valence) arising from IT paradoxes. Emotional ambivalence, depending on how its underlying opposing emotions are appraised – whether as threat or opportunity and as controllable or not, in turn leads to different coping strategies that then become reflected in certain technology use patterns. The framework also highlights the mediating role of emotional ambivalence in the relationship between IT paradoxes and technology use patterns.

Keywords: Technology Paradoxes, Individual Differences, Emotional Ambivalence, Cognitive Appraisals, Technology Use Patterns

INTRODUCTION

Nowadays, although information technology (IT) has become increasingly prevalent in all aspects of people's daily life, people often find their daily experiences with IT to be ambivalent (Johnson, Bardhi & Dunn, 2008). On the one hand, people enjoy the benefits of new IT; but on the other hand, they are often confused with the complex features of IT. Users' experiences with IT may be paradoxical (Jarvenpaa & Lang, 2005), characterized by conflicting emotions where users are confronted with both positive and negative aspects of technology usage. The notion of technology paradox is not new. In social science, Winner (1994) argues that the same technology that creates positive feelings of intelligence and efficacy can also elicit feelings of stupidity and ineptitude (Winner, 1994). In marketing research, Mick and Fournier describe eight central technology paradoxes – control/chaos, freedom/enslavement, new/obsolete, competence/incompetence, efficiency/inefficiency, fulfills/creates needs, and engaging/disengaging (Mick & Fournier, 1998). In information systems (IS) research, Orlikowski (1991) and Chinn (2001) discuss the paradoxical nature of IT. Jarvenpaa and Lang propose eight paradoxes of mobile technology – empowerment/enslavement, independence/dependence, fulfills/creates needs, competence/incompetence, planning/improvisation, engaging/disengaging, and public/private (Jarvenpaa & Lang, 2005).

IT paradoxes produce conflicting evaluations of IT and elicit mixed emotions (known as emotional ambivalence) toward IT (Mick & Fournier, 1998). Mixed emotions are conflicting emotions occurring simultaneously or sequentially. For example, mobile technology creates a sense of empowerment by enabling users to connect to others anywhere and anytime. However, by allowing others to be able to reach users 24/7 and making it harder for users to create and maintain personal space from others, it also creates a sense of enslavement. The conflict between empowerment and enslavement may give rise to conflicting feelings/emotions about mobile technology.

Emotions have been found to play an important role in IT use (Bagozzi, 2007; Beaudry & Pinsonneault, 2005; Beaudry & Pinsonneault, 2010; Deng & Poole, 2010; Gregor, Lin, Gedeon, Riaz & Zhu, 2014; Ortiz de Guinea & Markus, 2009; Stein, Newell, Wagner & Galliers, 2015; Yin, Bond & Zhang, 2014; Zhang, 2013). In technology acceptance research (e.g., Davis, 1989), the emotion concept has been incorporated in a few empirically validated extensions of technology acceptance model (Venkatesh, 2000). Although cognitive constructs are still the major theoretical considerations in studying IS (information systems) usage behaviors and emotions have generally been regarded as supplement to cognitive constructs, some recent research suggests that those constructs, such as perceived usefulness of IT, which have been once understood as purely cognitive, can be detected at the neuronal level in the brain areas normally associated with emotional activity (Dimoka, 2011; Dimoka, 2012). Prior IS research suggests that an IT event, such as implementation of new IT tools, elicits particular emotions in users depending on how the IT event is appraised – firstly, as an opportunity or a threat to the achievement of user's personal goal; and secondly, as controllable or uncontrollable by users (Bala & Venkatesh, 2016; Beaudry & Pinsonneault, 2010). Based on these two types of cognitive appraisals of the IT event, one of four classes of emotions may be triggered: challenge emotions, achievement emotions, deterrence emotions, or loss emotions (Beaudry & Pinsonneault, 2010). Beaudry and Pinsonneault (2010) also examined the impact of one exemplary emotion (excitement, happiness, anxiety, and anger) per class on IT use and revealed that emotions influence IT use directly or indirectly through their influence on adaptation behaviors or strategies (Beaudry & Pinsonneault, 2005; Beaudry & Pinsonneault, 2010). For example, happiness has a positive direct effect on IT use, whereas anger has a positive indirect effect on IT use through users' seeking social support. The behavior of seeking social support is part of a general disturbance handling strategy that helps to restore emotional stability and minimize perceived threat (Beaudry & Pinsonneault, 2005).

Although a number of studies were conducted to investigate the effects of uniform emotions on IT use, few of them examined the relationship between mixed emotions and IT use. Stein et al. (2015) found that while users respond to uniform emotions with clear adaptation strategies, they cope with mixed emotions by combining different adaptation behaviors. Due to the limited research on IT paradoxes, there is a lack of good understanding of the consequences of IT paradoxes. Recognizing the paradoxical nature of IT, this paper examines its unique characteristics and proposes a theoretical framework of the emotional and behavioral consequences of IT paradoxes. Integrating the technology paradox and mixed emotion research, cognitive appraisal and coping theories, and research on emotions and coping strategies in the IS field, the proposed framework focuses on the following research questions: How do IT paradoxes elicit emotional ambivalence in users? Who are likely to experience emotional ambivalence arising from IT paradoxes? How do users cope with emotional ambivalence in response to IT paradoxes? The framework suggests the moderating effects of IT users' individual differences on the impact of IT paradoxes on users'

feelings of emotional ambivalence as well as the mediating role of emotional ambivalence in the relationship between IT paradoxes and users' technology usage patterns.

