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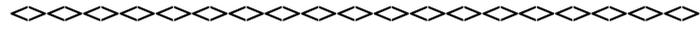
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Editorial Note

The May 2013 issue of the *Journal of International Business Disciplines (JIBD)* has been the result of a rigorous process in two stages:

- Stage 1: all papers that were submitted to the 2012 IABD conference went through blind reviews, and high quality papers were recommended for publication in the *Business Research Yearbook (BRY)*.
- Stage 2: approximately ten percent of the articles published in the *BRY* and one invited manuscript (originally reviewed by the Chief Editor) were selected for possible publication in *JIBD*, and the respective authors were contacted and asked to resubmit their papers for a second round of reviews. These manuscripts went through a rigorous review process by the editorial board members and external reviewers. In the end, four articles were recommended by the editorial board for publication in the May issue of *JIBD*.

JIBD is committed to maintaining high standards of quality in all of its publications.

Ahmad Tootoonchi, Chief Editor
Journal of International Business Disciplines

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AN INVESTIGATION OF SOURCE INFLUENCES

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TRUSTMARKS AS INTERNET CERTIFICATIONS: AN INVESTIGATION OF SOURCE INFLUENCES

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ABSTRACT

This study provides a foundational investigation of the source influences of internet “trustmarks” (i.e., any third-party mark, logo, picture, or symbol, presented in an effort to dispel consumers’ concerns about security and privacy). An experiment utilized three identical marks, but it manipulated the certifying source as coming from either the government, industry experts, or consumer reviews (along with a control condition). Results show that the governmental trustmark was most influential in building cognitive and affective trust. Additionally, male subjects were generally more trusting than female subjects.

INTRODUCTION

For many years now, the notion of trust has been thoroughly studied by researchers in the fields of psychology, sociology, economics, and business (see Swan, Bowers, & Richardson, 1999 for a meta-analysis). Whether trust is perceived as a cognitively-developed attitude (Doney & Cannon, 1997), an innate emotion (Luhman, 1979), a calculated belief (Williamson, 1993), or a required social force allowing us freedom from prediction and confidence in interactions (Lewis & Weigert, 1985), the existence of trust is notoriously important to business and social exchange. Trust is seen as the very foundation upon which relationship marketing is built (Berry, 1995). Even within the relatively new and ever-changing world of the Internet, researchers have noted that *ecommerce* requires a base level of trust between the consumer and the organization (Grabner-Krauter & Kaluscha, 2003).

Consequently, an interesting communications phenomenon has emerged. Internet firms must send/post computer-mediated signals (i.e., actions that parties take to reveal their true types, Kirmani & Rao, 2000) to get across critical information to potential consumers. In order to signal trustworthiness, internet-based firms have begun to seek out and post *ecommerce*-specific certifications from objective third parties, effectively renting the reputation of another. For example, the VeriSign company now processes over 650 million views daily on over 100,000 websites worldwide (www.verisign.com). The TRUSTe company claims to be the most recognized Internet seal in the world with more than 75% of unique Internet users (amongst the over two billion – Internet World Stats 2011) exposed to TRUSTe certified websites each month (www.truste.com). Not to be outdone, the Better Business Bureau boldly states, “Almost 90% of online shoppers would feel more confident shopping on a site that displays the BBBOnline

Seal” (www.bbbonline.org). Apparently, internet businesses have taken notice that lack of trust, along with the associated privacy and security concerns, is often the most frequently cited reason for consumers not purchasing from *etailers* (Benassi, 1999; Hine & Eve, 1998; Sheehan & Hoy, 2000; Sipior, Ward, & Mendoza, 2011). Thus, firms are attempting to build trust through various seals, certifications, “authenticators” (Rust, Kannan, & Peng, 2002), and trustmarks (Aiken, Osland, Liu, & Mackoy, 2003).

Given this well-justified proliferation of third-party certifications amongst *etailers*, the concept of trust transference (Doney & Cannon, 1997; Milliman & Fugate, 1988) plays a very important part in internet marketing. The internet is a communications context wherein information asymmetry abounds. Offered relatively few informational cues, presented mostly in visual written and iconographic forms, internet consumers must frequently ascribe notions of trustworthiness from outside-source signals. Some of these outside-source signals have aptly taken on the designation of “trustmarks” (Aiken, et al., 2003). Trustmarks have been defined as any third-party mark, logo, picture, or symbol, presented in an effort to dispel consumers’ concerns about internet security and privacy and, therefore, to increase firm-specific trust levels (Aiken, Liu, Mackoy, & Osland, 2004). A trustmark is designed to communicate trustworthiness through behavioral insinuations of capability, rational suggestions of credibility, and emotional implications of benevolence and integrity. Usually, an internet firm must license the trustmark from some third-party – compensating the party through both an upfront fee and a monthly payment. The issuing firm investigates the company, its internet security methods and specific *ecommerce* practices, and then authorizes the licensor to post the mark on its website. Consumers are then assured that there are certified security, privacy and disclosure standards for the use and access of information that they provide to the organization (Russell & Lane, 2002).

Marketing researchers have learned that context-specific trustmarks are effective (Aiken & Boush, 2006); however, the field has yet to more deeply investigate many of the complex signal-based communications processes surrounding trustmarks. Thus, the current work has two main objectives. First, the study serves as a preliminary investigation into the process of trust development through the use of trustmarks. Second, the study specifically explores the impact of source influences of trustmarks in early stages of trust transference. A between-subjects experiment manipulates only the source characteristics of stimuli so as to come from: (1) a governmental source; (2) consumer reviews; and (3) an objective, expert third-party source (along with a control condition). The sections below discuss extant literature, share the study’s method and results, and discuss findings and managerial implications.

TRUST IN A COMPUTER-MEDIATED ENVIRONMENT

Prior to the explosion of the internet as an all-in-one distribution, promotion, and marketing tool, researchers recognized the multitude of situational factors and noted that trust is both target- and context-specific (Aiken, 1999; Johnson-George & Swap, 1982; Schurr & Ozanne, 1985). Previous research has studied internet trust at both the firm-specific level (Jarvenpaa &

Tractinsky, 1999; Luo, 2002; Shankar, Urban, & Sultan, 2002; Sultan et al., 2002; Yoon, 2002), the community-level (Blanchard, Welbourne, & Boughton, 2011), as well as the broader, more macro-environmental context. For instance, Mutz (2005) evaluates *ecommerce* in terms of general social trust. Moreover, while Grabner-Krauter and Kaluscha (2003) speak of system trust, Walczuch and Lundgren (2004) describe institution-based trust in *ecommerce* in general. Chen and Dhillon (2003) propose three primary dimensions of *generalized* Internet trust, namely: competence, integrity, and benevolence.

An ever-expanding subset of the business and marketing literature concentrates on how the concept of trust is unique in a computer-mediated environment (Handy, 1995; Hine & Eve, 1998; Jarvenpaa & Tractinsky, 1999; Koehn, 2003; McKnight & Chervany, 2002). In the context of the Internet, buyers and sellers exist in a computer-mediated *marketspace* wherein issues are not resolved face-to-face; but rather, distant users attempt to communicate through a globally elaborate “web” of electronics hardware and software (Dugal & Roy, 2000; Hoffman, Novak, & Peralta, 1999a). Internet firms and *infomediaries* are positioned between producers and the growing throng of *econsumers* (Parasuraman & Zinkhan, 2002). Communications and transactions occur electronically, thereby increasing risks for online consumers and placing a heavy communications burden on sellers whose website effectiveness is affected by a variety of design characteristics (Geissler, Zinkhan, & Watson, 2001). Trust in the Internet is further complicated by the fact that developmental attributes of online trust are influenced by the shopping trip’s specific purpose (Reibstein, 2002).

Contemporary definitions of trust in the internet reflect new-found consumer apprehensions. Overcoming perceptions of uncertainty has linked trust to the diffusion and acceptance of *ecommerce* in general (Grabner-Krauter, 2002; Shankar, Urban, & Sultan, 2002). Internet consumers worry about everything from excessive spam e-mails and intrusive cookie files, to costly credit card fraud and perilous identity theft. Milne and Boza (1999) define trust in terms of this largely affective privacy element, noting the expectancy of an internet consumer to rely on marketers to treat personal information fairly. Thus, issues of risk, reliability, privacy, security and control of information emerge as key variables in internet trust development (Bhatnagar & Ghose, 2004; McCole, Ramsey, & Williams, 2010). These issues dominate firm-specific or website-specific trust research (e.g., Garbarino & Strahilivitz, 2004; Sultan et al., 2002; Yoon, 2002).

In this way, society in the information age (Glazer, 1991) seems to have developed a new form of *contextual* trust - a form of trust that is characterized by the unique representations of *econsumers* and virtual firms as encoded, transmitted, and decoded through an electronics-driven computer-mediated environment (Aiken & Boush, 2006). Contextual trust appears to be affected by the communications-media involved, the unusual shopping environment, and the transaction-specific risks and rewards. Every aspect of internet consumption, including communications, transactions, and even terms of delivery, is moderated by an omnipresent generalized trust of the media context itself (Aiken et al., 2007). Further, this form of contextual Internet trust

encompasses issues of risk, reliability, privacy, and security, as well as perceptions related to control of information (Rust, Kannan, & Peng, 2002; Strauss & Frost, 1999).

Overcoming the concern for privacy is a major building block for trust development in the internet (Hine & Eve, 1998; Benassi, 1999). Researchers have observed that privacy is a multidimensional concept and plays a critical role in fear of purchasing online (Hine & Eve, 1998; Sheehan & Hoy, 2000). This concern for privacy likely derives from fear of the unknown (Hoffman, Novak, & Peralta, 1999b). In as much as trust requires a cognitive and affective leap of faith (a movement beyond calculative prediction – see Williamson, 1993), trust in the internet implies, to some extent, behaviorally overcoming a concern for privacy. To take action in the face of risk is to engage in trusting behavior (Moorman, Zaltman, & Deshpandé, 1992; Schurr & Ozanne, 1985). Such action appears as a cognitive abstraction of trust - an imperfect attempt to rationally estimate the incalculable possibilities of risks and rewards (Aiken, Liu, Mackoy, & Osland, 2004).

Moreover, trust in the internet involves unique issues of control. In the off-line world consumers think nothing of giving their phone numbers or home addresses to seemingly disinterested cashiers and store managers. However, online consumers often cite feelings of helplessness and fear while shopping on the internet (Hine & Eve, 1998). *E*consumers often desire complete control over their personal information, control over the actions of a web vendor, and control over the Internet site. Managing the actions of an Internet firm affects consumer perceptions of privacy and security (Bhatnagar & Ghose, 2004; Hoffman, Novak, & Peralta, 1999b). Thus, internet consumers carefully guard their personal information.

Finally, internet trust has been noted to carry with it unusual behavioral burdens. That is, internet behaviors and behavioral intentions are consistently judged by *e*consumers and potential *e*consumers alike. A firm's resources and abilities are meticulously judged, discussed in chat rooms, and rated by all types of consumers and groups. Trust in an internet context, then, largely develops through keeping behavioral promises. Accordingly, an evolving sense of "Darwinian trust" emerges as the new essence of online commerce (Alsop, 1999). Koehn (2003) speaks of the related concepts of *calculative trust* (parties reviewing another's history of keeping promises), as well as the *knowledge-based trust* (that emerges when two parties are familiar with each other and interact frequently). Past behaviors lead to greater trust. And, in an internet context in which both inexperience and uncertainty abound, any and all concrete behavioral assessments are applied in the trust development process. Thus, third-party certifications, ratings, reviews, and trustmarks take on greater weight through the process of trust transference (Aiken, 1999; Aiken, et al., 2004; Doney & Cannon, 1997; Miliman & Fugate, 1988).

Trust Development through Transference

The internet has drastically changed the acquisition, processing, and management of information (Biswas & Biswas, 2004). Transference serves a communicative function in information processing. In this sense, it is a reasonable evolved consumer heuristic to transfer feelings and cognitions from a trusted proof source to another person or group with which the consumer has little or no experience. This communicative “short cut” makes even more sense in a computer-mediated context wherein information asymmetry abounds.

Thus, in an attempt to answer the fundamental question, “How does trust develop in a business relationship?” many authors have recognized myriad antecedents (Doney & Cannon, 1997; Ganesan, 1994; McAllister, 1995; Morgan & Hunt, 1994; Schurr & Ozanne, 1985; Swan, Bowers, & Richardson, 1999). Antecedents are generally viewed as contributors of the process that brings a trustor away from a state of either neutrality or distrust. The process of trust development relies on the formation of expectations (under the influence of individual perception) about the motives and behaviors of a trustee. In order to better understand the complexities of interpersonal trust development, Doney and Cannon (1997) proposed “Five Cognitive Processes.” One was labeled the *transference process* wherein researchers noted that trust can develop by attaining a third party’s definition or opinion of another as trustworthy. This suggests that trust can be transferred from one trusted source to another person or group with which the trustor has little or no experience. These processes are an acknowledgment that something happens between the apperception of an antecedent and the emergence of trust.

Trustmarks as Internet Signals

The concept of signaling theory is derived from a widely accepted economic idea that parties involved in a transaction will have varying levels of information (Bergen, Dutta, & Walker, 1992; Mishra, Heide, & Cort, 1998; Rao & Monroe, 1996). This potential discrepancy of information has implications for possible transactions and relationships between the parties (Bagwell & Riordan, 1991; Boulding & Kirmani, 1993). Kirmani and Rao (2000) further explain signaling theory and its complications by stating that, “When one party lacks information that the other party has, the first party may make inferences from the information provided by the second party, and this inference should play a role in the information the second party chooses to provide” (p. 67). By choosing what to project to outsiders, the information becomes a signal. Lastly, signaling theory posits that a rational consumer expects a firm to honor the implicit commitment conveyed by a signal, since not honoring a promise is viewed as economic suicide for a company (Bagwell & Riordan, 1991; Boulding & Kirmani, 1993).

In the context of the Internet, signals may be of utmost importance in terms of consumer diagnostics (Biswas & Biswas, 2004). Marketers are faced with the difficult task of truly understanding their customer base. Only then can marketers choose the most appropriate signal

to send an effective message, reducing customers' apprehensions and thereby declaring the website trustworthy. Furthermore, this signal must be placed in the most advantageous place on the web page, making it easily readable and convenient for customers to see, but not so forthcoming that it actually increases uneasiness among the customer base (it is conceivable that consumers might call into question the need for a firm to send such a strong signal). Aiken et al. (2004) present a suitable categorization of 20 possible Internet signals (e.g., trustmarks, consumer reviews, chat rooms, banner ads, online coupons, return policies, warranties, translations of sites, etc.).

Finally, previous studies have shown that choosing an appropriate third-party is critical to how potential consumers will react to the trustmark. That is, the third-party must be seen as credible in order to be effective (Russell & Lane, 2002). Garbarino and Strahilevitz (2004) found that site recommendations (from friends) lead to both greater reductions in perceived risk and also stronger purchase intentions. A better understanding of the influences of source characteristics of trustmarks would have a great impact on the effectiveness of the mark a company utilizes.

METHOD

A between-subjects experiment attempted to measure trustmark source influences on firm-specific trust utilizing four conditions (inclusive of a control condition). Since the research was exploratory there were no a priori hypotheses. A convenience sample of 400 subjects was taken from a large northwestern university. The sample consisted of approximately 90% undergraduate students and 10% graduate students from across the school's four major colleges (thus generating subjects from a wide variety of study disciplines). While 21 of the surveys were deemed unusable, an additional 21 surveys came from self-identified international students and were set aside for future comparative analyses. The remaining 358 usable questionnaires contained 168 female (46.9%) and 189 male (52.9%) subjects.

Data collection took place in classroom settings rather than over the internet in order to increase response rates and to increase subjects' involvement levels. The paper-and-pencil questionnaire consisted of three parts. Nearly all of the variables were measured using seven-point Likert-type scales. Part One provided an introduction to the study and inquired about generalized Internet commerce trust (GICT). The scale was adapted from Aiken et al. (2007) and measured the five dimensions of GICT.

Part Two opened with another short introduction, written in a font size three times that of the rest of the questionnaire. The short paragraph provided further introduction to the stimuli and implored subjects to pay special attention to the website they were about to see. They were asked to "spend one-two minutes carefully examining all aspects of the following web page." Next, one of four possible experimental stimuli were presented in the form of a screen print from a mock website. The site posed as a new electronics superstore and the specific page highlighted a digital

camera for sale. Three different internet trustmarks were presented in the lower right corner of each website. These trustmarks were designed by a graphic artist so as to look realistic but not especially familiar or recognizable as any company that subjects would have seen before. The main design element was a lock -- meant to instill a sense of security and protection. Above the graphic was the name "SiteSecure." The slogan of the mock company was "Keeping Consumers Safe on the Internet," and was shown below the lock and above the name of the firm in all three experimental conditions. The trustmarks only differed in terms of the identification of the certifying source at the bottom of the mark. Phrases at the bottoms of the trustmarks were: (1) "Reviewed and Certified by Customers Like You;" (2) "PC Magazine - Editors' Choice;" and (3) "The Bureau of Consumer Protection (A Division of the Federal Government)," with the latter two having green text above the phrase which read "Certified By." This was not placed on the Customer review condition in order to avoid redundancy. Additionally, there was a control condition, picturing all elements of the company, the website, as well as the camera and its functions, without any trustmark. Exposure to experimental conditions was randomly assigned.

Part Three of the questionnaire contained variables adapted from Aiken and Boush's (2006) measurement of firm-specific trust (FST). Here, variables attempted to measure the affective, behavioral, and cognitive elements of trust in the experimental website. After the firm-specific trust questions, subjects were asked several demographic and Internet-usage questions.

RESULTS

Generalized Internet Commerce Trust Results

Cumulatively, the GICT scale yielded a Cronbach's alpha of 0.68. While a principle components factor analysis validated the same five dimensions found previously by Aiken et al. (2007), separate analyses of each component is beyond the scope of this paper. Thus, an aggregated GICT mean was calculated by averaging responses to Part One of the survey. The mean for the sample was 3.91 on a seven point scale. This relatively low overall trust of the Internet, in general, is consistent with previous research noting that people are still hesitant to trust web information (Gosling, 2004).

After running frequencies and placing subjects into two relatively equal sized GICT groups, a set of oneway ANOVA and t-tests were run. First, with respective means of 3.53 and 4.51, it was not surprising that low trusters had significantly lower GIC scores than high trusters ($t = 22.8$, $p < .01$). Additionally, across gender groups, the data showed that men were more trusting, in terms of generalized Internet commerce, than women (male mean = 4.12, female mean = 3.85; $t = 4.05$, $p < .01$).

Second, after blocking on those subjects displaying high levels of GICT (and then low levels of GICT), an ANOVA revealed that high GICT subjects exposed to the government-sourced trustmark displayed significantly higher firm-specific trust means ($F = 4.44, p < .01$). Furthermore, in post hoc tests the government condition had significantly higher firm-specific trust means compared to the both the control condition ($p < .01$) and the independent experts condition ($p < .05$). High GICT subjects seemed to be more influenced by the government-sourced trustmark. Low GICT subjects were not swayed by exposure to the different conditions.

Third, an ANOVA found significant differences between GICT groups and their firm-specific trust scores (after controlling for exposure to experimental stimuli). Thus, generalized Internet trust was determined to be a significant moderating variable between the trustmark condition and firm-specific trust ($F = 11.02, p < .01$) as well as the three base components of firm-specific trust. Lastly, the GICT means across Internet usage groups and Internet purchasing groups failed to show statistical significance. Essentially, regardless of the number of hours spent on the Internet, or the number of items purchased through the Internet, subjects' levels of GICT were quite similar.

Firm-Specific Trust Results

Firm-specific trust (FST) was measured according to the three foundational components (affective, behavioral, and cognitive) recognized by so many previous researchers (see Aiken & Boush, 2006; Doney & Cannon, 1997; Ganesan, 1994; Johnson & Grayson, 2005; Lewis & Weigert, 1985). Means were calculated for each component and in total. Cronbach's alpha scores were .934 for total FST, .720 for affective FST, .925 for behavioral FST, and .921 for cognitive FST. It is interesting to note the striking differences in means between behavioral elements of trust and other aspects of trust. Subjects were quite distrustful of the experimental firm in terms of providing their email and home addresses, their phone numbers, and their "personal demographic information."

A set of ANOVA and t-tests were utilized to investigate differences in FST means. When FST means were analyzed across experimental conditions, the means of the group exposed to the governmental source were consistently higher than that of subjects in the other three groups. The differences were statistically significant for the combined measure of FST ($F = 4.22, p < .01$). Further analyses showed that the government-sourced trustmark favorably influenced affective trust ($F = 5.05, p < .01$) as well as cognitive trust ($F = 4.46, p < .01$), but it did not have an effect on the behavioral FST component. Post hoc tests utilizing Tukey's HSD multiple comparisons further reinforced the power of the government-sourced trustmark.

TABLE 1: FIRM-SPECIFIC TRUST BY TRUSTMARK SOURCE CONDITION *

<u>Source Condition</u>	Affective Trust <u>Means</u>	Behavioral Trust <u>Means</u>	Cognitive Trust <u>Means</u>	
Government Certified (n = 90)	4.16 (s = .93)	3.39 (s = 1.41)	4.14 (s = 1.10)	3.89 (s = 1.02)
Consumer Certified (n = 90)	3.92 (s = .92)	3.17 (s = 1.32)	3.99 (s = 1.16)	3.70 (s = .99)
Industry Expert Certified (n = 91)	3.83 (s = 1.07)	3.22 (s = 1.58)	3.72 (s = 1.29)	3.59 (s = 1.21)
Control Condition (n = 87)	3.61 (s = .85)	2.85 (s = 1.36)	3.55 (s = 1.16)	3.34 (s = .99)
ANOVA results	F = 5.05 p < .01	F = 2.17 p < .09	F = 4.46 p < .01	F = 4.22 p < .01

* 7-point scale

Testing FST levels according to internet usage groups (high, medium, and low – as broken down according to self-reported numbers of hours spent on the internet) showed practically no mean differences. Furthermore, testing FST levels according to internet shopping groups (low, medium, and high relative to the self-reported number of annual internet purchases) revealed practically no differences in FST means. In other words, subjects who were heavy internet users were not differentially influenced by the source characteristics of the trustmarks.

Finally, the sample showed significant FST differences across gender groups. Just as noted above in terms of GICT, men showed higher trust levels than women at the firm-specific level. A set of t-tests revealed that, in aggregate of all experimental conditions, men showed significantly higher levels of FST (3.82 compared to 3.42, $t = 2.83$, $p < .01$) as well as the corresponding foundational bases of FST. However, analyzing each experimental condition separately, we see that this gender distinction was largely driven by significant differences in the consumer-sourced condition and the control condition. That is, male subjects responded more positively to the consumer-sourced condition and were less distrustful of the control condition. The pattern was inconsistent across the industry expert condition and gender means were nearly equal in the government-sourced condition.

DISCUSSION

The overarching purpose of this study was to explore the source influences of internet trustmarks. After careful analyses, several conclusions can be drawn with confidence. First, with respect to firm-specific trust, the results revealed that amongst the three sources the government-sourced trustmark was the most influential. Given the US tendency to rate high on individualism (vs. collectivism) according to Hofstede (1980), one might have expected the Industry Experts source to induce the highest levels of FST. Anecdotally, one might reason that this result was also surprising given a growing distrust of the US government in the wake of bank scandals, bailouts, etc. Yet, at least amongst college students, it appears that federal agencies instill greater perceptions of security than do other sources. Perhaps this age cohort views federal certifications as highly credible. Or, perhaps college students, for the most part extremely technologically savvy, understand the ease of posting reviews (either from consumers or industry experts) and so they somehow discount the informational value of these sources.

Second, our findings reveal that the behavioral component of trust is still not usually higher than the affective or cognitive components of FST. Further, consumers' behavioral trust is not significantly influenced by trustmarks. This study found that the sources of trustmarks did not have any influence on behavioral trust. So, although it might appear on the surface that college students are exceedingly comfortable giving out personal information (e.g., email addresses, phone numbers, and even their home addresses) over the internet, they are actually much more generous and optimistic (or perhaps less cautious and restrictive) in their affective and cognitive judgments. It is interesting to note that, behaviorally speaking, a significant number of people regularly give false personal information over the Internet (Hoffman, Novak, & Peralta, 1999a).

Third, the data show that men not only have higher levels of generalized Internet commerce trust, but that they also (oftentimes) are more trusting at the firm-specific level compared to women. These results are consistent with previous findings that women are more concerned with privacy, security, and risk (Sheehan & Hoy, 2000). Still, the aggregated GICT mean was only 3.81 (below the midpoint of the 7-point scale). This moderately low number is surprising, given the longstanding emphasis on security in *ecommerce*. Additionally, many Internet users are protected through the use of anti-virus software, malware, as well as fraud and identity theft guarantees that did not exist a decade ago. Still, even with advanced technology, this study provides evidence that consumers are quite reluctant to trust on the Internet.

Lastly, from the purchasing behavior data gathered, medium purchasers tend to have the highest GICT. At first glance, this finding seems surprising because the mid-level does not have the most experience with online purchasing. However, it may be that the medium purchasers have the highest GICT because they have had fewer negative experiences. Perhaps heavy purchasers are more likely to have experienced theft or fraud through their many Internet transactions. The low purchasing group also included respondents who had never made a purchase online. These include the skeptics, who may have never trusted the Internet.

LIMITATIONS AND FUTURE RESEARCH

This study suffers from many of the most common plights of academic research. First, although this study would ideally be generalized to the entire population of Internet users, the sample was derived purely from college students in roughly the same age range. While one might argue that students go through the same cognitive processes of inference making and trust transference as the general population, there still may be something idiosyncratic about this group with regards to their interpretations of internet signals. Future studies should take care to include wider demographic and geographic ranges.

Second, the stimuli were presented on a mock website, which displayed a fabricated trustmark, and the data were collected in a lab-type setting. While this was done to eliminate any potential biases, to control for external confounds, and to heighten involvement levels of respondents, the experiment may have suffered from perceived artificiality. This may have reduced trust levels across the board, due to fear of the unknown or a general lack of realism. Steps to increase the realism (i.e., using an existing trustmark, a real internet firm, and collecting data over the internet) would likely increase the validity of the study. Still, future studies would have to take measures to ensure against biases that might stem from previous interactions and perhaps well-formed attitudes about a test company, brand, or existing trustmark. Regardless, the complex and interesting sub-field of internet commerce and communication signaling through trustmarks requires further exploration and empirical validation.

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ACCOUNTANTS & MARKETERS PROLIFIC DISCOURSE

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ABSTRACT

Marketers have been subjected to considerable criticism for not understanding the financial impact of their decisions. However, empirical research has discovered that the vast majority of measures that marketing managers rated as significantly useful were non-accounting measures by nature. It is highly conceivable that accountants and marketers are envisioning the business in general, and marketing in particular, in very distinctive ways in terms of primary scope and focus, unit of analysis, and conditions of decision making. This paper will demonstrate that the traditional cost accounting approaches are inadequate for marketing decision making, and suggests that a paradigm shift by both marketers and accountants are imperative for more efficient decision making, which is a prerequisite for creating a long-lasting competitive advantage in the market place.

INTRODUCTION

Accountancy professionals and their marketing counterparts oftentimes have gone about their particular perspectives, and tasks without much concern and/or noteworthy and consequential interfaces with other disciplines, albeit some brief discussions regarding interfacing the two perspectives took place in the 1920s (Roselender & Hart, 2003). Marketers have been subjected to criticism for failing to fully understand the financial impact of their decisions (Ratnatuga, Hooley & Pike, 1990). Homburg, Hoyer, and Fassnacht (2002), and Lertwongsatien & Wongpinunwatona (2003), on the other hand, have recognized that marketing managers desire both profitability and performance reports for decision-making. They have also called out for enhanced accounting procedures to provide these all-important data. The objective of an effective accounting system should be to provide relevant and timely information that will assist marketing managers in making informed decisions regarding profitability, pricing, adding or dropping product items or product lines, and evaluating sales territories or customer accounts. In

achieving this, it is necessary to be able to estimate and/or trace costs directly to product lines, product items, territories, customer types. Thus, an interface between the disciplines can potentially be a tremendous stride forward to achieve greater firm efficiency and profitability.

PURPOSE OF THE STUDY:

The purpose of this paper is to:

- a. Discuss the quintessence of the problem and provide two prototype examples (Part III.)
- b. Scrutinize the root of the problem: the existence of three divergent perspectives (Part VI).
- c. Discuss the strategic importance of an alternative conceptual framework (Part V).
- d. Propose a conceptual framework in order to bring about a “Genuine Accountants & Marketers Prolific Discourse” that will serve as a contribution to practice (Part VI).

THE QUINTESSENCE OF THE PROBLEM

The fields of accountancy and marketing often diverge in both focus and purpose; accountants traditionally have concerned themselves with detailed measurements of production operations on a micro level, thus leading to cost accounting as a distinct branch of the field. Marketers, on the other hand, have focused more on a macro approach; thus the disciplines recurrently appear dissimilar, or at odds, with one another. A corresponding argument can be presented about management accounting textbooks and research (Blanchard & Chow 1983; Roselender & Hart, 2003). The majority of reports and data generated by conventional accounting procedures and practices, from marketers’ perspectives, are not practical for decision-making, for the reasons that they are either unavailable on a timely basis, or they are using distorted inputs (e.g., arbitrary allocation of marketing costs). Accounting has conventionally imposed its disciplines on marketing (Roselender & Hart, 2003). Guilding and Godfrey (2009) believe such practices are inappropriate for marketing parishioners (e.g., brand and brand equity measurements and valuation). In the following section we discuss two prototypes associated with: (A) treating marketing expenditures as cost or investment; and (B) the issues associated with brand equity measurements to provide some embodiment of the problems that exist among two perspectives. Corporations are becoming more involved in marketing and are finding it a struggle to comprehend and develop marketing programs, and “nowhere is this struggle more evident than in the accounting profession” (Barr & McNeilly, 2003, pg. 713).

Prototype 1: The Treatment of Marketing Expenditures

Decades ago, when most firms manufactured and marketed a narrow product line, key costs were direct labor and materials and were easily traced to individual products. As marketers developed

wider and expanded product lines, indirect cost allocations became more difficult for accountants to cover. The prevalent view among many accounting researchers was that such cost allocations were essentially arbitrary and thus served no useful purpose. Today's growth industries are often characterized by very different cost structure forms than those traditionally dominated by manufacturing. In many industries such as consumer products, services, high technology, and information, the material and process conversion costs may be much lower in comparison to overhead and marketing costs.

The "Marketing Concept" dictates that all operational areas of the firm focus upon both customer satisfaction and generating profit for the organization, thus giving rise to the desirability of accountancy and marketing to interface successfully with those goals in mind. Whilst the distortion of allocating overhead and indirect costs was perceived to be insignificant, it is widely recognized that product lines have proliferated significantly, and direct labor now represents a small fraction of corporate costs, while expenses associated with marketing and promotion have increased significantly (Cooper & Kaplan, 1988; Konig, Hungenberg & Engelbertz, 2009). Marketing costs make up more than 50% of the total costs in many product lines (Lewis, 1991; Rubl & Bailey, 1994; Stapleton, Sanghamitra, Beach & Julmanichoti, 2004; Gleaves, Burton, Kitshoff, Bates & Whittington, 2008). Corporations often spend a considerable amount of their budget on promotions. It is estimated the corporations commonly spend 5-10 percent of their sales on advertising, although some spend more (Gray, 2005).

Consumer product giant, Kellogg's, spends more than 15 percent of its sales on advertising and personal selling in the industrial sector. Corporations such as General Motors and Proctor and Gamble have spent \$4.75 billion and \$5.23 billion, respectively, on advertising in 2007 (Halliday, 2008). The pharmaceutical industry spent \$29.9 billion on promotions, which represents 18.2 percent of their sales (Donohue, Cevasco & Rosenthal, 2007). Corporations such as Minute Maid and Tropicana view substantial advertising expenditures as brand equity investments (Sriram & Kalwani, 2007).

The above examples and figures indicate that the product cost is only one cost, and possibly a small part of the total cost. However, marketing is a major cost component in the United States and a significant factor in worldwide competition and should not be ignored. According to Lewis (1991), Schoch and Teoh (1995), and Roselender and Hart (2006), the accounting profession has not pursued this challenge in a satisfactory manner.

A useful categorization of marketing costs is the distinction between "order-filling" and "order-getting" costs offered by Macintyre (1983), and refined by Shin (1999), even though these terms go back at least as far as 1929 (Freeman, 1929). Order-filling costs are those associated with order processing, packaging, shipping, warehousing, and bill collecting. Order-getting costs are concerned with stimulating demand and are largely represented by promotional activities such as advertising, personal selling, and sales promotion. These costs are primarily discretionary in

nature. Order-getting activities rely heavily upon strategic planning, while management control is the most appropriate focus for order-filling activities.

The most important characteristic of order-getting costs, from the marketing viewpoint, is their long-term impact on sales, which implies they should be treated as an investment rather than as an expense. The question of the extent to which advertising affects future sales is important in decision making. Current marketing expenditures, such as advertising, usually do not have their full impact on sales in the same accounting period. Moreover, their impact on sales may extend well into the future. The influence of current marketing expenditures on sales in the future is referred to as the carryover effect, according to Johnson, Herrmann and Huber (2006).

In order to properly assess the effectiveness of marketing expenditures, the fraction of the total sales in the current period and each succeeding period, which are attributable to the current marketing effort, must be measured. Numerous well-accepted and validated models have been developed in the marketing literature to measure the lag effect of advertising (Koyck 1964; Palda 1964; Kotler, 1971; Clarke & McCann, 1973; Doyle & Saunders, 1985; Feichtinger, Hartl & Sethi, 1994; Seetharaman, 2004). However, accountants prefer to treat advertising as an expense rather than investment. The two arguments given by accountants for expensing order-getting type of costs are uncertainty of future benefits, and lack of causal relationship between expenditures and benefits.

Prototype 2: Brand Equity Measurement

The terms "Marketing Goodwill," "Marketing Asset," and "Brand Equity" have been increasingly used and specifically defined, and the methods for measuring them are discussed in the marketing literature (Park & Srinivasan, 1994; Canibano, Covarsi & Sanchez, 2000; Aaker & Joachimsthaler, 2004; Rust, Ambler, Carpenter, Kumar & Srivastava, 2004; Christodoulidas, DeChernatony, Furrer, Shiu & Abimbola, 2006).

It has been long recognized that intangible assets, especially brands, can be extremely valuable and often such assets are far more significant than, for example, tangible assets (Murphy, 1990). Previous research has indicated that a mixture of financial and non-financial performance measures are becoming commonplace for some corporations, such as intangible and tangible assets, not just financial data and measures; this new concept is referred to as a "balanced scorecard" (Kaplan & Norton, 2001; Lester & Parnell, 2003). According to Madden, Fehle and Fournier (2006), organizations that have created strong brands have added value to their stockholders by yielding greater returns while bringing about less risk. Brand owners are aware that their brands are valuable, investors and corporate raiders share precisely the same view, and that is why the concept of brand value has figured in a significant number of takeovers in recent years, e.g., Guinness (Johnnie Walker, White Horse); Nestle (Kit-Kat); Sears (K-Mart and Lands

End); Delta Airlines (Western Air Lines); Maytag (Magic Chef); and American Standard (Trane), (Murphy, 1990; Walker, 2000).