THEORETICAL BACKGROUND

Paradoxes of Technology

“Paradox maintains that something is both X and not-X at the same time” (Mick & Fournier, 1998, p. 125). The idea of technology paradox has been noted in different disciplines. In marketing literature, Mick and Fournier (1998) indicate that consumers' response to technology is paradoxical and propose eight paradoxes of technology : control/chaos, freedom/enslavement, new/obsolete, competence/incompetence, efficiency/inefficiency, fulfills/creates needs, assimilation/isolation, and engaging/disengaging (P1-P8 shown in Table 1). They define these paradoxes around the idea that “polar opposite conditions can simultaneously exist, or at least can be potentiated, in the same thing” (Mick & Fournier, 1998, p. 124).

Table 1. Definitions of Technology Paradoxes Proposed by Mick and Fournier (1998), Jarvenpaa and Lang (2005) and Awad and Krishnan (2006)

Technology Paradox	Definition
P1: Control/Chaos	Technology can facilitate regulation or order, and technology can lead to upheaval or disorder.
P2: Freedom/Enslavement	Technology can facilitate independence or fewer restrictions, and technology can lead to dependence or more restrictions.
P3: New/Obsolete	New technologies provide the user with the most recently developed benefits of scientific knowledge, and new technologies are already or soon to be outmoded as they reach the marketplace.
P4: Competence/Incompetence	Technology can facilitate feelings of intelligence or efficacy, and technology can lead to feelings of ignorance and ineptitude.
P5: Efficiency/Inefficiency	Technology can facilitate less effort or time spent in certain activities, and technology can lead to more effort or time in certain activities.
P6: Fulfills/Creates Needs	Technology can facilitate the fulfillment of needs or desires, and technology can lead to development or awareness of needs or desires previously unrealized.
P7: Assimilation/Isolation	Technology can facilitate human togetherness, and technology can lead to human separation.

P8: Engaging/Disengaging	Technology can facilitate involvement, flow, or activity, and technology can lead to disconnection, disruption, or passivity.
P9: Independence/Dependence	Mobile technology enables users' connectivity independent of time and space, and mobile technology at the same time creates users' dependence on mobile technology for connectivity.
P10: Planning/Improvisation	Mobile technology can serve as an effective planning tool, and mobile technology allows users to make less preparation and improvise more.
P11: Public/Private	Mobile technology provides a personal tool for private communication, and mobile technology ends up generating more private calls in public areas and interfering with others' privacy.
P12: Illusion/Disillusion	People may hold unrealistic expectations about mobile service performance fed by commercials and marketing. In practice, after using the new mobile devices, they may feel the service performance is quite inadequate and become disappointed about the mobile services.
P13: Personalization/Privacy	Data storage and processing technologies allow companies to provide personalized services tailored to individual customers based on knowledge about their preferences and behaviors. But personalization raises privacy concerns to customers about disclosing their personal information.

Adopted from Mick and Fournier (1998), Jarvenpaa and Lang (2005) and Awad and Krishnan (2006)

In the IS field, Jarvenpaa and Lang (2005) extend Mick and Fournier's work and suggest eight paradoxes of mobile technology: empowerment/enslavement, independence/dependence, fulfills/creates needs, competence/incompetence, planning/improvisation, engaging/disengaging, and public/private (Jarvenpaa & Lang, 2005). While some of Jarvenpaa and Lang's technology paradoxes overlap with Mick and Fournier's, they discover some paradoxes unique to mobile technology, such as independence/dependence, planning/improvisation, public/private, and illusion/disillusion paradoxes (P9-P12 shown in Table 1). The empowerment/enslavement paradox suggests that the ability to remain connected 24/7 afforded by mobile technology can lead to convenience and empowerment while simultaneously creating challenges of establishing and maintaining appropriate usage boundaries. Mobile technology allows individuals to be in contact with others virtually any time and anywhere. However, the same technology can cause an expectation that individuals must be in contact, regardless of the situation. The independence/dependence paradox considers that mobile technology enables users' connectivity

independent of time and space but at the same time it creates users' dependence on mobile technology for connectivity. The dependence on total connectivity coexists with the independence of time and space. With mobile technology, people get so used to being always connected independent of time and space that it's difficult for them to break the "always on" habit. The fulfills/creates needs paradox refers to the ability of mobile technology to facilitate the fulfillment of needs or desires versus its ability to promote the development or awareness of new needs or desires. On the one hand, mobile technology can help fulfill needs related to time constraints or location convenience, like the ability to offer location-based services. On the other hand, collecting individuals' location data creates a new need for privacy. The competence/incompetence paradox represents the ability of mobile technology to facilitate feelings of efficacy versus its ability to induce feelings of incompetence. Users of mobile technology acquire new competencies as they are able to do things anytime and anywhere. But these technology-enabled competencies tend to be limited in scope and may in turn cause incompetence at a higher level. For example, the new competence of being connected anytime and anywhere may disturb one's concentration and reduce one's ability to concentrate on one task at a time. The planning/improvisation paradox addresses the ability of mobile technology to serve as an effective planning tool for activities versus its ability to allow users to make less preparation and improvise more. Mobile technology enables efficient scheduling for better coordination and planning of work and social activities. As mobile technology makes it easier to plan on the spot, users can improvise social and work arrangements, updating flexibly and responding rapidly, with a minimum of forward planning or preparation required. However, too much improvisation may lead to disorganization and chaos. The engaging/disengaging paradox involves the ability of mobile technology to facilitate involvement, flow, or activity versus its ability to lead to disconnection, disruption, or passivity. Mobile technology allows users to engage in a wider variety of virtual communication activities. Yet mobile technology can also cause people to become less involved in and disengage from face-to-face activities, leading to detrimental family life and social interaction. The public/private paradox arises from having private communication in public spaces. Mobile technology provides a personal tool for private communication. However, freed from spatial and temporal constraints, private calls are increasingly made in public areas, where it is quite easy for other people to follow the complete conversation. This can interfere with one's privacy, create unwanted noise hindrance and disturb other people's activities. The illusion/disillusion paradox is concerned with whether users' expectations about mobile service performance are met when acquiring new mobile devices. People may hold unrealistic expectations about mobile service performance fed by commercials and marketing. But after using the new mobile devices, they may feel the service performance is quite inadequate and become disappointed about the mobile services. For example, mobile devices sometimes jam; batteries may run down quickly; video conversations are nearly impossible due to slow Internet connections, and etc.

Awad and Krishnan (2006) come up with personalization/privacy paradox (P13 shown in Table 1). Recent advances in data storage and processing technologies allow companies to have greater access to personal information about their customers and provide personalized services tailored to individual customers based on knowledge about their preferences and behaviors. However, personalization raises privacy concerns to customers about disclosing their personal information. Customers prefer to divulge as little information as possible because of the privacy invasion risk (Culnan & Bies, 2003; Sheng, Nah & Siau, 2008). As personalization benefits coincide with

privacy risk, consumers face a dilemma between seeking personalization benefits and avoiding privacy risks (Awad & Krishnan, 2006; Sutanto, Palme, Tan & Phang, 2013).

Emotions

Mixed Emotions

Lowrey and Otnes (1994) imply that mixed emotions are an outcome of experiencing paradox. Mixed emotions are also described as mixed feelings (Kahneman, 1992) or emotional ambivalence (Fong, 2006). Mixed emotions occur when an individual simultaneously experiences conflicting emotions, which involve holding both positive and negative emotional evaluations simultaneously. When the intrapsychic conflict of a technology paradox results in opposing emotional judgments about the technology, mixed emotions involving both positive and negative emotions will arise.

Traditionally, positive and negative emotions have been viewed as two opposite ends of a continuum and thus are considered to be negatively correlated or mutually exclusive (Russell, 1979). This view implies that people have limited ability to experience conflicting mixed emotions (Russell, 1980; Watson & Tellegen, 1985). However, more recent research suggests that individuals can simultaneously experience different emotions of opposite valence (Cacioppo, Gardner & Berntson, 1997). Positive affect and negative affect can be better represented as two independent constructs (Brehm & Miron, 2006) rather than diametric opposites of a continuum and have been found to activate different sections of the brain (Henriques & Davidson, 1990). Thus, it has been argued that individual's affect system is not constrained to a bipolar processing continuum, but rather it has a flexible structure integrating two separate systems with different operating characteristics for processing positivity and negativity (Norris, Gollan, Berntson & Cacioppo, 2011). Larsen, McGraw and Cacioppo (2001) suggest that mixed emotions are more likely to occur in situations containing both pleasant and unpleasant aspects. The experiences of mixed emotion have been found to occur in a variety of contexts, including the context of IT usage. Stein et al. (2015) argue that various cues within an IT event may interact and produce mixed affective responses in users. Thus, IT paradoxes can be considered complex stimuli involving conflicting cues that may elicit mixed emotions with opposing valences.