Recent take-over activities have increased the awareness that the balance sheet is not a market valuation instrument and that, under the historical cost convention, it excludes assets where cost is not easily verifiable; such assets can frequently be attributed to activities of the marketing function. The relative importance of such assets is, in fact, supported by the size of many take-over bids. Marketing expenditures play a significant role in securing long-term commercial success and the creation of sustainable competitive advantages in the marketplace. The long-term impact of marketing expenditures to create goodwill and positive image in the market can assume considerable commercial value. All mergers and acquisitions must now record any applicable goodwill (Ellis, 2001).

Measuring the brand equity in reality deals with the treatment of intangible marketing assets, such as product image and reputation, has been an interesting challenge for marketers and accountants alike. Aaker (2004) has provided the most comprehensive definition of brand equity: "A set of brand assets (or liabilities) linked to a brand's name and symbol that add to (or subtracts from) a product or service" (pg. 15). Aaker has also synthesized recent thinking about marketing and depicted a comprehensive, yet parsimonious, set of factors that contribute to the development of brand equity. It is contemplated that, to a greater extent, the equity of a brand hinges on the number of people who purchase it regularly. Hence, the concept of brand loyalty, as well as the size and degree of this loyalty, is established as a vital component of brand equity. Strong effects of brand recognition on choice and market share are discussed and documented extensively in marketing. Thus, Aaker regards the concept of brand awareness as a second component of brand equity. He discusses the content of brand awareness in terms of the types of associations and then relates it the traditional concept of product positioning (Aaker, 2004). Considering the PIMS findings (Buzzell & Gate, 1987; Faria & Wellington, 2005), perceived quality is included as another significant component. Other proprietary brand assets-- such as patents, trademarks, and established channel relationships - constitutes the fifth, and final component.

Shocker (1993), on the other hand, contended that the five components of brand equity are accepted largely on the basis of face validity and little attempt is made to demonstrate their relative importance or possible interrelation. The impression left is that higher brand loyalty, awareness, and perceived quality are necessary for creating and maintaining brand equity. Tradeoffs among the factors of the models are not discussed. A review of the literature indicates a lack of substantial references to the financial or accounting aspects of brand equity, or even to the controversy that has characterized attempts to value brands as assets on balance sheets. Measuring a brand's value means identifying the sources of this value. Marketers, thus, are interested in the process by which the value of a brand was created. Marketers strongly believe that land, buildings, or machines, although valuable, no longer constitute a firm's true assets, but its intangible assets, such as know-how, patents, process, and brands are the true assets of a

company which create a sustained competitive advantage. Accountants, on other hand, are concerned that valuing a brand threatens the fundamentals of historic cost accounting principles, but practitioners are demanding relevant and realistic measures of the most valuable assets of the company. However, there has been limited interest shown in the accounting literature concerning the problems of reporting intangible marketing assets, or the implications that arise from failing to do so (Guilding & Pike, 1990; Stout, 2003). The accounting treatment of goodwill, as an aggregate intangible asset, has conceptually been discussed in accounting literature for many years. In financial accounting, the difference between the market value of the business and the fair value of its separable assets is referred to as goodwill, and reparability is the criterion employed to distinguish goodwill from other assets (Leake, 1914; Canning, 1929; Miller, 1973; Schipper, 2003; Seetharaman, Sreenivasan, Sudha & Yee, 2006).

The need for long-term performance measurement is particularly apparent with respect to the marketing function, where activities such as the building of image, reputation and market share are naturally long-term and strategically focused (Roselender & Hart, 2006). Evaluation systems should be designed to monitor performance in a manner more consistent with longer-term strategic goals, rather than short-term operational goals (Allen 1990; Cambano, Covarsi & Sanchez, 2000).

A step toward a better direction was taken by Guilding and Pike (1990), who have offered a management accounting perspective on intangible marketing assets. A typology was developed based on a theoretical accounting perspective. The marketing assets were classified under four headings: value creator, marketing assets, value manifestation, and the synthesis of marketing assets (i.e., competitive advantage). However, they have concluded that:

Financial accounting principles are ill-suited to accommodate intangible assets. Empirical studies indicate that management accounting has not, as yet, developed an alternative accounting treatment designed to recognize such assets. Currently, with regard to intangible marketing assets, the management accounting treatment appears to carry an undesirable powerful internal influence, conflicting with the important strategic notion of developing competitive advantage (pg. 47). The primary question is why accounting has not effectively addressed the above issues. The following section shall show the root of the problem rests upon the different perspectives by which marketers and accountants look at business operations.

THE ROOT OF THE PROBLEM: DIVERGENT PERSPECTIVES

It is highly conceivable that accountants and marketers are envisioning the business in general, and marketing in particular, in very distinctive ways. As shown in Table 1, an extensive literature review indicates that these perspectives are divergent in terms of scope and focus of disciplines, the treatment of marketing expenditures, primary units of analysis, primary operating conditions,

and finally, primary tasks and decision criteria. Dunk and Kenny (1983) investigated the usefulness of performance measures as perceived by marketing department managers and found that the vast majority of measures that marketing managers rated as of useful significance were non-accounting measures. Studies conducted by Clark (1999) and Furrer, Alexandre and Sudharsan (2007) echo these findings. According to the latter study, many firms now choose marketing performance, rather than financial performance, to evaluate marketing strategies. Cravens and Guilding (2001) also indicate agreement with this sentiment by stating that accounting information alone is insufficient when corporate powers are making decisions and information that is more quantifiable in nature is desired.

The studies cited in Table I have pointed out that marketing activities and decision making usually involve creative thinking, imagination and optimism about the marketplace. Accountants, on other hand, usually are concerned with realism and control. Marketers have primarily used an outward focused, growth seeking, cost augmentation, and Strategic-Business-Unit basis, or consumer and market orientation, while accountants have primarily used an inward focus on production, cost direction, cost reduction, and company basis orientation. The primary unit of analysis for accountants is a legal entity (company), while marketers deal with a product/market unit of analysis. Marketing managers look for increasingly detailed reports of product lines or even items, by sales territory, by salesperson, and by customers. With the advancement of computers, un-aggregate reports now are available to marketers; nevertheless they suffer from a very important shortcoming. They are mainly concerned with the internal criterion of the budget, and primarily the criteria used by accountants are internal (e.g., focusing on unit costs, variances, and on annual budget). Marketers, on the other hand, are traditionally concerned with external criteria (e.g., market share, brand loyalty, brand equity, trend analysis and customer satisfaction).

TABLE I: DIVERGENT PERSPECTIVES

	Traditional Cost Accounting Perspective	Activity-Based Costing (ABC) Perspective	Marketing Management Perspective
Primary Scope & Focus	<ul style="list-style-type: none"> ○ Inward Looking: ○ Production Cost ○ Cost Reduction and control ○ Product & Operation ○ Orientation 	<ul style="list-style-type: none"> ○ Improve Internal Efficiency: ○ Accurate allocation of overhead and other costs to Products, Services. And Customers 	<ul style="list-style-type: none"> ○ Out-ward looking: ○ Customer Segments and Needs ○ Profitability Growth Emphasis ○ Consumer & Market Orientation
The Treatment of Marketing Expenditures (e.g., Advertising)	<ul style="list-style-type: none"> ○ Cost ○ Tangible Assets 	<ul style="list-style-type: none"> ○ Relevant Cost ○ Tangible Assets 	<ul style="list-style-type: none"> ○ Cost and Investment ○ Both Tangible Assets & Intangible Assets
Primary Unit of Analysis	<ul style="list-style-type: none"> ○ Legal Entity (Company) 	<ul style="list-style-type: none"> ○ Company ○ Product ○ Customer Groups 	<ul style="list-style-type: none"> ○ Product/Market (Customer Groups) ○ Strategic Business Unit (SBU)
Primary Operating Condition	<ul style="list-style-type: none"> ○ Primarily Deterministic (e.g., production costs) 	<ul style="list-style-type: none"> ○ Both Deterministic and Stochastic 	<ul style="list-style-type: none"> ○ Primarily Stochastic (e.g., dealing with Uncertainty in Market Place)
Primary Task	<ul style="list-style-type: none"> ○ Analytical & Advisory 	<ul style="list-style-type: none"> ○ Analytical & Advisory 	<ul style="list-style-type: none"> ○ Decision Making ○ Risk Taking ○ Efficient use of Resources ○ Accountability
Primary Decision Criteria	<ul style="list-style-type: none"> ○ Unit Cost ○ Variance ○ Inventory Control ○ Annual Budget 	<ul style="list-style-type: none"> ○ Unit Cost ○ Variance ○ Accurate Allocation of Costs ○ Internal Efficiency 	<ul style="list-style-type: none"> ○ Profitability ○ Market Share Growth ○ Brand Loyalty & Brand Equity ○ The extent of Customer Satisfaction

Sources:

Gerard McHugh, John Fahy, Patrick Butler (1998); Robert Inglis, Robert Clift (2008); Tollington, Anthony (1995); Cunningham, Gary M (1992); Lewis, Ronald J.(1991); Guiding, C., Pike, R (1990); Drew Stapleton, Sanghamitra Pati, Erik Beach, Poomipak Julmanichoti, (2004); M Haddad. (2000); Michael Gering. (1999); Dunk and Kenny (1983); Clark (1999); Furrer, Alexandre and Sudharsan (2007); Barra (1983); Brown (2008)

Accounting is accustomed to dealing primarily with tangible assets, while marketing frequently deals with both tangible assets and intangible assets simultaneously. The accountant usually deals with certainty (e.g., production costs), while the marketer is accustomed to dealing with the uncertainties of the marketplace. Many of these costs presumably cannot be susceptible to accounting's more rigid control disciplines. Accounting professionals often serve as analytical advisors, while marketing people are often in charge of decision making and resource allocation.

Traditionally, accountants have created managerial and marketing reports at the highest level of aggregation. Marketing managers need to understand patterns of resource deployment at the micro level (brand level) while traditional accounting reports would provide the financial focus at an aggregate level (functional level).

The above-mentioned differences include an inherent conflict of opinion and interest, which ultimately may cause the creation of a communication gap. If these conceptual differences are not resolved, marketing and accounting departments may definitively become rivals, whereas both must ultimately be concerned with the performance of the whole company.

THE STRATEGIC IMPORTANCE OF AN ALTERNATIVE APPROACH

Cost information that helps management assess the profitability, effectiveness, and efficiency of products, processes, and departments is a very critical factor in planning, directing and controlling the operations. Previously simplistic approaches are not workable and can also be dangerous. Intensified global competition and radically new production technologies have made accurate product information crucial to competitive success (Cooper & Kaplan, 1991; Janton, Ndubisi & Yeah, 2003). At a strategic level, both Hayes & Abernathy (1980) and Bourne, Mills, Wilcox, Neely and Platts (2000), have argued that an emphasis on short-run financial controls has jeopardized the competitiveness of U.S. firms. A successful business should deploy resources to those activities that yield the highest strategic benefit in the long-run. Cost management should be used as one of the keys to helping American firms succeed in a worldwide competitive environment.

A prominent theme of managerial accounting journal articles in recent years has been world-class competition, noting the gradual slipping of U.S. manufacturers to off-shore manufacturers. Again production costs have been the center of attention, while marketing costs have been largely ignored. It has been found that traditional cost accounting systems fail to provide accurate cost information and we must also focus on marketing costs as an important component of the total cost of a product (Lewis, 1991; Stapleton, Sanghamitra, Beach & Julmanichoti, 2004). Effective cost reporting can be used as a basis to aid marketing managers in developing successful and competitive strategies. This cannot be achieved unless marketers work with accountants to adopt a more holistic approach to cost management.

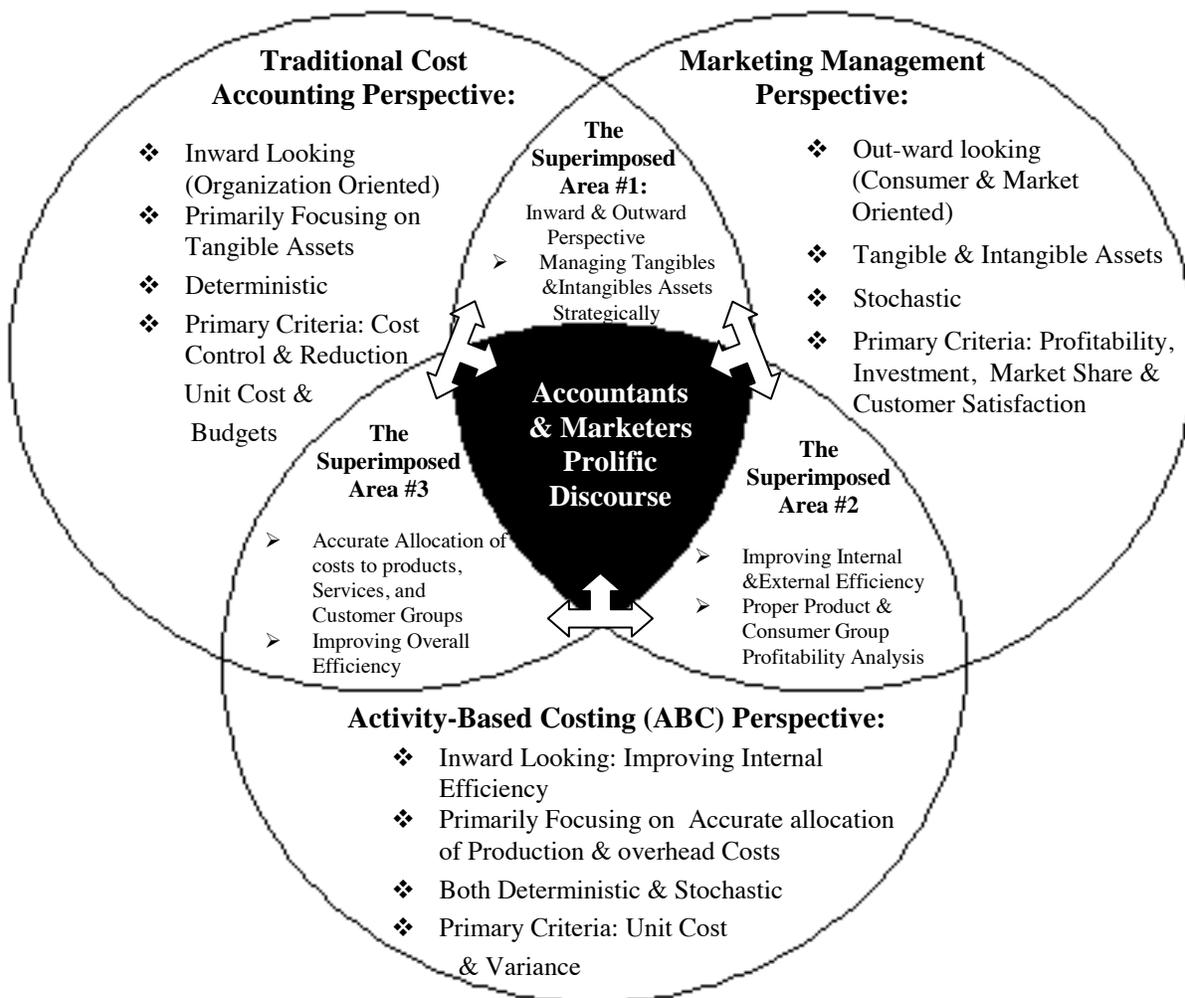
The traditional approach to cost accounting often leaves the needs of marketing managers unmet for the purpose of performance measurement. This conclusion is supported by Nanni, Dixon, and Vollmann (1990), Sheth and Sisodia (2002) and Rowlinson (2004). Both fields thus have the opportunity to develop goals, systems, and reports that will serve each other and top management effectively. This can be a win/win situation for the entire organization as the perspective evolves to team-based programs and decision-making.

RESOLUTION:

A GENUINE ACCOUNTANTS & MARKETERS PROLIFIC DISCOURSE

FIGURE I: INTEGRATING AND SYNTHESIZING THE THREE PERSPECTIVES

The Conceptual Framework



To resolve the discrepancies discussed in previous sections, a serious dialogue is required between accountants and marketers, because accountants and marketers envision the business in

general, and marketing in particular, distinctively. Both need a paradigm shift in order to reduce the consequential gap that exists between them. The most promising approach to create a productive dialogue between accountants and marketers is to integrate the core ideas of Activity-Based Costing (ABC) and two other perspectives (traditional cost accounting and marketing management perspectives) as proposed in Figure I.

In order to bring about a prolific discourse between accountants and marketers, areas of overlap exist between the three perspectives that can be synthesized (the Superimposed Areas 1, 2, and 3). The following section will briefly discuss the genesis of ABC and the three “Superimposed Areas” that should lead to accountants and marketers prolific discourse.

Genesis of ABC

The use of activity-based costing was suggested during the 1960s (Heskett, Ivie, & Glaskowsky, 1964; Lewis, 1968), however, the professions have largely ignored those recommendations and overlooked the fact that many marketing allocations have cost characteristics similar to those of production activities (Lewis, 1991). Activity-Based Costing (ABC) initially was formalized by Cooper and Kaplan in 1991 and then proliferated by other scholars, including Turney (1992), Stratton (1993), and Estrin, Kantor, and Albers (1994).

The slow initial rate of adoption of ABC was due to accounting lag, or according to Scapens (1994), “the time lapse between development of a theory and application in practice” (pg. 304). Initially, accountants viewed the ABC approach as a one-dimension approach to calculating product costs (Soin, Seal & Cullen, 2002), but the ABC system actually aids businesses achieve better decision-making, based on accurate costing information (Stapleton, Sanghamitra, Beach & Julmanichoti, 2004). However, an extended view of the ABC system can lead to more efficient management of marketing costs as well, and creating the necessary inter-functional synergy.

Only recently, serious attention has been paid to the creation and implementation of ABC systems (Chen, Hergeth & Zuckerman, 2002; Roselander & Hart, 2003; Gupta & Galloway, 2003; Baird, Harrison & Reeve, 2004).

The Superimposed Area #1

Marketing managers need to compare the profits that various customers, product lines, brands, or regions generate. Allen (1990) and Mehta, Dubinsky and Anderson (2002) advocate that control systems should be designed to monitor performance in a manner more consistent with longer-term strategic goals, rather than short-term operational goals. The need for long-term

performance measurement is particularly apparent with respect to the marketing functions focusing upon the building of image, reputation and market share of a long-term, strategic nature.

Traditionally, marketing decision-makers based pricing decisions around costs, thus providing a unique bridge between accountancy and marketing. As decisions evolved toward being more market-based, perhaps this desirable relationship has been allowed to dissipate in importance, or disappear altogether. Better and more profitable operational decisions are made when both internal and external viewpoints are considered. Accountants bring up the evaluative and cost data which are absolutely vital to business success. Conversely, marketing professionals develop vehicles such as test markets to give reasonable estimates about new product success. Then “what if” decision-making is necessary to render effective models for consideration of potential product-line additions.

The Superimposed Area #2

Managers’ decisions based on ABC are called Activity-Based Management (ABM). ABM includes decisions to modify pricing, product mix, and customer mix; to change supplier and customer relationships, classify activities as value-added or non-value-added, and to improve the design of products and services (Atkinson, Banker, Kaplan, and Young (1995) and Gupta and Galloway (2003)). Because ABC is capable of revealing the links between performing particular activities and the demands which those activities make on the organization's resources, it can give managers a clear picture of how products, brands, customers, facilities, regions, or distribution channels both generate revenues and consume resources, thus allowing them to make effective operational, and more importantly, strategic long-term oriented decisions (Cooper & Kaplan, 1991; Gupta & Galloway, 2003).

The Superimposed Area #3

ABC is now being used in manufacturing and service organizations to overcome the inability of traditional cost systems to accurately assign overhead costs. ABC systems avoid arbitrary allocations and subsequent distortions by assigning the costs of organizational resources to the activities being performed by the resources, then assigning activity costs to the products, services, and customers that are creating the demand for, or benefiting from, the activities being performed. Although ABC analysis is a step in the right direction, blindly applying such without considering the assumptions behind it, may produce results that may not be any more reliable than traditional cost accounting methods.

The two assumptions underlying activity-based costing are: the costs in each cost pool are driven by homogeneous activities, and the costs in each cost pool are strictly proportional to the

activities. Some diverse marketing activities are contrary to the first assumption. The second assumption can be violated by several conditions, including the presence of nonlinear cost. It will also be violated if both fixed and variable costs are included in the same cost pool and they are assigned to products as if they were strictly variable. Finally, the joint costs can violate this assumption when they are not strictly proportional to the activity; thus a refinement and re-application are essential to maximize its utility (Roth & Borthick, 1991; Goldsby & Class, 2000).

Managerial Implications and Conclusions

Clearly organizations are more effective when teamwork is employed as a leadership vehicle. Developing product teams which include key accountancy professionals is a trend worth its weight in gold, along with finance, production and general management professionals. The concept of a 'functional team' makes marketing more effective. Turf wars can disappear and each function's professionals can grow in wisdom and performance due to the other's influence and the resultant team synergy will enable the firm to prosper more fully. Previous research (Furlong & Oancea, 2005) has discussed such collaboration between accounting and marketing by stating it is important to establish such methods of collaboration in order to form a partnership.

Although many marketing and accounting professionals may look at such an attempt to interface as threatening, Sidhu and Roberts (2008) have praised such collaboration as positive. They claim that "neither profession has to surrender what they do; they just have to relate it to the value created in the long term for the firm" (pg. 684).

At the minimum the following changes, based on skills and focus of both accounting and marketing, should be considered in the development of an effective ABC system, capable of serving the needs of marketers:

1. Marketing performance should be viewed both against external, as well as internal, criteria.
2. The criteria for sales and gross margin performance should be externally based; they should be related to customers and competitors, (e.g., development of a selling price index using leading competitors' prices).
3. The conventional operating statements need to be translated for marketing management from a legal entity basis to a Strategic Business Unit basis (Pyne, 1984). The operating statement can be extended to incorporate all relevant marketing mix variables, and to reveal the business unit in its competitive context. This requires estimation of the revenue and marketing mix variables costs for each SBU.
4. Marketers must gear up to take a ROI-related view of key decisions about products, services, customers, distribution channels, promotion, and pricing.
5. As part of a managerial development program, companies can move executives from one function to another in a planned sequence to help eliminate the cultural differences and knowledge gaps between accountants and marketers (Mills and

- Tsameniji, 2000). Job swaps between the accounting and marketing departments should become commonplace. A marketing manager can be attached to the managerial accounting team. Marketing insight can infuse the work of the accountants with new vigor and bring their brand-based knowledge to the table to add to accounting-based methods (Canibano, Covarsi & Sanchez, 2000; Luo & Donthu, 2006). Accountants can make a powerful contribution to the marketing manager's job, because they can bring insights and perceptions drawn from an intuitive feel for overall company profitability that would not come naturally to a marketer (Booth, 1986).
6. Companies are encouraged to report order-filling costs separately from other marketing costs, such as order-getting costs. Systems can be developed which reward the successful interface of the two disciplines. These could include the following: Creation of a financial incentive reward for accomplishment of pre-agreed-upon goals traceable to the interface (i.e., reduction of costs, increased profitable market share growth, and/or overall ROI increases).
 7. Development of psychologically-based incentives such as "President's Clubs," "Golden Circle Clubs," or "Achievers Clubs," which will recognize accountancy and marketing teamwork and reward the members with honor awards and/or prizes.

SUGGESTIONS FOR FUTURE RESEARCH

In the conclusion section of the paper, the minimum changes required in the development of an effective ABC system discussed which included moving executives from one function to another in a planned sequence, implementing job swaps between the accounting and marketing departments, and attaching a marketing manager to the managerial accounting team. All of these changes may require significant organizational structure implications. Once a reasonably cooperative marketing and accounting relationship is developed, many companies find that a formal medium for integration is required to adequately integrate the specific activities of managers.

The "Establishing an Informal Interface" path has the advantage of simplicity. The potential disadvantage is that functions have no formal access to one another. According to Chung (1994) and Lai (2002), the traditional approach to corporate structure and management viewed the organization as a collection of vertical departments or business units. The vertical organization created invisible departmental barriers that discouraged employees in different departments from interacting with each other, and departmental goals were typically set in a way that could cause conflicts among departments. The managers in the departments fight to protect and build turf, feeling loyalty and commitment to the functional fields and not to the overall corporation and its goals.

The assignment of "Cost and Managerial Accountants to Marketing Team" may be another alternative; it has the advantages of financially analyzing the marketing programs and monitoring their implementation and performance, and coordination of planning and budgeting. Teamwork formation offers multiple rewards for its participants. Communication channels between marketing and accounting emerge, giving rise to an enhanced understanding of the differing perspectives of the team players. Additionally, common goals and perspectives are identified and the disciplines begin to intuitively realize and appreciate how each can afford the other quality ideas and inputs to help the other in its salient functions.

The above conventional functional organizational structures cannot very effectively accommodate the desired characteristics proposed in our conceptual framework and establishing an effective link between accounting and marketing. A promising approach is the concept of the "Horizontal Organizational Structure" (Jacob 1995; Poynter & White, 1990; Stough, Eom & Buckenmeyer, 2000). The objective of the horizontal corporation is to change the narrow mind-sets of armies of corporate specialists who have spent their careers climbing a vertical hierarchy to the top of a given function. The pure form of horizontal organization consists of two core groups: a group of senior management responsible for strategic decisions, and a group of empowered employees working together in different process teams. The objective is to change the employee's focus from coordination and reporting, to the flow and nature of work, and spend more time on activities that add value for customers. Team members are typically empowered personnel from the respective functions. Increased interaction of employees from different departments fosters close working relationships and better communication. It has been suggested that the horizontal structure will remain a major organizational strategy for another two decades (Lai, 2002).

Future research can identify and ascertain:

A. What evolutionary path have companies followed in order to create an accounting/marketing interface?



B. What have been the implications of adopting one or more of the above paths in terms of:

- identifying potentially profitable new product/services concepts early
- shortening the time required to develop new product/service.
- developing marketing plans which have been profit-based and market-driven
- creating greater customer orientation and satisfaction,

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EMPIRICAL INVESTIGATION OF THE RELATIONSHIP BETWEEN GOVERNMENT SPENDING AND ECONOMIC GROWTH IN THE US AND CHINA

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ABSTRACT

Of interest, is the debate over the effect of deficit financing on economic growth. There are those that argue for a negative effect and others for no effect or a positive effect. In fact, studies in the literature are mixed on the impact of deficit on growth. One theory claims that federal deficits are likely to increase growth of the gross domestic product (GDP) by increasing buying power. Another theory claims that federal deficits can reduce growth by affecting an increase in interest rate, which can lead to reduced investment. A third theory is that deficits have no effect on growth.

In this study, we investigate the relationship between government spending (whether deficit or surplus) and GDP growth in two different economies, namely the U.S. and China. In China there is surplus spending. On the other hand, deficit spending prevails in the U.S. Results show that in both countries government spending and GDP are co-integrated, indicating a long run equilibrium relationship between the two time series. Bivariate time series analysis indicated that there is a functional relationship between deficit spending and economic growth in the U.S. Deficit spending had a negative effect on economic growth. However, in China there was no effect of government spending on economic growth. In this case, economic growth seemed to be the determinant of government spending.

INTRODUCTION

The relationship between government spending and economic growth is of fundamental importance, especially in an economic downturn or recession. If the economy is down, revenue is down and government spending would likely result in a deficit. It is of interest then to determine if deficit spending would have an influence on economic growth. Economists hold

three points of view on this issue, namely that deficit spending will have a negative effect, a positive effect, or no effect on growth. One theory claims that deficit spending will increase growth by increasing consumer buying power (Palley, 2011; Eisner, 1989; Domar, 1993). Another argument claims that it will decrease growth by increasing interest rate and thus reduce investment (Barth & Wells, 1999). A third claims that deficit spending has no effect on growth (Bernheim, 1989).

Government spending under a growing economy will usually lead to surplus spending. Of interest then is to determine if in this case there would be a relationship between surplus spending and growth. A growing economy according to Wagner's law (1892) leads to an increase in government spending. On the other hand, according to Keynesian economics, government spending leads to economic growth. These are then opposite views of the cause and effect between government spending and GDP growth. This is an important issue to investigate since it determines the economic measure a country should assume in promoting growth. If deficit spending reduces growth, then there would be a legitimate claim to fiscal austerity measures as is being proposed by some countries in Europe for a remedy to an economic downturn. On the other hand, austerity measures would be detrimental to the economy if spending is the right stimulus for growth.

From the arguments above, it is clear that empirical studies to determine the relationship between government spending and economic growth are of utmost importance. Of interest would be to determine the relationships between spending and growth under two scenarios: strong economic growth and slow growth or economic downturn.

In this study, we use time series data from the U.S. (exemplifying relatively slow growth or economic downturn) and China (exemplifying strong economic growth) to investigate the short and long term relationship between government spending, relative to revenue, and economic growth (as measured by the GDP) using time series and co-integration analyses.

RELEVANT LITERATURE

Budget deficits in recent years in the U.S. and other countries have caused concern about their possible effects on economic growth. Barth and Wells (1999) point out that budget deficit lowers national savings and has a negative effect on investment and net exports. Financing the debt by borrowing increases interest rate, which can lead in turn to a reduction in investment and an appreciation of the dollar. An appreciated dollar retards exports. Also, a reduction in investment leads to a reduction in economic growth. Barrow (1974) argued that private savings will increase when government sells bonds in order to finance the deficit. In this case, bond-financed deficits will have no effect on economic investment or export. In fact, empirical evidence showed that investment, export, and private saving declined over the period 1982 to 1994, a period of large and persistent deficits (Ball & Markiw, 1995). Eisner (1989) argued that government deficits has

an effect on the economy in that they increase public debt and hence affect aggregate demand. Horrigan and Protopapadakis (1982) are of the belief that deficits and surpluses promote economic efficiency. As such, the question is how to determine the optimum size of deficits in order to enhance economic efficiency. Eisner (1989) and Domar (1993) argue that economic slowdown or an increase in unemployment calls for deficit spending in order to improve the economic situation.

Collins (1999) presents two points of view concerning the effect of deficits on the financial markets. The first claims that budget deficits cause interest rate to rise because of increased demand for loanable funds. A rise in interest rate could in turn reduce investment and economic growth. The second point of view, referred to as the Ricardian view, claims that a tax-induced budget deficit will have no effect on interest rate because it increases savings which offset the increase in demand for loanable funds. Collins presented coefficients of correlation (calculated over five year intervals between 1944 and 1994 in the U.S.) between deficits and stocks and bonds as well as data on deficits and investment and interest rates. Results were not consistent with the argument that deficits cause an increase in interest rate and a decrease in GDP growth, investment, and stock performance. Hutchison and Pyle (1984), Ford and Laxton (1995), and Tanzi and Fanizza (1995) provided empirical evidence indicating that higher deficits in industrial countries have increased interest rates. On the other hand, studies by Barro and Sali-I-Martin (1990) and Evans (1987) support the Ricardian view, namely that a tax induced budget deficit has no effect on interest rate.

Palley (2011) argues that deficit financed public investment is needed for economic growth and austerity measures slows growth. Taylor et. al. (2012) presented evidence to the effect that an increase in public spending in the U.S. had a positive effect on economic growth. The authors recommend an increase in public spending in order to stimulate growth which would eventually increase revenue. An alternative to this proposal is to use the Keynesian approach and enact a balanced increase in taxes and spending, with taxes coming from the rich and spending going to the middle class and poor. The assumption is that the middle class and poor have a higher propensity for spending than the rich. This increase in spending will help the economy grow. Liu et. al. (2008) using Granger causality analysis found that, for U.S. data between 1947 and 2002, public expenditure had a positive effect on GDP growth, which is in line with the Keynesian hypothesis. However, GDP growth did not have any effect on increasing the public expenditure. From the above studies, it is clear that results are mixed on the effect of spending on economic growth. Hence, there is a need for further studies in this area in order to shed more light on this situation.

DATA COLLECTION

Data for the United States on government spending (GS) relative to revenue (spending – revenue) and GDP was in billions of dollars. Positive values for spending indicated deficit

spending and negative values non-deficit or surplus spending. The data were obtained from the on line source:

http://www.usgovernmentspending.com/downchart_gs.php?year=1900_2016&chart=G0-fed&units=p

For China. The GDP and government spending relative to revenue was in billions of Yuan and obtained from the on line source in China.

来源：国家统计局<http://219.235.129.58/reportView.do?Url=/xmlFiles/e103f3e552a9477eb132917f956a3032.xml&id=7b50175ff30c45ddb0e78646864a1840&bgqDm=20060000>

Data for the U.S. was over the years 1975-2011. In the case of China, data were available over the years 1975 – 2009.

Plots of the GDP and government spending relative to revenue over years are presented below:

FIGURE 1. PLOT OF GOVERNMENT SPENDING (SPENDING – REVENUE) GS, OVER YEARS IN THE U.S.

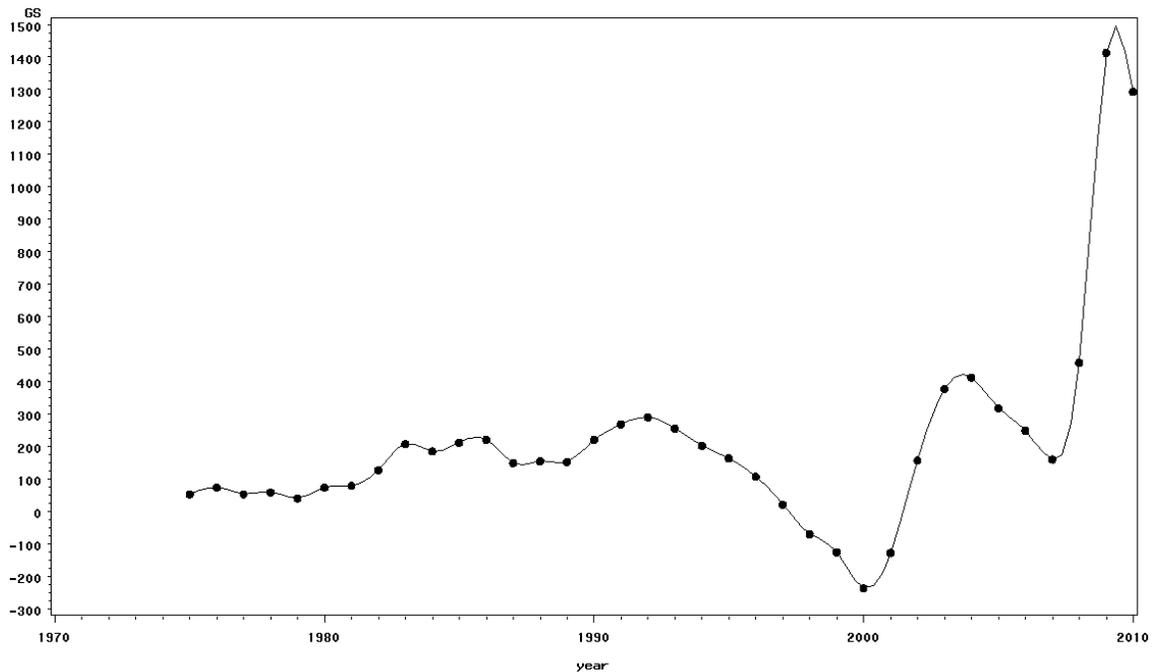


FIGURE 2. PLOT OF GDP OVER YEARS IN THE U.S.