Emotions are subjective and differ depending on individual characteristics. The literature on emotions suggests that individual difference factors play important roles in the experience of emotions and subsequent behavioral responses (Krohne, 2003). Thus, individuals' experiences of mixed emotions in response to technology paradox may vary dependent on their individual difference factors. When an individual experiences certain IT paradoxes, he/she may feel mixed emotions with or without one dominant emotion. If the individual is able to resolve the conflicts arising from IT paradoxes, then one emotion will often be dominant over the other and attenuate the feeling of mixed emotions. If the individual is not able to resolve the conflicts and holds contradictory evaluations of IT, then intense mixed emotions may occur with no dominant emotion. In other words, to experience strong mixed emotions, the individual must be aware of the duality of the situation in which no dominant evaluation of IT exists, and they must feel internal friction and stress associated with emotional ambivalence. It is this recognition of an intrapsychic conflict that results in strong mixed emotions or emotional ambivalence. Thus, individual difference factors (i.e., need for cognition, construal level, and tolerance for ambiguity) that influence

individuals' ability to process information and handle conflicts may account for the extent of mixed emotions or emotional ambivalence that individuals experience as a result of IT paradoxes.

Cognitive Appraisal and Coping Theories

Since mixed emotions involve both pleasant and unpleasant feelings occurring simultaneously, they are ambiguous and complex, and thus cannot be explained by basic emotion theory or dimension theory. The Cognitive Appraisal Theory (CAT), which posits emotions as outcomes of different combinations of appraisals, provides an appropriate theoretical framework for understanding the occurrence of mixed emotions. The CAT views emotions as “valenced reactions to events, agents, or objects, with their particular nature being determined by the way in which the eliciting situation is construed” (Ortony, Clore & Collins, 1988, p. 13). It emphasizes that experience of different emotional feelings is determined by how the emotion-eliciting stimulus is interpreted along a number of appraisal dimensions (Folkman & Moskowitz, 2004; Frijda, 1986; Lazarus, 1966; Lazarus, 1991; Lazarus & Folkman, 1984; Ortony et al., 1988; Roseman, 1984; Roseman, 1991; Scherer, 1988; Smith & Ellsworth, 1985).

Lazarus and Folkman (1984) proposes a two-stage cognitive appraisal process of emotions – primary appraisal and secondary appraisal. During primary appraisal, people evaluate the potential consequences of a particular event and its personal importance and relevance. During this stage, people ask the question of what is personally at stake in this situation. Some individuals may view the event as an opportunity for personal gain or growth, while others may regard the same event as a threat of potential loss or damage (Bhattacharjee, Davis, Connolly & Hikmet, 2017). During secondary appraisal, people assess what coping options are available to respond to the situation. They determine the level of control (high or low) they have over the event and what they feel they can do about it given the coping resources at their disposal. During this stage, people ask the question of what they can do about this situation.

Following cognitive appraisals, the individual engages in coping behaviors to deal with the emotion-eliciting event. Coping behaviors refer to “cognitive and behavioral efforts exerted to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). Internal demands arise from individuals' personal desires or expectations such as a need for achievement, accomplishment, or internalized performance standards, while external demands are imposed by the external environment, such as social pressure or job requirements. Internal and/or external demands will become disruptive events when exceeding one's resources to manage them. According to the coping theory, individuals engage in the specific coping behaviors that can best restore their personal well-being (Lazarus & Folkman, 1984). Appraisal is central to coping because it involves the assessment of the situation in terms of its expected consequences and personal significance and what can be done about it in light of the resources available at one's disposal. Appraisal influences people's coping responses that in turn influence situational outcomes (Kessler, 1998; Lazarus & Folkman, 1984; McRae, 1984). Folkman and Lazarus' stress and coping model (1988) suggests that people cope with their emotions mainly through two different types of strategies: problem-focused and emotion-focused coping strategies. The problem-focused coping strategy is directed at reducing demands from the external environment or increasing personal resources to meet external demands, while the emotion-focused coping strategy is focused on regulating or

controlling emotional responses to stressful situations. In general, if individuals appraise emotion-eliciting events as positive (primary appraisal) and/or when they feel they have control over the situations (secondary appraisal), they tend to employ problem-focused coping responses, for instance, by manipulating the external environment and/or changing themselves to cope with the demands from the environment (Lazarus & Folkman, 1984). The problem-focused coping may include planning, seeking information, using instrumental support, acquiring new skills or knowledge to handle the event, and etc. On the contrary, if the situations are perceived as negative or outside of the individuals' control, then emotion-focused coping behaviors tend to be more prevalent (Lazarus & Folkman, 1984). The emotion-focused coping involves altering one's perception and emotion about an event without affecting the emotion-eliciting situation at hand, based on the assumption that any attempt to change the external environment will likely be futile and only lead to more frustration and distress. Such coping strategy may include adjusting one's expectation of the event, wishful thinking in terms of maintaining hope and optimism that the event will be reversed, positive thinking in terms of selectively processing information about the event to make oneself feel better, seeking emotional support, emotional venting, being in denial, or withdrawing from or avoiding the event (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986; Lazarus & Folkman, 1984). Coping research suggests that emotion-focused behaviors have traditionally been associated with suboptimal coping adjustments, while problem-focused behaviors have been linked to more positive results (Carver, Scheier & Weintraub, 1989; Causey & Dubow, 1992; Ebata & Moos, 1991; Endler & Parker, 1990). For example, while such emotion-focused behaviors as avoidance or withdrawal are potentially helpful for regulating emotional response, they are not likely to generate external positive outcomes.