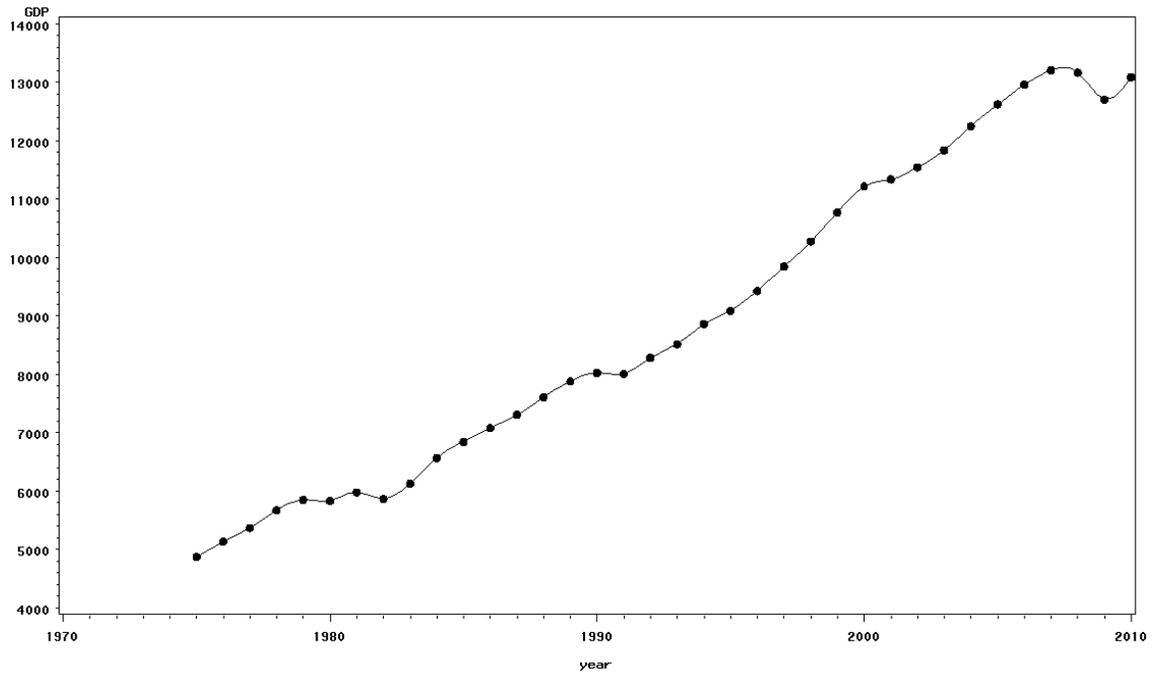


FIGURE 3. PLOT OF GOVERNMENT SPENDING (SPENDING – REVENUE), GS, OVER YEARS IN CHINA

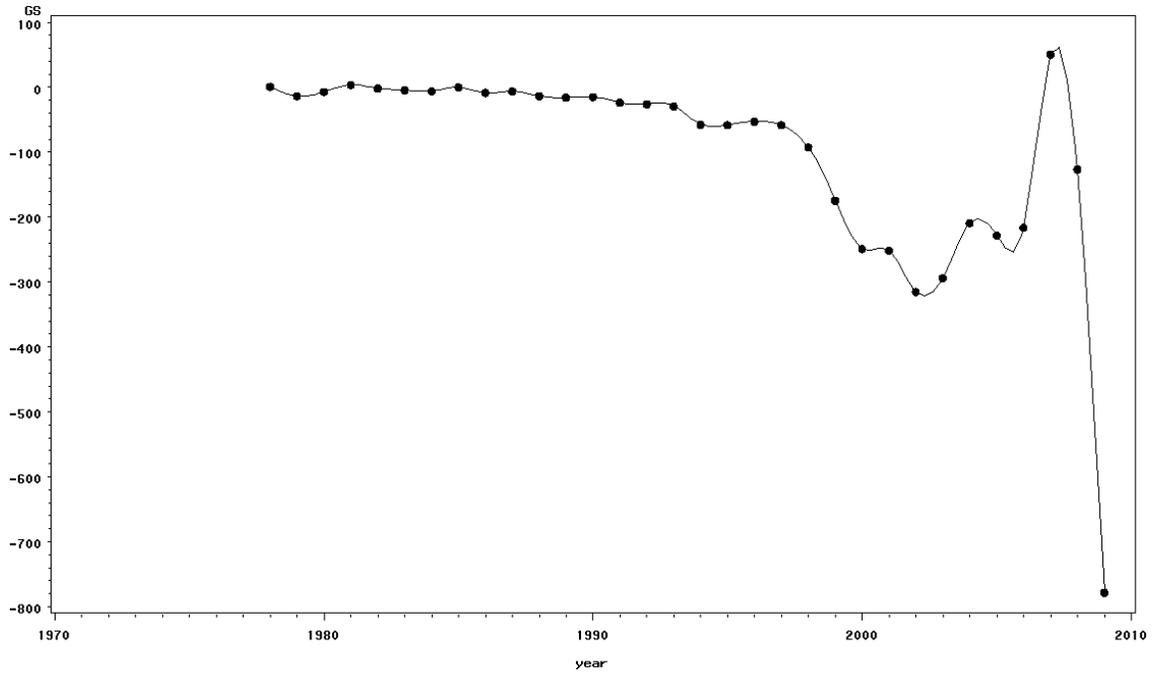
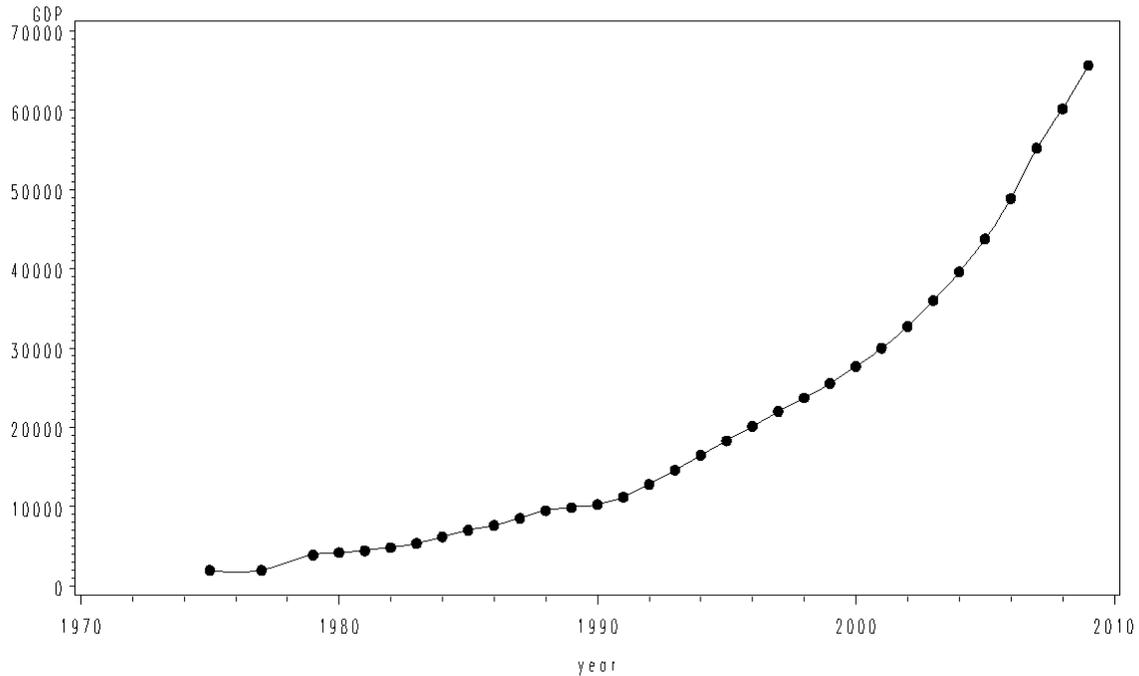


FIGURE 4. PLOT OF GDP OVER YEARS IN CHINA



METHODOLOGY

The SAS software was used in the data analysis. The Johansen co-integration analysis was performed in order to determine if co integration exists between government spending relative to revenue, GS, (spending-revenue) and economic growth as measured by the GDP. Also, time series transfer function analysis was used to build an empirical model relating GDP to government spending.

CO-INTEGRATION

Co-integration between two time series implies that the two variables are in a long-run equilibrium relationship. This means that in the long run, the two series do not diverge over time. Any divergence is usually short term and eventually the two series come back together. Furthermore, two series that are co-integrated may or may not be correlated. Table 1 presents the co-integration analysis results for GDP and GS using the Johansen co-integration test (Johansen, 1988).

In the U.S., government spending relative to revenue (GS) and log GDP (IGDP) seem to be co-integrated since the trace value is larger than the critical value when the rank is 0, but less than

when the rank is 1. This says that there is a long-term linear relationship between the two variables. Also, based on the transfer function time series analysis below, the two series are also cross correlated.

For China, government spending relative to revenue and LGDP are also co-integrated with $r = 1$, implying, as for the U.S., a long-term linear relationship between the two variables. It is interesting to note, however, that for China the two time series are not cross correlated indicating that there is no short term relationship between the two. As a result, there was no functional relationship between spending and growth as indicated by the transfer function analysis.

TABLE 1. JOHANSEN CO INTEGRATION RANK TEST FOR GOVERNMENT SPENDING (GS) AND GDP GROWTH

Variables	$H_0: \text{rank} = r$	$H_a: \text{rank} > r$	Trace	Critical Value
U.S.				
GS LGDP	0	0	54.13	12.21
	1	1	0.00	4.14
China				
GS LGDP	0	0	83.86	12.21
	1	1	0.41	4.14

BIVARIATE TIME SERIES MODELING USING THE TRANSFER FUNCTION APPROACH

The transfer function analysis is the state of the art modeling approach to determine the functional relationship between two series, the input or independent series and the output or dependent series. We are interested in determining if government spending relative to revenue (GS) does have an effect on GDP. Hence, the input series is GS and the output series is GDP or in this case its log transform. This approach is especially relevant when there is no feed- back between the output and input series as determined by the cross-correlation function. If the cross-correlation between two stationary series is significant for only zero or positive lags, then there is no feed- back between the output and input series (Wei, 2006). This was the case for the series considered in this study. Indeed the cross correlation between GS and log GDP for the US series was significant only for lag zero.

The analysis is based on the fact that the two series are stationary. For the U.S. data, both series were not stationary. Their first difference was stationary as determined by the Dickey-Fuller unit

root test and the dampening patterns of the autocorrelation function (ACF) and the partial autocorrelation function (PACF). Likewise, GS and LGDP were not stationary for the China data. However, GS(1) and LGDP(1) were found to be stationary. Therefore, the analysis that follows is based on the first difference, GS(1), and LGDP(1).

A transfer function model between two series, y and x , is expressed in general as

$$y_t = v(B)x_t + e_t \quad (1)$$

Where e_t is a noise series that is independent of x_t .

Here, $v(B) = \sum v_j B^j$, where B is the backshift operator, $Bx = x_{t-1}$.

The function $v(B)$ is determined from the cross correlation between x and y .

The steps involved in the identification of the transfer function model are (Wei, 2006):

1. Prewhiten the input series.

Identify an autoregressive integrated moving average (ARIMA) model $\phi_x(B)x_t = \Theta_x(B)\alpha_t$ and use it to whiten the input series by calculating the white noise series in Eq. (2) below.

$$\alpha_t = (\phi_x(B) / \Theta_x(B))x_t \quad (2)$$

In general, $\phi_x(B)$ and $\Theta_x(B)$ are expressed as

$$\phi_x(B) = (1 - \phi_1 B - \phi_2 B^2 - \dots - \phi_p B^p)x_t$$

$$\Theta_x(B) = (1 - \theta_1 B - \theta_2 B^2 - \dots - \theta_q B^q)\alpha_t$$

2. Compute the filtered output series

$$\beta_t = (\phi_x(B) / \Theta_x(B))y_t \quad (3)$$

3. Calculate the sample cross correlation between α_t and β_t

$(\rho_{\alpha\beta}(k))$ so as to determine v_k , where

$$v_k = \rho_{\alpha\beta}(k) (\sigma_\beta / \sigma_\alpha) \quad (4)$$

4. Identify $v(B)$

Match the pattern of v_k with the known theoretical patterns of $v(B)$ in order to identify $v(B)$.

$$\text{Once } v(B) \text{ is identified, express } e_t \text{ in Eq. (1) as } e_t = y_t - v(B)x_t \quad (5)$$

and identify the appropriate model for Eq. (5) to determine the final model in Eq. (1).

ANALYSIS FOR THE U.S.

The model that was identified for the U.S. using the transfer function analysis above gave the following functional relationship between LGDP(1) and GS(1):

$$(1 - 0.23164 B) \text{LGDP}(1)_t = .02357 - 0.000051 \text{GS}(1)_t \quad (6)$$

The model satisfied the diagnostic checking, namely:

1. There was no cross correlation between the noise series and the independent or input series (GS), which indicates that the error was independent of the input series
2. Both the autocorrelation function, ACF, and the partial autocorrelation function, PACF, for noise in the model showed no pattern. Also a formal chi-squared test confirmed that the noise was white noise

As a result, the transfer function model in Eq. (6) is an adequate model relating the first difference of the log of GDP to the first difference of GS.

From the model in Eq. (6), it is seen that GS(1) has a negative effect on LGDP(1).

FORECASTING

In using the model for forecasting, one may replace in Eq. (6) $\text{GS}(1)_t$ by $\text{GS}_t - \text{GS}_{t-1}$ and

$\text{LGDP}(1)_t$ by $\text{LGDP}_t - \text{LGDP}_{t-1}$.

This gives:

$$(1 - 0.23164 B) (\text{LGDP}_t - \text{LGDP}_{t-1}) = 0.02357 - 0.000051 (\text{GS}_t - \text{GS}_{t-1}) \quad (7)$$

Expanding Eq. (7) gives:

$$\begin{aligned} \text{LGDP}_t - \text{LGDP}_{t-1} - 0.23164(\text{LGDP}_{t-1} - \text{LGDP}_{t-2}) &= 0.02357 - 0.000051 (\text{GS}_t - \text{GS}_{t-1}) \\ \text{or} \\ \text{LGDP}_t &= \text{LGDP}_{t-1} + 0.23164(\text{LGDP}_{t-1} - \text{LGDP}_{t-2}) + 0.02357 - 0.000051 (\text{GS}_t - \text{GS}_{t-1}) \end{aligned} \quad (8)$$

In order to obtain the forecast for LGDP_t at time t , one needs to predict the value for GS_t . This can be obtained from the following time series model developed from the observed values of the time series GS.

$$\begin{aligned} \text{GS}(1)_t &= 0.19294 \text{GS}(1)_{t-1} \quad \text{OR} \\ \text{GS}_t &= 1.19294 \text{GS}_{t-1} - 0.19294 \text{GS}_{t-2} \end{aligned} \quad (9)$$

ANALYSIS FOR CHINA

Of interest is the fact that the cross correlation was close to zero and therefore not significant (Chi-square = 0.12 and p close to 1.0) and there was no functional relationship between LGDP(1) and GS(1). In this case, the independent variable GS had no effect on LGDP as the dependent variable. There is evidence from the Granger causation test that LGDP Granger causes GS ($p = 0.0082$), but GS does not Granger cause LGDP ($p = 0.9579$). This result is in accord with the fact that GS has no effect on LGDP. Also, it supports Wagner's law in the sense that strong economic growth leads to increased government activities and spending. Spending in China is not deficit spending because of the strong economic growth. It is reasonable then to assume that the strong economy contributed to non-deficit spending.

CONCLUSION

Results of the bivariate time series analysis are interesting in that they show that under different economies, U.S. and China, government spending and log GDP were co-integrated. This means that both time series variables are in a long-run equilibrium relationship. The two series do not diverge over time. Any divergence is usually short term and eventually the two series come back together. It is not surprising to find that spending and economic growth go hand in hand and have a long-run equilibrium. This long-run relationship may be due to direct cause and effect or may be due to a third variable or group of variables that were not observed. Likewise, a functional relationship, as represented by Eq. (8) for the U.S. data, may not be due to direct cause and effect.

Of interest is the finding that deficit spending had a significant negative effect on growth as determined by the time series bivariate model. China, on the other hand, shows strong economic growth and non-deficit spending. Under these conditions, the bivariate time series analysis failed to show any significant effect of non-deficit spending on economic growth. In this regard, the Granger test showed also that non-deficit spending had no causal effect on growth. On the other hand, economic growth Granger caused government spending. The fact that deficit spending had a negative effect on growth in the U.S. could be attributed to the fact that the money spent may not have been enough nor allocated properly in order to stimulate growth. More studies are needed in this regard, using more data and control variables, in order to shed more light on this spending and growth dilemma.

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A MODEL OF CONTROL PARITY AND STRATEGIC STAKES

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ABSTRACT

Results of extant research into how ownership control affects performance of International Joint Ventures (IJVs) in emerging economies such as China have been inconclusive. We aim to solve this problem by analyzing two control mechanisms: ownership control and operational control. We argue that operational control by foreign parent firms in proportion to their ownership control is critical to performance of IJVs in China. Designing a proper relationship between ownership control and operational control, however, depends on the degree of strategic stakes, a concept addressing the relative importance of resource provisions in IJVs. A conceptual model and corresponding propositions are developed.

INTRODUCTION

Establishing International Joint Ventures (IJVs) is considered a common method for firms from developed countries such as the U.S. to enter emerging economies such as China (Child, 2002; Yan, 2000; Yan & Child, 2004). Doing so enables firms from developed countries to seek growth outside their saturated home markets, and firms from emerging economies to increase global presence and competitiveness (Pearce & Branyiczki, 1997). For example, the Chinese government approved 405,180 joint ventures with total capital of \$419.8 billion USD between 1979 and 2002 (Li, Zhang, & Jing, 2008). Managing IJVs, however, has never been an easy task; it has high failure rates (Kogut, 1988), and more so in emerging economies (Luo, 2007a; Steensma & Lyles, 2000). Compared to a wholly-owned subsidiary, managing IJV performance has additional difficulties as the two or more parent firms need to effectively coordinate their activities to reduce conflicts of interest and opportunistic behaviors by parent firms, such that they can effectively utilize resources and implement strategies to gain competitive advantages (Geringer & Hebert, 1989; Schaan, 1983). Gaining effective control in IJVs thus plays an important role (Duan & Chuanmin, 2007; Dhanaraj & Beamish, 2004; Yan & Child, 2004).

There are different approaches to studying control in IJVs and we focus on exploring the relationship between two control mechanisms: ownership and operational control. Empirical studies indicate a discrepancy between these two control mechanisms (Blodgett, 1991; Child, 2002; Schaan, 1983, 1988), that is, parent firms with a high level of ownership control do not necessarily have a high level of operational control. There is still a need for theoretical work to address this discrepancy and provide analysis on how it affects IJV performance (Geringer & Hebert, 1989; Yan & Gray, 1994, 2001).

Ownership control refers to a majority ownership position, which parent firms can rely on to manage an IJV's activities. Studies indicate that ownership control could determine parent firms' behavior in managing IJVs, and it serves as predictor of the overall control held by parent firms and control over specific strategic decisions (Child, Yan, & Lu, 1997; Killing, 1983). In IJVs in China, both foreign and Chinese partners provide resources to the joint venture either through written or verbal agreement (Yan & Gray, 1994). Studies found that more often Chinese firms than foreign firms provide knowledge about government relationships, laws and customs, and consumer preferences in the domestic market; while foreign firms more frequently provide financial resources along with technological and managerial expertise (Child, 2002; Yan & Gray, 1994; Yan & Child, 2004). As a critical resource for growth, capital investment by foreign firms has received extensive research attention in terms of ownership control (Beamish & Banks, 1987; Dhanaraj & Beamish, 2004). It serves the needs of most of the Chinese entrepreneurial firms who lack capital to develop the domestic market, and establishing an IJV provides a practical way to tap into the traditionally deeper financial resources and production expertise provided by foreign partners. Ownership control is therefore perceived as a highly visible, fair and practical control mechanism for foreign firms to rely on, and thus is a critical focus for foreign firms in establishing IJVs in China (Duan & Chuanmin, 2007; Killing, 1983; Li et al., 2008). Nevertheless, the effect of ownership control on IJV performance is still ambiguous, given that empirical results have been inconclusive (Dhanaraj & Beamish, 2004; Li et al., 2008; Luo, 2007b).

Researchers have suggested exploring additional control mechanisms besides ownership. The seminal work by Geringer and Hebert has drawn attention to operational control that is not a strict consequence of ownership control (1989). Operational control is carried out through controlling day-to-day business operations in IJVs, rather than through controlling ownership stakes. It reflects control activities in areas of management systems, selection of general managers, and specific functional areas such as sales and technical operations (Child, 2002; Yan & Gray, 1994). Operational control was especially applied to understand IJVs' management control issues in developing economies such as China (Child, 2002; Yan & Gray, 1994). We continue this line of research by advancing the argument towards the notion of a balanced relationship between ownership and operational control. The balanced relationship is termed control parity, which should reduce conflicts and opportunistic behaviors in IJVs and ultimately enhances IJV performance.

We also investigate contingency variables in this study. Earlier studies examining for example, goal congruency, IJV experience and strategic independence (Guidice & Cullen, 2007; Pangarkar & Klein, 2004) generated interesting results. We believe exploring additional contingencies can broaden our understanding of the complexity of multiple control mechanisms. We investigate strategic stakes, which describes the degree of the importance of the IJV that parent firms perceive, depending on the combination of the relative importance of resource provisions to IJV performance and the relative importance of the IJV to parent firms' own performance. This concept is developed from bargaining power research (Yan & Gray, 1994), and enriched by studies of resource based control seeking behavior in IJVs (Chi, 1994; Geringer, 1991; Mjoen & Tallman, 1997; Yan & Gray, 1994; Yan & Child, 2004). The study has two main contributions. First, we advocate establishing control parity, a balanced relationship between ownership and operational control in IJVs. Control parity can reduce potential conflicts of interest and opportunistic behaviors, and thereby enhances IJV performance. Second, prior to designing control parity, we advise parent firms to investigate the degree of strategic stakes in order to design an optimal control parity that strengthens IJV performance.

LITERATURE BACKGROUND

Ownership Control

Foreign parent firms in their Chinese IJVs usually contribute substantial financial resources, and their capital investment is normally incorporated into IJV equity (Child, 2002). Foreign parent firms also contribute non-capital investments such as systems, management service and training; however, these are not incorporated into equity (Yan, 2000). The degree of capital injection into IJVs determines ownership control, i.e., equity control. Child (2002) stratifies equity control into three categories: majority-controlled, jointly-controlled, and minority-controlled structure. If equity is evenly distributed between parent firms, then the IJV has a jointly-controlled ownership structure. If not, the IJV has either a majority-controlled or minority-controlled structure by the foreign parent firm.

A generally accepted view of majority-controlled ownership structure is that this structure can lead to better IJV performance than the other two structures because majority-controlled ventures offer a more stable environment, which benefits business development (Killing, 1983). This logic is broadly tested and accepted, even though Beamish questioned Killing's results (Beamish, 1984). For instance, studies of IJVs in China show that both foreign and Chinese majority-controlled ventures have better performance than jointly-controlled ventures (Li et al., 2008). Some researchers specify that it is foreign firms' majority equity control that enhances IJVs' survival in an overseas market (Dhanaraj & Beamish, 2004). Other researchers, nevertheless, disagree. Blodgett failed to find that ownership affects the stability of IJVs (1992), and Kogut failed to confirm that majority ownership enhances IJV

performance (1988). The failure of majority-controlled IJVs, according to some studies, is caused by the opportunistic behavior (Geringer & Woodcock, 1989; Lyles & Salt, 1996), which is believed to be more severe in emerging markets such as China (Luo, 2007a, b). Opportunistic behavior could be reduced by changing the organizational form to, for example, a wholly-owned subsidiary (Hu & Chen, 1994). It is argued that when there are less government constraints on a wholly-owned subsidiary by foreign firms, we would observe more IJVs transformed to wholly-owned subsidiaries (Hu & Chen, 1994). In a study of U.S. initiated IJVs abroad, foreign parent firms (U.S. firms) with a majority-controlled structure were found to follow this pattern as a way to cope with the opportunistic behavior in uncertain business environments (Contractor, 1990). However, a wholly owned subsidiary is not without cost. For example, wholly-owned subsidiaries by foreign firms in China lack the capability of tapping into local knowledge and taking advantage of local distribution networks, and generate costs that are greater than the benefit gained from the unity of control (Yan & Gray, 1994).

The inconclusive results of studies of majority-controlled IJVs stimulated examinations of jointly-controlled ownership structures (Choi & Beamish, 2004; Luo, 2007b). Luo studied 188 IJVs in China and found that the environmental volatility of emerging economies increases opportunistic behaviors (2007a), under which a jointly-controlled ownership structure helps to reduce unwelcome behaviors through trust building (Luo, 2007b). Under this view, the jointly-controlled ownership structure creates a similar result in reduced opportunistic behavior that a wholly-owned subsidiary aims to achieve, through building trust between parent firms and enhancing goal commonality, which ultimately leads to better IJV performance (Yan & Gray, 1994). Still, the evidence of the effect of cooperation facilitated by jointly-controlled structures on IJV performance is mixed in China (Child, 2002; Hebert & Beamish, 1997). It remains unclear why some jointly-controlled structures fail to generate superior performance than other ownership structures (Li et al., 2008).

IJVs with minority-controlled ownership by foreign parent firms are not common in China (Child, 2002). Foreign firms engaging in this type of ownership structure are perceived as having the least preparation of long-term planning in the Chinese market (Bleeke & Ernst, 1995). Although there are concerns about the issues facing foreign parent firms in this category of ownership structure, there are also positive effects, such as controlling learning costs in uncertain environments (Child, 2002). This may be a lower cost method of examining the viability of investment in emerging economies. We conclude that the result of minority-owned structure in IJVs, at best, needs further empirical testing.

Operational Control

In studies of ownership control, researchers suggest that the level of equity seldom predetermines the level of overall control (Anderson & Gatignon, 1986; Hennart, 1988;

Mjoen & Tallman, 1997). Control can be gained from other critical resources, such as knowledge about specific activities and management (Mjoen & Tallman, 1997), knowledge and ties to the local government (Luo, Shenkar, & Nyaw, 2001), and the ability to staff the key managerial positions (Schaan, 1988). It is evident that interest in exploring other control mechanisms besides ownership has increased. For example, Blodgett (1991) studied management control, Mjoen and Tallman (1997) introduced special activity control (expertise control), Child (2002) and Yan and Gray (1994) emphasized resource-based operational control, and in addition Yan and Gray also proposed daily management control (2001), which is in line with Yan and Gray's operational control (1994).

Operational control is carried out through controlling day-to-day business operations in IJVs, rather than through controlling ownership stakes. Researchers have approached operational control by analyzing: 1) the similarity between the management systems of the IJV and parent firms, as it portrays the power struggle in designing the management structure and procedure; 2) the nationality of the general manager of the IJV, as this indicates which parent firm is making strategic decisions; and 3) the managerial control of the technical and sales departments, which reflects the IJV's daily routines (Child, 2002; Yan & Gray, 1994). For instance, if the management system of an IJV is similar to that of its domestic parent firm, but deviates from that of its foreign parent, then operational control of the IJV is very likely in the hands of the domestic parent firm. Similar to ownership control, operational control is sought to ensure higher performance of IJVs, but research indicates mixed empirical findings. For example, Mjoen and Tallman found that control of daily activities is positively related to perceived performance of the IJV; while control of specific operational activities fails to generate a positive effect on IJV performance (1997). Yan and Gray, in their study of IJVs in China, found that foreign parent firms that controlled management systems were high in performance satisfaction, albeit foreign parent firms that shared operational control with their Chinese counterpart were also high in performance satisfaction (1994).

It is interesting to note a discrepancy between ownership and operational control (Child, 2002; Schaan, 1983, 1988). For example, one study showed that some foreign parent firms with a majority-controlled ownership structure had limited operational control in their IJVs, in which the domestic Chinese firms staffed the key managerial positions, made technical decisions and ran daily operations (Child, 2002). Schaan also observed that parent firms with a minority-controlled ownership structure could run IJVs conforming to their own interests by gaining control over specific operational activities (Schaan, 1983, 1988).

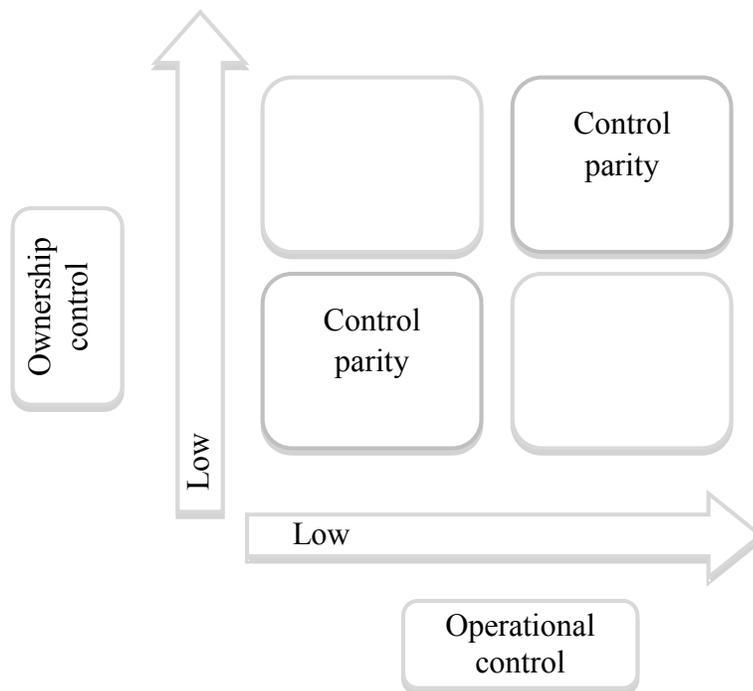
Control Parity

We suggest combining ownership and operational control together to understand IJV performance. This is a tantalizing research area given that previous empirical studies indicate the existence of discrepancies between ownership and operational control (Child, 2002;

Schaan, 1983, 1988), and theoretical work addressing this discrepancy is still limited (Gering & Hebert, 1989; Yan & Gary, 1994, 2001).

We argue that ownership control and operational control are related to each other, and only when both mechanisms are considered proportionately to each other in the decision-making process, a situation we term as control parity, conflicts of interest and opportunistic behaviors can be better managed, resulting in improved IJV performance. Control parity, in essence, reflects a balanced relationship between ownership and operational control. It is a fit between the two mechanisms: A high level of ownership control should be matched with a high level of operational control, and a low level of ownership control with a low level of operational control (See Figure 1).

FIGURE 1. THE REALIZATION OF CONTROL PARITY



In Figure 1, when the foreign firm has obtained a majority-controlled ownership structure, the foreign firm should establish a high level of operational control that is in proportion to its ownership control. This structure would enable the foreign parent firm to maintain proper supervision over daily operations, which facilitates an early identification of managerial problems and a timely response to reduce conflicts and opportunistic behaviors by the local parent firms.

Disproportionate control can increase the propensity to fail. On the one hand, for foreign parent firms, too little operational control coupled with a majority-controlled ownership structure creates inevitable weaknesses in fighting the opportunistic behaviors of their domestic counterparts. It is easier for domestic parent firms to manipulate IJVs' daily business activities conforming to their own interests, which may not be shared by the IJV or by their foreign counterparts. This is a problem of "sleeping partner" when the capital providers are outside the management of daily business (Child, 2002). It perhaps explains why foreign parent firms' China strategy characterized as "relying on capital investment to enter the market" will not work (Bai, 2008; Wang, 2008). On the other hand, for foreign parent firms, concentrated operational control coupled with a minority-controlled ownership structure is also problematic. In this case, domestic parent firms are discouraged from leveraging their local resources, as the level of ownership fails to empower them in operations (Yan & Gray, 1994).

Proposition 1: Control parity can reduce conflicts and opportunistic behaviors, which leads to better IJV performance.

Earlier research found that obtaining control parity is feasible (Child, 2002). Child studied 20 IJVs in China. He first classified the IJVs into majority-controlled, jointly-controlled and minority-controlled IJVs by foreign parent firms. Then he analyzed the level of operational control under each ownership structure. The results indicated that three of nine majority-controlled IJVs by foreign parent firms were closely operated by the foreign firms, four of seven jointly-controlled IJVs had operational responsibilities evenly shared between parent firms, and one of four minority-controlled IJVs by foreign parent firms was mainly operated by its Chinese parent firm. Nevertheless, the establishment of control parity is not an easy task, as capital providers are often outside management daily business (Child, 2002). This is well captured by a recent joint venture dispute and failure between the French conglomerate Danone and a local Chinese firm in the dairy market Wahaha in 2009 (HangZhou Wahah Group Co. Ltd., 娃哈哈):

In 1994, Danone through its Hong Kong based firm Bai Fuqin approached the general manager of Wahaha, Qinhou Zhou, proposing to establish an IJV in the dairy market with USD \$450 million equity from Danone (Bai, 2008). In 1996, the IJV was formed among three companies, Wahaha (owned by Hangzhou municipal government with Zong as the managing director), Bai Fuqin and Danone (Dickinson, 2007). In 1998, Danone acquired Bai Fuqin, obtained 51% of the IJV and became the largest owner. In the following years, the IJV grew quickly and contributed roughly five to six percent of Danone's global profits in 2006, and in the meantime, Wahaha became the largest beverage producer in China and the fifth largest worldwide, with sales revenue of US\$1.4 billion (Krug & Rothlin, 2009). Initially, only the five best performing subsidiaries of Wahaha joined the IJV. By 2007, the original five venture companies had grown into 39 venture companies, besides which, Wahaha had also created more than 40 non-joint venture companies that sold the same products under the

same Wahaha trademark (Bai, 2008). The creation of non-joint venture companies was not an issue until 2005, and Danone insisted on controlling 51 percent of the non-joint venture companies for a payment of US \$513 million in 2006. Zong refused the offer, complaining Danone's price was too low. Bitter verbal attacks started and soon escalated into high-profile media wars and fights about foreign monopoly, protectionism, and national economic security (Krug & Rothlin, 2009). The dispute continued until September 30, 2009, when Danone withdrew from the IJV for a monetary settlement that both sides had agreed upon. The once highly praised IJV dissolved in bitterness.