Another well-known categorization of coping behaviors specifies the approach coping vs. the avoidance coping. Approach coping behaviors are oriented toward the sources of the emotional responses, while avoidance coping behaviors are oriented away from them (Roth & Cohen, 1986). Ebata and Moos (1991) describe the approach coping strategies as "cognitive attempts to change ways of thinking about the problem and behavioral attempts to resolve events by dealing directly with the problem or its aftermath" (Ebata & Moos, 1991, p. 34). In contrast, avoidance coping strategies are described as "cognitive attempts to deny or minimize threat, and behavioral attempts to get away from or avoid confronting the situation ..." (Ebata and Moos, 1991, p. 34), and include avoidance/withdrawal or distancing.

Prior research has found that approach-oriented coping produces better adjustment outcomes than avoidance-oriented coping (Billings & Moos, 1981; Folkman & Lazarus, 1980). In the IS field, Beaudry and Pinsonneault (2005) make a similar argument based on their findings that IT users achieved improved performance benefits by engaging in approach-oriented behaviors such as deeper use of IT sparked by positive reappraisal of IT and that users who committed avoidance-oriented behaviors by minimizing their learning of IT and consequently engaging in superficial use of IT produced few performance benefits.

All problem-focused coping strategies are approach-oriented, because they involve the direct confrontation and management of the sources of emotions. However, the emotion-focused coping strategies can be either approach-oriented or avoidance-oriented. The approach-oriented emotion-focused coping such as seeking social support from others or reappraising the emotion-eliciting event in a positive light is generally considered as an adaptive emotion regulation strategy, whereas

the avoidance-oriented emotion-focused coping such as distancing from or avoiding the stress-evoking event is viewed as being maladaptive (Folkman & Lazarus, 1985; Holahan & Moos, 1987).

Emotions and Coping Strategies in IS Research

In IS Research, it has been suggested that individuals evaluate an IT event along two appraisal dimensions: first, to determine whether the new IT constitutes a threat or an opportunity to the achievement of individuals' personal goals (primary appraisal); and second, to assess the extent of control individuals have over the expected outcomes of IT implementation (secondary appraisal) (Beaudry & Pinsonneault, 2010). Depending on an individual's appraisals of IT event, he/she may experience one of four classes of emotions: challenge emotions (e.g., excitement, hope), triggered by appraisals of opportunity and high control; achievement emotions (e.g., happiness, relief), evoked by appraisals of opportunity and low control; deterrence emotions (anxiety, distress), activated by appraisals of threat and high control; and loss emotions (anger, frustration), aroused by appraisals of threat and low control (Beaudry & Pinsonneault, 2010).

Beaudry and Pinsonneault's coping model of user adaptation (CMUA) postulates four adaptation strategies (Beaudry & Pinsonneault, 2005) in response to IT event-elicited emotions. CMUA involves 3 stages. First, an IT user engages in primary appraisal as he/she assesses whether the IT event constitutes an opportunity or a threat. Second, the user engages in secondary appraisal by assessing his/her degree of control over his/her environment. And finally, based on the primary and secondary appraisals, the user engages in various adaptation behaviors to deal with the IT event. Such adaptation behaviors may be problem-focused or emotion-focused. The problem-focused adaptation behaviors are oriented toward modifying any of the three contextual elements related to IT usage: the IT-enabled work task (work adaptation), the individual IT user (self adaptation), or the IT itself (technology adaptation). In contrast, the emotion-focused adaptation behaviors are directed at only the IT user himself/herself and focus on restoring the user's internal emotional stability rather than changing the external environment. CMUA identifies four high-level coping strategies that are characterized by various combinations of problem-focused and emotion-focused adaptation behaviors in response to the emotional outcomes of primary and secondary appraisals: 1) benefits maximizing (e.g., taking full advantage of the opportunities offered by an IT to maximize personal benefits) in response to challenge emotions, 2) benefits satisficing (e.g., being satisfied with the limited benefits an IT offers) in response to achievement emotions, 3) disturbance handling (e.g., restoration of personal emotional stability and minimization of the perceived negative consequences associated with an IT) in response to deterrence emotions, and 4) self-preservation (e.g., restoration of emotional stability, with little or no impact on individuals' performance at work using an IT) in response to loss emotions (Beaudry & Pinsonneault, 2005; Beaudry & Pinsonneault, 2010). The first two strategies of benefits maximizing and benefits satisficing, are adopted when the individual views the IT event as an opportunity. Both strategies involve little or limited emotion-focused adaptation behaviors as there is no or little need for restoring emotional stability. If such an individual perceives himself/herself to have control over the work environment, he/she is likely to engage in problem-focused adaptation behaviors such as work adaptation, technology adaptation and self adaptation (Fadel, 2011) that allow him/her to derive maximum advantage from the functionalities/capabilities offered by the IT, which is termed as benefits maximizing. On the contrary, if the individual has little control over his/her work environment, he/she is likely to engage in limited problem-focused

or emotion-focused adaptation behaviors by employing the benefits satisficing strategy wherein he/she passively accepts the benefits offered by the IT without proactively adapting to it. The next two adaptation strategies of disturbance handling and self-preservation are employed when the individual views the IT event as a threat. If such an individual perceives himself/herself to have a high degree of control over his/her work environment, he/she will likely engage in both problem-focused adaptation behaviors to mitigate the potential harm derived from the IT usage and emotion-focused adaptation behaviors to minimize perceived negative consequences and restore emotional stability. Such an adaptation strategy is termed as disturbance handling. In contrast, if the individual has limited control over his/her work environment, he/she may have to adopt the self-preservation strategy by relying solely on emotion-focused adaptation behaviors to restore emotional stability since there is very little he/she can do to alter his/her environment.

THEORETICAL FRAMEWORK AND PROPOSITIONS

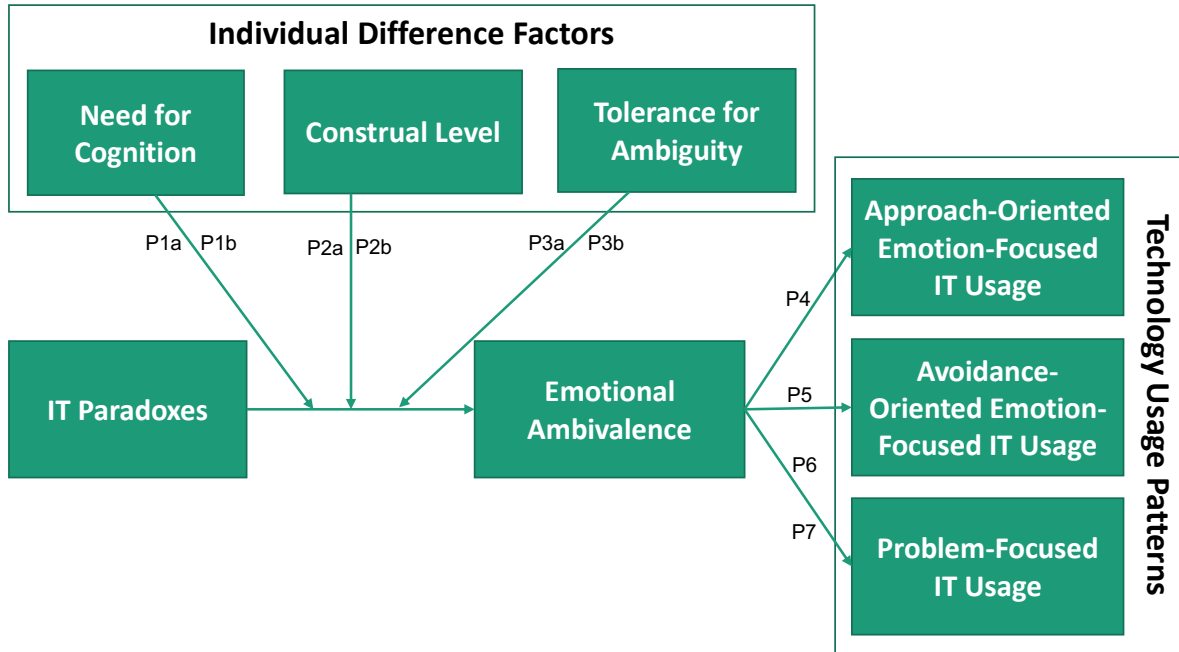
Drawing on the technology paradox and mixed emotion research, cognitive appraisal and coping theories, and research on emotions and coping strategies in the IS field, this paper proposes a theoretical framework of the emotional and behavioral consequences of IT paradoxes (Figure 1). The framework focuses on the moderating effects of IT users' individual differences (i.e., need for cognition, construal level, and tolerance for ambiguity) on the impact of IT paradoxes on users' feelings of emotional ambivalence as well as the mediating role of emotional ambivalence in the relationship between IT paradoxes and users' technology usage patterns (i.e., problem-focused IT usage behaviors, approach-oriented emotion-focused IT usage behaviors, and avoidance-oriented emotion-focused IT usage behaviors).