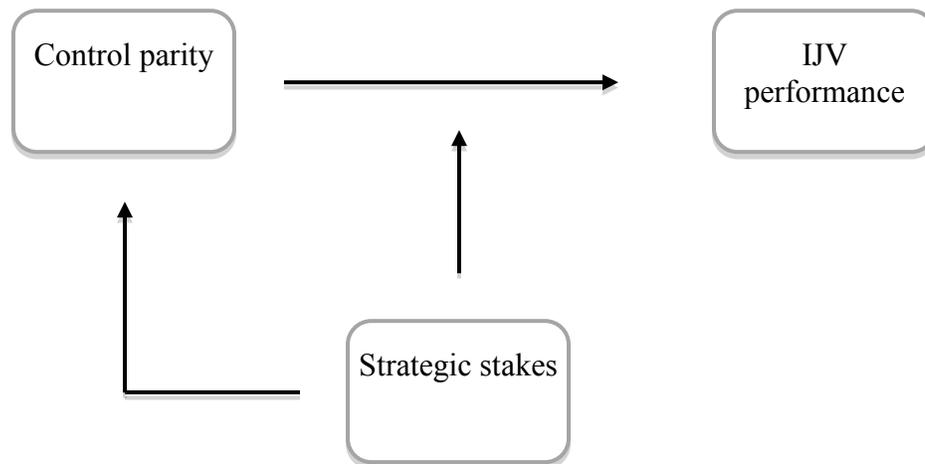
Various reasons for the failure of the IJVs have been suggested, such as trademark transfer problems and the hasty relationship between Danone and the domestic firms (Krug & Rothlin, 2009). While recognizing that individual managerial styles could influence the IJV's operation, we also believe a lack of control parity is another unexplored major reason, as the unbalanced relationship made it difficult to manage conflicts and opportunistic behaviors over time. That is, the ownership control of Danone (51%) failed to generate a corresponding responsibility in operational areas. Danone's operational control only related to: 1) decisions about producing bottled water and dairy products; and 2) providing technical support for the production (Zhang & Van Deusen, 2010). Danone was not responsible for selling the products, nor building up management systems and processes. Specifically, the general manager was Qinhou Zong from Wahaha, who was also the chairman for all the JV companies with executive power, while Danone was not able to appoint a single executive into any senior management positions (Lu, Tao, & Wei, 2008). At the same time, Zong drove away whoever was sent by Danone, leaving Danone with little impact on the structure of management system (Lu et al., 2008). As the chairman of the IJV, Emmanuel Faber from Danone recalled that, "He (Zong) operates in a very entrepreneurial way, making a lot of decisions on his own." Danone controlled technical support, but its role in providing this service is dubious, as the degree of technology required in the dairy production is hard to qualify and quantify, and is perhaps less sought after than that in other industries such as telecommunications (Wu, 2007). To sum up, Danone's contribution to the IJV's operation was rather limited compared to Wahaha. If Danone was more involved in daily operations of the IJV, the damage caused by competing with Wahaha's non-joint venture companies perhaps could have been detected and stopped earlier.

A MODEL OF CONTROL PARITY

A variety of contingency variables can influence the relationship between control mechanisms and IJV performance. For example, variables such as goal congruency, IJV experiences, size of the firm, leadership turnovers, etc. can change the ownership control effect on IJV performance (Guidice & Cullen, 2007; Lowen & Pope, 2008; Pangarkar & Klein, 2004). These studies focus on analyzing effects of one specific control mechanism, and while we examine two control mechanisms. We propose to analyze strategic stakes in our model. The model describes that strategic stakes can influence the construction of control

parity and moderate the relationship between control parity and IJV performance (See Figure 2).

FIGURE 2. THE MODEL

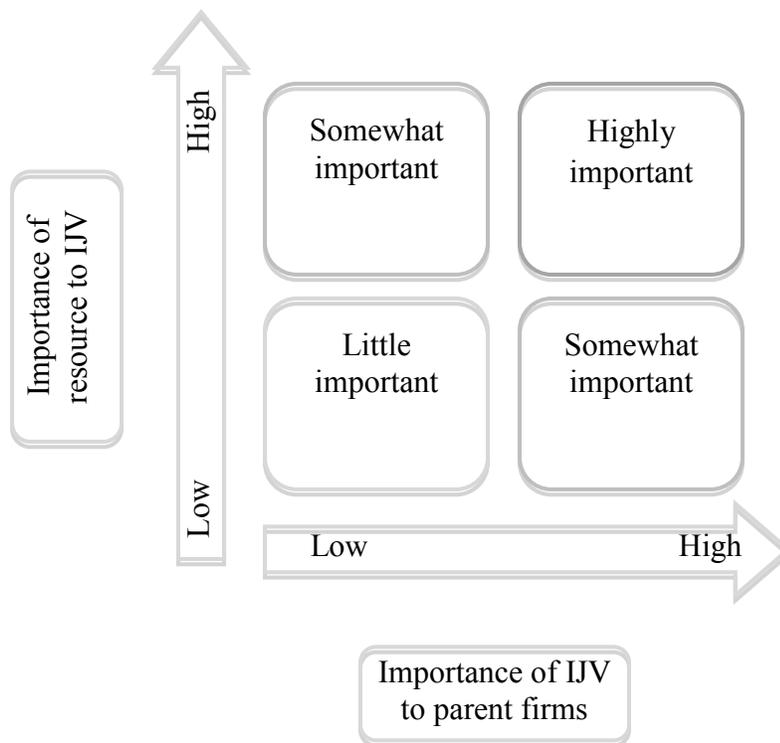


The concept of strategic stakes is built upon the argument of the relative bargaining power between parent firms (Yan & Gray 1994), where bargaining power is defined as “*the bargainer’s ability to favorably change the bargaining set to win accommodations from the other party and to influence the outcome of a negotiation*” (1994 : 1480). It addresses the ability of bargainers to mobilize resources (Bacharach & Lawler, 1984), and these resources can be financial capital, relational capital and knowledge. Studies found that the relative bargaining power between parent firms determines initial and subsequent operational controls (Yan & Gray, 1994), and can even make the original bargain obsolete and thus change the subsequent control structure (Hamel, 1991; Vernon, 1977). We continue this line of argument, and use the concept of strategic stakes to capture the component of resource-based bargaining power.

Based on bargaining power, the concept of strategic stakes describes situations where parent firms contributing the most critical resources are more able to exercise control over IJVs (Chi, 1994; Geringer, 1991; Mjoen & Tallman, 1997; Yan & Gray, 1994; Yan & Child, 2004). Meanwhile, the concept also reflects situations where IJVs contributing the most critical resources to parent firms’ performance will increase those parent firms’ desire to obtain control – a deviation from the bargaining power’s argument (Yan & Gray, 1994), which will be illustrated in the following. In essence, strategic stakes focuses on both the capability to control due to resource provisions, and the desire to control, an element that could potentially change the actual exercise of control (Geringer & Hebert, 1989), making strategic stakes more suitable than bargaining power in our analysis.

The concept of strategic stakes includes two factors: 1) the relative importance of resource provision to IJV performance, and 2) the relative importance of the IJV to parent firms' performance. The degree of strategic stakes depends on the combination of the two factors. Specifically, a parent firm has a high level of strategic stakes when both factors are perceived as highly important; the parent firm has a medium level of strategic stakes if either factor is perceived as highly important; and the parent firm has a low level of strategic stakes when both factors are perceived as being of little importance (See Figure 3).

FIGURE 3. THE STRATEGIC STAKES



The first factor is the relative importance of resources collection. According to resource dependence theory (Pfeffer & Salancik, 1978), parent firms are the fundamental factors behind the success of IJVs (Luo, 2007b; Pfeffer & Nowak, 1976; Saxton, 1997) because parent firms are sources of knowledge that generate abnormal returns for IJVs (Kogut & Zander, 1993). The greater the resource investment by a parent firm, the greater control by the parent firm over that investment (Yan & Child, 2004). At the same time, the greater the relative importance of a resource, the greater propensity for parent firms providing that resource to obtain control over that resource and over the IJV (Mjoen & Tallman, 1997; Yan & Gray, 2001; Yan & Child, 2004). This is in line with the argument of bargaining power that parent firms who contribute strategically important resources can enhance their

bargaining power and ultimately their management control (Blodgett, 1991; Harrigan & Newman, 1990). The relative importance of resources can also be used to explain partner selection in IJVs. For example, Gerginer (1991) found that an increase in the perception of resource importance to IJV performance is positively associated with an increased weighting of selection criteria associated with that resource.

According to the first factor, the importance of financial resources should be examined in a relative sense. Other resources can be perceived more important than capital investment to IJV performance. In one study, Luo et al., (2001) found that when local knowledge is treated more important than financial resources, the parent firms providing local knowledge are able to leverage their bargaining power through that knowledge to seek higher levels of control in IJVs. In another study, Li et al., (2008) identified cases where Chinese parent firms lacked capital that was considered critical to the success of IJVs, and foreign parent firms who successfully entered the Chinese market with sufficient capital therefore obtained more control of the IJVs than their Chinese counterparts. Duan and Chuanmin (2007) conducted a three-case analysis of IJVs between parent firms from China and the U.S. In all three cases, technological capabilities were regarded as one key resource that all three IJVs needed. The U.S. parent firms gained more control than their Chinese counterparts by having access to technology, even though none of the American parent firms acquired a majority ownership stake in their IJVs respectively.

The second factor is the relative importance of the IJV. From a bargaining power perspective, the relative importance of an IJV to parent firms' performance can, however, negatively affect their control of the IJV (Mjoen & Tallman, 1997; Yan & Gray, 2001). This is because when parent firms believe the IJV to be of great importance to them, they negotiate strongly for control. The process exposes them to greater risk and renders them more dependent on their partner, which results in worse negotiations, and consequently less control than they would have wanted (Yan & Gray, 2001). Logically appealing, we argue differently using resource dependence theory (Pfeffer & Salancik, 1978). When the IJV becomes more strategically important to parent firms' own performance, they would have a stronger desire to seek and increase control. Although the negotiation process may get worse as Yan and Gray described (2001), there are possible ways to alter this situation. For example, parent firms could add resources that are more strategically important to the IJV, which gives them a stronger bargaining power to negotiate for better control (Blodgett, 1991); or, as indicated by the earlier IJV example between Danone and Wahaha, parent firms could even violate agreements to actually enhance their control, resonating an old saying, "*Where there is a will there is a way.*" A strong desire to seek control can change the realignment.

In short, increased relative importance of the IJV to a parent firm's performance would heighten their incentive to seek control. In a hypothetical example where the ownership structure of an IJV determines how much revenue from the IJV is sent back to each parent firm for further consolidation, the parent firm with a higher ownership stake would get more

of the revenue generated by the IJV (Duan & Chuanmin, 2007). Assuming there are no governmental capital restrictions, if the IJV revenue contributes to the performance of the Chinese parent firm more than that of the foreign parent firm, then the Chinese parent firm would be more motivated than its counterpart to control the IJV operation. It is important to note that, even when the foreign parent firm has a majority-controlled ownership and therefore gets more of the revenue generated by the IJV, the relative importance of the IJV to the foreign firm may still be low. This is because the contribution of the IJV to the foreign parent firm as a percentage of the total revenue is relatively small.

Effects of Strategic Stakes

In the model (Figure 2), the concept of strategic stakes influences the establishment of control parity and moderates the relationship between control parity and IJV performance. The model follows the logic where strategies influence organizational structure and ultimately affect firm performance (Geringer & Hebert, 1989; Guidice & Cullen, 2007; Yan & Gray, 1994). The nature of resources forms an important strategic influence. For example, if resources are strategically important to IJV performance, then they can strengthen the bargaining power of resource providers, and lead to changes in control structure in IJVs (Yan & Gray, 1994). The control structure in IJVs also changes over the life span of the venture as the relative importance of the IJV to parent firms' overall strategies can be reduced or phased out over time (Barlett & Ghoshal, 1986; Harrigan & Newman, 1990).

According to the model, the concept of strategic stakes sheds light on the design of control parity. Using IJVs in China as an example, if the degree of strategic stakes for foreign parent firms is higher than their Chinese counterparts, foreign parent firms would be better off by increasing both ownership and operational controls to ensure IJVs' operation conforming to foreign parent firms' interests. If foreign parent firms in this case have only established a minority-controlled ownership structure with a low degree operational control that is proportionate to the ownership stake, there is little protection for foreign parent firms when they need to battle opportunistic behavior of their Chinese counterparts.

Proposition 2: Parent firms with high strategic stakes should establish control parity by having a majority-controlled ownership structure and a high level of operational control that is proportionate to the ownership stake.

If the degree of strategic stakes for foreign parent firms is low, foreign parent firms would be better off by limiting both ownership and operational control. Otherwise, there is little economic justification. That is, the cost of control is higher than the benefit from it. For example, there are financial capital investments to secure ownership control, and human

capital investments to secure operational control. The investment decision may fail to optimize resource utilization where they are needed most in areas with higher strategic stakes. *Proposition 3: Parent firms with low strategic stakes should establish control parity by having a minority-controlled ownership structure and a low level of operational control that is proportionate to the ownership stake.*

When foreign parent firms have established control parity with a majority-controlled ownership structure and a corresponding high level of operational control, the degree of strategic stakes of foreign parent firms can further moderate the relationship between control parity and IJV performance. This is because a high level of strategic stakes will further motivate foreign parent firms to operate more vigilantly in the daily businesses.

Proposition 4: When one parent firm has a majority-controlled ownership structure and a high level of operational control that is proportionate to the ownership stake, the degree of strategic stakes of this parent firm will enhance the relationship between control parity and IJV performance.

DISCUSSION AND CONCLUSION

Studying ownership structure of IJVs alone has generated mixed results, and we aim to address the inconclusive results by analyzing ownership and operational control concurrently. We propose that the establishment of control parity defined as operational control in proportion to ownership control can help to solve this problem. The design of control parity, however, depends on the level of strategic stake facing parent firms that can also moderate the relationship between control parity and IJV performance. Understanding strategic stakes enables parent firms to choose a proper design between ownership and operational controls. We aim to achieve two goals in this study. First, a balance is needed between ownership and operational controls in IJVs. This is because a balanced relationship can enhance IJV performance. As a result, the paper departs from earlier studies that promote a specific type of ownership structure (majority-, jointly- or minority-controlled structure) for practitioners (Dhanaraj & Beamish, 2004; Killing, 1983). We argue that all three types of ownership structure can work as long as a proportionate relationship could be achieved and maintained between ownership structure and operational control.

Second, we hope to increase research interests in studying the relative importance of resources in IJVs through the concept of strategic stakes. This concept enables us to examine the importance of resources in a comparative manner. For example, financial resources are critical in instrumentally developing the market; however, other resources may become more important than financial investment over time. Research shows that tangible resources such as financial resources are an inferior source to create competitive advantages in the long run

(Irland, Hitt, & Vaidyanath, 2002); and their relative importance falls behind intangible resources, such as tacit knowledge dealing with the local government and other institutional infrastructures. That is, as the most fungible, least tacit, of the assets, financial resources are considered to have little power in IJVs where tacit knowledge embedded about the local environment, networking, distribution and marketing skills have higher influence (Blodgett, 1991). Without this tacit knowledge, businesses suffer competitive disadvantages in the Chinese market, and eventually exit the market (Chen, 2001; Yan & Gray, 1994). For instance, in the earlier example of Danone-Wahaha, without the brand name recognition generated by Wahaha and distribution channels established by Wahaha, the joint venture between Danone and Wahaha would not have been near as successful in the Chinese market in its early days.

The concept of strategic stakes also addresses the importance of IJVs to parent firms. Again in the example of Danone-Wahaha, the importance of the IJV seems to be different for the two parent firms. During the 1990s and 2000s, Danone adopted a market expansion strategy through establishing IJVs in fast-growing emerging economies like China, India and Pakistan (Krug & Rothlin, 2009). For example, besides starting the IJV with Wahaha in 1996 in China, Danone systematically developed other alliances with Guangzhou Milk in 1987, Wuhan Dongxihu Beer in 1996, Robust in 2000, Bright Dairy in 2001, Aquarius in 2004, Huiyan and Mengniu in 2006 (See Appendix). Most of these Chinese firms were direct competitors of Wahaha in the nutritional drink market (Zhang & Van Deusen, 2010). It is possible that these alliances may not share the similar importance to Danone, but the failure of one of these alliances would have a limited impact on Danone's performance as the risk has been spread out. For Wahaha, Danone was the only foreign partner at that time in the domestic market. The overall IJV performance was critical for Wahaha at a time when it was to conquer the increasingly competitive domestic nutritional drink market (Zhang & Van Deusen, 2010). The IJV between Wahaha and Danone is more important for Wahaha's performance than for Danone. It is thus no surprise that Wahaha violated its earlier agreement with Danone, and established nearly 40 non-joint venture companies, using the same brand name as the joint venture companies and creating direct competition with Danone.

Analyzing strategic stakes can better prepare foreign parent firms' entry strategy. For example, a high level of strategic stakes facing the Chinese domestic parent firm will make it difficult for foreign firms with a majority-controlled ownership structure to acquire a high level of operational control. In this situation, foreign firms perhaps are better off by setting up an exit strategy upon entering the domestic market.