Due to the subjective nature of emotional experiences, IT paradoxes will lead to strong feelings of emotional ambivalence only if individuals perceive conflicts arising from IT paradoxes and hold contradictory evaluations of IT. The perceptions of conflicts are formed through continuous sense making and involve the development of multiple perspectives, which are related to individuals' information-processing abilities. One individual difference factor influencing one's information-processing ability is need for cognition, which is defined as an individual's "tendency to engage in and enjoy effortful cognitive endeavors" (Cacioppo, Petty & Kao, 1984, p. 48). Individuals who are high in need for cognition are naturally inclined to engage in deep reflection and "seek, acquire, think about, and reflect back on information to make sense of stimuli, relationships and events in their world" (Cacioppo, Petty, Feinstein & Jarvis, 1996, p. 198). In contrast, individuals low in need for cognition do not enjoy thinking and try to avoid unnecessary thought activity. Hence, they are less likely to use cognitive elaboration when processing information and are more likely to engage in effort-reducing heuristics (Dole & Sinatra, 1998; Nowlis, Kahn & Dhar, 2002). Therefore, the IT users low in need for cognition are more likely to rely on simple cues and stereotypes when making judgments about IT (Haugtvedt, Petty & Cacioppo, 1992), whereas those high in need for cognition are more likely to fully consider all relevant information about IT usage. This study proposes that a stronger need to cognitively engage in IT usage events will make individuals more likely to engage in deep reflection about the impacts of IT usage and make conflicting evaluations about IT. Thus, the need for cognition moderates the relationship between IT paradoxes and emotional ambivalence, and the following propositions are suggested.

Proposition 1a: Individuals that are high in need for cognition are more likely to experience emotional ambivalence from IT paradoxes.

Proposition 1b: Individuals that are low in need for cognition are less likely to experience emotional ambivalence from IT paradoxes.

Figure 1. Theoretical Framework of IT Paradoxes, Emotional Ambivalence and Usage Patterns



Another individual difference factor affecting people's information-processing ability is construal level. The construal level theory (CLT) posits that people may construe information in memory at an abstract, high level or at a concrete, low level (Trope & Liberman, 2003). High level construals are superordinate and decontextualized, and thus lead to a more generalized understanding of actions and events. Conversely, low-level construals are subordinate and contextualized, reflecting a focus on the details or specifics of actions and events. It has been suggested that people who organize conflicting ideas at a decontextualized superordinate level process the ideas more inclusively, thus rendering them less conflicting and more coherent (Abelson, 1959). Therefore, people with a high-level construal use fewer and broader categories to classify different stimuli than those with a low-level construal (Liberman, Sagristano & Trope, 2002). Thus, I argue that the tendency of IT users with high level construals to process conflicting cues of IT more inclusively may lead them to more likely resolve the conflicts arising from IT paradoxes and hence experience less mixed emotion/emotional ambivalence. This suggests the moderating role of construal level in the relationship between IT paradoxes and emotional ambivalence and leads to the following propositions.

Proposition 2a: Individuals that are high in construal level are less likely to experience emotional ambivalence from IT paradoxes.

Proposition 2b: Individuals that are low in construal level are more likely to experience emotional ambivalence from IT paradoxes.

Tolerance for ambiguity, an individual's ability to process and interpret vague or unstructured information, is another individual difference factor relevant for people's information-processing ability. Tolerance for ambiguity specifically pertains to the manner in which an individual perceives and processes information about ambiguous or unfamiliar situations (Furnham & Ribchester, 1995). Individuals who are low in tolerance for ambiguity try to avoid or quickly stop processing paradoxical information (Vernon, 1970) and thus are more likely to perceive ambiguous situations as strictly black or white (Bhushan & Amal, 1986). On the contrary, people with a high tolerance for ambiguity continuously seek all relevant information about the ambiguous situations and make judgements based on a larger set of information (Grenier, Barrette & Ladouceur, 2005; Vernon, 1970) than those with a low tolerance for ambiguity. Therefore, IT users high in tolerance for ambiguity are more likely to recognize conflicting cues arising from IT paradoxes. So, tolerance for ambiguity has a moderating effect on the relationship between IT paradoxes and emotional ambivalence. And the following propositions are suggested.

Proposition 3a: Individuals that are high in tolerance for ambiguity are more likely to experience emotional ambivalence from IT paradoxes.

Proposition 3b: Individuals that are low in tolerance for ambiguity are less likely to experience emotional ambivalence from IT paradoxes.

Emotional ambivalence results from a primary appraisal involving both opportunity and threat elements. On the one hand, such an appraisal evokes feelings of stress and anxiety; and on the other hand, it may be characterized by positive feelings such as hope, eagerness or enjoyment. For example, an IT user may enjoy the IT benefits in improving his/her efficiency in task performance while simultaneously feeling a degree of stress associated with devoting more time and effort troubleshooting the system. In such a situation, if IT users perceive a high control over the situation, they tend to proactively cope with the situation and engage in both problem-focused and approach-oriented emotion-focused IT usage behaviors. This argument is in line with Stein et al.'s observation that IT users cope with mixed emotions by combining different adaptation behaviors (Stein et al., 2015). Problem-focused IT usage behaviors involve adapting the work processes to fit with the technology (work adaptation), modifying the functionalities or features of IT to support one's work (technology adaptation) or improving one's ability, skills and knowledge to use the technology (self adaptation) (Fadel, 2011); while approach-oriented emotion-focused IT usage behaviors include seeking social support and undertaking positive reappraisal of IT (Fadel, 2011). In contrast, if users have little or no control over the situation, they may undertake little problem-focused behavior and are likely to engage in avoidance-oriented emotion-focused IT usage behaviors, such as wishful thing, avoiding and distancing from the technology, because little can be done to change the situation. Hence, the following are proposed:

Proposition 4: The experience of emotional ambivalence toward IT along with the appraisal of having high control over IT use will be positively associated with approach-oriented emotion-focused IT usage behaviors (e.g., seeking social support and positive reappraisal).

Proposition 5: The experience of emotional ambivalence toward IT along with the appraisal of having low control over IT use will be positively associated with avoidance-oriented emotion-focused IT usage behaviors (e.g., avoidance, wishful thinking and distancing).

Proposition 6: The experience of emotional ambivalence toward IT along with the appraisal of having high control over IT use will be positively associated with problem-focused IT usage behaviors (e.g., work adaptation, technology adaptation and self adaptation).

Proposition 7: The experience of emotional ambivalence toward IT along with the appraisal of having low control over IT use will be negatively associated with problem-focused IT usage behaviors.

RESEARCH DESIGN

Sample and Data Collection

To test the proposed research model and its associated propositions, a web-based survey will be conducted to investigate the presence of paradoxes associated with the use of smartphones and their emotional and behavioral consequences for the smartphone users. The participants for this study will be the faculty, staff and students at a southeast university in the USA. To solicit participation, an email invitation will be sent to all faculty, staff and students at the university. Interested participants may click on the link in the email invitation to be directed to the survey website. A screening question will be included at the beginning of the survey to determine whether the respondent has used a smartphone. The survey website will be designed in such a way that only those who have used smartphones will be able to proceed with the survey. To encourage participation, prizes (Amazon.com Gift Cards) will be provided by means of a lucky draw. The survey will not reveal the research purpose of identifying the presence of technology paradoxes to the participants. Instead, it will merely mention that the study addresses the use of smartphones. Respondents will be asked to respond to all survey questions related to the presence of technology paradoxes, their needs for cognition, construal levels, tolerance for ambiguity, feelings of emotional ambivalence toward smartphones, perceived levels of control over smartphones, smartphone usage behaviors, and etc.

Since data will be collected from a sample of university faculty, staff and students, the results of the proposed study may not be applicable to other populations. However, all university faculty, staff and students are smartphone users, and the proposed study is designed to study their emotional and behavioral responses that are considered primitive and instinctive for all human beings, the use of faculty, staff and student sample should not present a serious threat to the validity of this study.

Measures

The survey instrument will be developed by incorporating and adapting existing valid and reliable scales where appropriate. The measurement scales of IT paradoxes will be developed to capture the presence of the technological paradoxes identified by Mick and Fournier (1988), Jarvenpaa and Lang (2005) and Awad and Krishnan (2006). For each IT paradox, two questions representing

the antagonism associated with that paradox will be asked. All the questions related to IT paradoxes will be interspersed in such a way that the opposing evaluations relating to a certain paradox would not be placed together or in close proximity, in order to disguise the purpose of the research. Furthermore, during the data collection process, the word paradox will not be used nor will any other term that may suggest the participants should tell their paradoxical or ambiguous experiences arising from the use of smartphones. The individual difference variables will be measured using the need for cognition scale (Ailawadi, Neslin & Gedenk, 2001), the behavioral identification scale for construal level (Vallacher & Wegner, 1989), and the tolerance for ambiguity scale (McLain, 1993). The measurement scale of perceived control over technology will be adapted from the work of Major et al. (Major et al., 1998). The emotional ambivalence will be measured using the bivariate evaluations and ambivalence measures (Cacioppo, Gardner & Berntson, 1997). The measurement scales of different IT usage behaviors – problem-focused IT usage behaviors, approach-oriented emotion-focused IT usage behaviors and avoidance-oriented emotion-focused IT usage behaviors will be adopted from Fadel's work (Fadel, 2011). Additionally, the participants' age and prior experience with smartphones will be measured as control variables.

ANTICIPATED OUTCOMES AND IMPLICATIONS

This study proposes a theoretical framework of the emotional and behavioral consequences of IT paradoxes. Drawing on the technology paradox and mixed emotion research, cognitive appraisal and coping theories, and IS research on emotions and coping strategies, the framework suggests that IT users' individual differences (need for cognition, construal level and tolerance for ambiguity) moderate the impact of IT paradoxes on users' feeling of emotional ambivalence which in turn mediates the relationship between IT paradoxes and people's IT usage behaviors. Previous IS research on emotions has primarily examined the antecedents of uniform emotions and their effects on IT adaptation behaviors (Beaudry & Pinsonneault, 2005, Beaudry & Pinsonneault, 2010). However, there is a lack of research investigating the role of mixed emotions in IT usage. This research further expands beyond the existing IS research on emotions in examining the relationship between mixed emotions/emotional ambivalence and IT usage behaviors. This paper also provides guidance to better predict and influence IT users' technology usage behaviors from the experience of IT paradoxes. For example, when a user experiences emotional ambivalence toward IT, improving his/her perceived control over IT through providing technical support, training and education may lead him/her to engage in approach-oriented emotion-focused and problem-focused IT usage behaviors.

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