Limitations and Future Research

There are limitations in this study. First, this paper has focused on examining strategic stakes that shape the behavior of parent firms in seeking control. We recognize that other

contingency variables influence the effect of ownership structure as well, such as goal congruency, IJV experiences and size (Guidice & Cullen, 2007; Pangarkar & Klein, 2004). Lowen and Pope (2008) used survival analysis techniques and found that parent firms' leadership turnover, size differential, host and parent country's political stability and partner experience significantly contribute to the IJVs' life span in addition to the relative ownership levels. How these variables interact with strategic stakes could be an interesting future research area. Second, this study focuses on formal control structure as exemplified by ownership control and operational control. There are subtle control mechanisms beyond formal control structure, and future studies should examine subtle control mechanisms to generate more insightful understanding on control issues in IJVs. Despite these shortcomings, the study has contributed to the research of IJVs in emerging economies such as China. It suggests that establishing control parity between ownership and operational control is more critical than deciding the form of ownership structure.

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APPENDIX

Danone's China Expansion

Year	Danone's capital investment	Partner/collaborator	Resultant entity
1987	Not known	Guangzhou Milk 广州市牛奶公司	Guangzhou Danone Yogurt 广州大能酸乳酪
1996	From 25.5% to 51%	Hangzhou Wahaha Group 杭州娃哈哈集团	Initially five subsidiaries, expanded to 39 by 2007.
1996	54.2%	Wuhan Dongxihu Beer 武汉东西湖啤酒	Wuhan Dongxihu Beer 武汉东西湖啤酒集团
2000	92%	Robust 乐百氏	Robust 乐百氏
2001	From 5% to 20.05%	Bright Dairy 光明乳业	Bright Dairy 光明乳业
2004	50%	Aquarius 正广和	Aquarius 正广和
2006	24.32%	Huiyuan 汇源	Huiyan 汇源
2006	49%	Mengniu 蒙牛	Mengniu 蒙牛

Source: Chinadaily, Danone's quick expansion in China, 2007-06-15, 15:43.

APPALACHIAN BUSINESS OWNERS: PERCEPTIONS OF THEIR OPERATIONS SYSTEM AND METHODS FOR PROBLEM RESOLUTION

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ABSTRACT

Operational improvement can be defined as an investment in technology, processes or procedures for growth, customer service, or efficiency. This paper explores the perceptions of 309 business owners in Appalachia about the operation systems of their firms and the percent of revenue spent on operational improvements. The majority, 41% spent between 1-5% of revenue followed by 27% who spent 6-10%. In addition, 69% of owners stated operational problems were resolved collaboratively by the employee and the supervisor? Finally, the researchers sought to establish if the operational issues varied by the owners' gender, type of business or sales volume. However, none of these variables revealed statistically significant differences in how operation issues were resolved.

INTRODUCTION

The Appalachian Region is a historically underdeveloped and economically disadvantaged area encompassing 205,000 square miles. Cradled by the Appalachian Mountains, it stretches from northern Mississippi to southern New York. In 1965, to address unemployment and poverty issues in this geographically-isolated region, the Appalachian Regional Commission was created (see www.arc.gov/appalachian_region/theappalachianregion.asp). The economy until the mid-1960s was dominated by mining, forestry, and heavy industry. Between 2000 and 2009, in fact, two-thirds of Appalachian counties had unemployment rates higher than the national average and per capita personal income and average earnings were nearly 20% lower than the nation as a whole. During this period the population growth was 5.7% as compared to 9.1% for the nation resulting from outmigration (see www.arc.gov/images/appregion/Jan2011/EconomicOverview).

The world, according to Thomas Friedman, is becoming flat (Freidman, 2005). Technology, communication and transportation improvements are enabling geographic isolated regions to prosper. Well-organized operational systems are vital for any business to succeed. Perhaps, through the use of better operations management, Appalachian firms could better compete in this new marketplace.

Operations Management refers to the set of activities that creates value in the form of goods and services by transforming inputs into outputs (Heizer & Render, 2010). Many times the operational functions of a business are ignored as these systems work behind the scenes and aren't a noticeable part of most organizations. Operations are rarely given a thought, expected to work and are analogous to electricity and telephone services that always work. No one is concerned about operations until something goes wrong. However, these functions are central for any business to run properly.

Operations often consist of hidden components which generally control a large share of the firms' resources. Their efficiency, process-flow, effectiveness, and timeliness are critical for firms to be competitive. Many firms have renewed their focus on cost-cutting, efficiency, and profitability in order to weather the storms of turbulent economic times. Understanding these factors could enable businesses to emerge better prepared for growth. For example, in addition to low prices, Wal-Mart has a superior supply chain and distribution system. This is reflected in Wal-Mart's direct reordering at the point of sale, efficient delivery, and inventory replenishment (Trunick, 2003). Southwest Airlines ensures its maintenance and operating efficiency by only using one type of aircraft. This means more proficient mechanics, interchangeable spare parts and any pilot can fly any plane (see www.southwest.com). In addition, by utilizing an interactive ordering system to prepare custom-made items, regional firms, such as the convenience store Sheetz, which specializes in gasoline at the lowest price and made-to-order sandwiches (<http://www.sheetz.com/main/about/gasoline.cfm>), are able to become more efficient and attract more customers. The concept of "best practices" provides similar businesses with ideas for improving efficiency. Egerton-Thomas (2005) provided advice to new entrepreneurs in the restaurant business on methods for improving operations. Likewise, Saunders et. al. (2008) studied operation management practices and selected the top fifty practices which could improve organizational performance.

Purpose

The purpose of this study is to investigate Appalachian business owners' perceptions of their operating system and their propensity to invest funds for improvement. In addition, this study seeks to determine which method: autocratic, shared, delegated or the use of consultants is predominantly utilized.

LITRATURE REVIEW

Minimal research directly related to Appalachia operations was found; however, literature in general concerning business owners' perception and problem solving was reviewed.

Perception

The owners' perception of their operating system is highly subjective and is often biased as their personal views have a profound impact on the business. In fact, Meziar and Starbuck (2003) contended owners generally have inaccurate and wildly-distorted perceptions of their businesses and markets. Nonetheless, the owners' willingness to obtain feedback and respond accordingly is an important moderating factor. Similarly, Walton and Dawson, (2001) found owners who incorporate their views into models of organizational effectiveness are more likely to improve effectiveness. A survey of 176 e-commerce firms by Schniederjans and Cao (2009) noted the alignment of operations strategy by general and operations managers is influenced by organizational variables such as years in operation and length of time the various managers worked together.

With the never-ending demands on time and resources, owners are often preoccupied and may not have the wherewithal to seek improvements if operations are functioning at an acceptable level. However, as time progress, myriad changes may have significant impact on the business. Godin (2003) warned however, that fixing a problem does not always correct the policy or situation that created the problem in the first place. Since operations often comprise a significant share of firms' expenses, cutting those expenses can lead to increased productivity. In addition, Spence (2009) suggested companies should focus on cost control to improve their profit margins. On the other hand, Whicker et. al. (2009) asserted that since the true cost of operations is unclear, perhaps metrics are needed to increase supply chain performance.

Achieving operative excellence is critical for every business. Schwientek and Schmidt (2008) claim operational improvements are the Holy Grail that leads to increased value over the long term. Furthermore, Johnson and Clark (2005) and Lashar (2008) contended that improving resource management can better deliver services to their customers. In fact, many of these improvements have come about through the use of technological solutions.

Consultants

When specific expertise is needed, consultants may be the solution as they can often bring experience and specialized skills to address operational problems. Kihn (2005) asserted consultants can add significant value and generally outperform in-house personnel. Carter (2001) cites the importance of consultants in dealing with the myriad of issues which affect the coal industry. Billington and Davidson (2010) emphasized how networking web sites, such as LinkedIn and Facebook, enable firms to access outside experts who have already addressed particular problems.

The use of consultants has a mixed history of successes and failures. Cassidy and Buede (2009) illustrated for decision-makers the danger of accepting expert advice without skepticism. Similarly, Kihn presented scathing practices conducted by some consultants. Hoffman (2004) noted Information Technology owners who hire consultants often end up getting less out of the technology product and outsourcing contracts than they had hoped for, due to poorly defined scope of work contracts. In a modern day parable, however, it is suggested that, although some consultants give bad advice, it doesn't prove they can't give good advice (The Tale of Mr. Jackson, 2010).

Certainly, it is not fair to paint all consultants with the same brush, as there are strong cases for the use of consultants. Consultants play a role in measuring the workload and productivity in hospitals (Rough et. al. 2010). Likewise, Garside (1999) found many manufacturing firms failed to invest adequate resources in designing factory operations due to their lack of expertise. In addition, Clarke (2007) cited ways for firms to make sure they are getting value for the fees paid to their consultants, as well as assistance in dealing with suppliers to gain the most benefit. (2009, Can You Trust Your Consultants and Service Providers)

Biech (2007) provided an in-depth analysis of the trials and tribulations of becoming a consultant by including advice on how to provide more value to the client, discussing managing customers, and actions which often lead to becoming a bad consultant. Further, Drain (2003) asserted the value in enlisting the services of a professional food consultant. Equally, cosmetic firms can benefit from hiring Information Technology consultants to improve marketing and management (Hiring an IT Consultant, 2009). Even if the consultant hired is honorable, the expectations of the owner should be reasonable. Soloman (1997), noted a survey of 26 firms which spent 2% of their net revenues on a consultant and saw the result of consultant use to their firm's stock price which was increased by 4 points. This assumed correlation is unrealistic for owners to expect as the results may have been due to other factors although it points to the value added by consultants.

Consultants may also assist in applying proven methods across industries. For example, Rutlege (2010) found the Toyota Production System for lean processing was used to improve quality and also reduce cost in a hospital laboratory environment. Similarly, Perry (2006) encouraged firms to take advantage of the third-party logistics service providers in order to control operations and costs. But before consultants can provide recommendations, however, their integrity needs to be examined by prospective customers. Kautonen et. al. (2010) studied 153 young Finnish firms and found the owners' perception of the consultants' integrity was more important than the effectiveness of their recommendations.

Decision Making

Every business confronts immediate and long-term operational problems that range from well-defined to ambiguous. Decision-making is on a continuum ranging from the manager or owner

making the decision alone, to shared input, and finally delegating the decision-making to the employees (Tannenbaum & Schmidt, 1973).

While it is conventional wisdom that those most closely affected (the front-line workers) may have some of the best ideas for improvement, these workers may not feel at ease contributing to the solution, due to limited knowledge or organizational culture. Nevertheless, owners in the last century have traditionally been autocratic and have adopted the “I’m the boss, that’s why” attitude” (Caruso, 2012). The concept of shared decision-making can be unsettling for seasoned, old school owners. However, including the workers in problem solving can yield better results (2002, The tyranny of managers). Replacing autocratic decision making with a more participative model begins with supervisors who do not feel their power, prestige or position are threatened (2002, The Ego has Landed).

Some bosses are autocratic in that they want to make every decision by themselves, but Golden Business Ideas (2002) stressed the importance of the boss stepping back to allow subordinates to come forward to solve the problem. The boss should then intervene only if the employees are having trouble solving a problem on their own. Further, in a study of nearly 7500 healthcare incidents, Adler-Milstein, Singer, and Toffel (2010) found that particular management practices can influence front-line workers' decisions about whether to speak up. Further direct managerial engagement can result in their doing so constructively.

With regard to the management styles, in a study of Midwest community colleges, Thaxter and Graham (1999) found the faculty perceived their institutions operated under autocratic decision making. While this minimizes unknowns, it also leaves faculty out of the process thereby eliminating ideas and innovations brought by faculty members. However, in a study of high school principals in Israel, Bogler (2001) found participative involvement by the faculty was integral to job satisfaction. Similarly, in a study of high school teachers in Oklahoma, moving from autocratic to participative decision-making improved morale and productivity (Muller & Thorn, 2007). Krause (2009) recommended the use of team based projects and Lean Six Sigma to encourage collaboration, increase quality and efficiency while, Carmelli et. al. (2009) contend that participatory decision-making in top management teams improves decision effectiveness and firm performance.

In an evaluation of conflict management systems, Lipsky and Avgar, (2010) cited the progressive and traditional views of conflict. Ultimately, the selection of a conflict management system is dependent on the broader goals and objectives of the organization. Lui and Ke (2007) stressed the importance of problem solving and how this skill can create competitive business advantages. They developed a prototype system to demonstrate the effectiveness of providing situation/action-relevant information and decision-making knowledge to help workers solve problems.

Even ideas which worked in the past are now coming back into vogue. LaLone (2008) contended survival strategies used in the 1930's- diversification, reciprocity, and pooling - are being adapted to run the family farm in the 21st century. While there is much emphasis on youth, Phair (2007) argued that experienced workers (those about 50 years of age) could solve half of firms' problems and alleviate projected labor shortages. Interestingly, problems develop when workers empowered to make decisions sometimes send the problem back to the supervisor rather than solving the problem themselves (Jones, 2000). Further, Tulgan (2007) asserts that the practice of "under management" is one of the biggest problems facing corporate America. Many upper-level owners do not follow the practice of MBWA (management by walking around). He contends supervisors are not doing what they are paid to do and offers suggestions for effective supervision. In short, while there is no one right method for all cases, the research points to employee empowerment and shared decision-making to improve employee efficiency and participation.

METHODS

The researchers developed a survey to ascertain the perceptions of businesses in the targeted Appalachian area. This instrument was mailed to the owners of small businesses to gauge their perceptions of their operating system, and how they solve operational problems. The survey encompassed various business sectors such manufacturing, retail, construction, wholesale, financial services, healthcare, and food services. The type, revenues, and the length of time in operation were compared to discern if any correlations exist. After six weeks, a follow-up survey was mailed to the firms to improve the anonymously response rate. The total number of respondents was 309 (approximately 10%) from five counties in three contiguous states in Appalachia. The researchers utilized SPSS for data management and analysis in an attempt to answer the following research hypotheses:

- H 1: Owners perceive their firms' operating systems are efficient
- H 2: Owners perceive preventive maintenance is critical
- H 3: Owners spend more than 6% of revenue to improve operating systems
- H 4: Owners independently solve operational problems

ANALYSIS OF EMPIREICAL SURVEY

The demographic compositions of the respondents are listed in Table 1. In summary, the majority of respondents was male (70%), over 50 years of age (70%), in retail firms (25%) with revenues over \$1 million (51%), and had been in operation over ten years (89%). Since nearly 90% of firms had been in business over ten years, it can be assumed they are surviving. The ARC 2011 report states between 2000 and 2009, two-thirds of Appalachian counties had unemployment rates higher than the national average and per capita personal income and average earnings were nearly 20% lower than the nation as a whole. Therefore, surviving does not equate to prospering.

TABLE 1. DEMOGRAPHICS

Gender	%	Annual Revenues	%
Female	23.6	< 500K	34.0
Male	69.6	500-1 mil	15.1
Unidentified	6.8	1-3 mil	22.0
Owners' Age	%	3-10 mil	14.8
0-39	8.1	Over 10 mil	14.1
40-49	22.0		
50-59	35.6	Business Classification	%
60-69	18.8	Manufacturing	11.7
Over 70	6.8	Retail	25.2
		Construction	10.0
Length of Time in Operation	%	Wholesale	1.9
1-3 yrs	1.0	Finance	8.7
4-6 yrs	3.6	Healthcare	7.4
7-10 yrs	6.5	Food Services	3.6
Over 10 yrs	88.7	Other	31.4

A Likert scale was used to establish the degree of confidence the owners have in their firms' operating system and data was collected by the gender and age of the owner, the revenues of the firm and the length of time the firm was in operation. Overall, owners overwhelmingly perceived (84%) their firm had an efficient operating system. By gender, this perception was even stronger as 90% of women owners felt their firm's operations were efficient. Regarding age, none of the owners over 70 years old were critical of their operating system; however, nearly one quarter of these owners were unsure of the value of replacing their existing systems or of the cost to replace their existing systems. In reference to the type of business, less than 3% of manufacturing owners strongly approved of their operating system. Conversely, 37% of the owners of financial firms strongly approved of the efficiency of their operating system. Interestingly, by revenue as well, the results were remarkably similar (see Table 2).

TABLE 2. EFFICIENCY OF OPERATIONS BY REVENUES

	Revenue				
	< 500K	500-1 mil	1-3 mil	3-10 mil	>10 mil
Disagree	2.0%	4.6%	3.2%	9.3%	2.4%
Not Sure	10.2%	7.0%	15.8%	9.3%	14.7%
Agree	87.8%	88.4%	81.0%	81.4%	82.9%

No statistically-significant differences were found on the basis of the owner's gender, age, business classification, or length of time in business or annual revenue. The hypothesis H1 was supported, as a strong majority of owners perceived their operating system as efficient.

The survey participants were asked about the importance of preventive investment in the maintenance of their operational systems, even if these systems appeared to be functioning normally. The results were mixed as only 30% agreed on the importance of preventive maintenance, 36% disagreed while 34% were not sure. This infers that these owners are not concerned about their operational system until a problem arises. More specifically, regarding the type of business, owners of Construction firms (42%) did not actively seek improvements if their current system was working. This may indicate the confidence in tried and true methods. Conversely, Manufacturing firms (51%) and Healthcare firms (48%) were willing to seek new efficiencies. This may be due to the competitive and dynamic nature of these businesses.

Overall, smaller firms were less likely to perceive the need for preventive maintenance than larger firms as they may be preoccupied with maintaining the business. However, over half of the larger firms, with sales over \$10 million actively pursued preventive maintenance, though these firms only represented fourteen percent of the respondents' population.

An ANOVA was performed and no statistically-significant differences due to business classification, owners' age, gender, or annual revenues were found. Therefore, hypothesis H2 was disproved, as a minority of owners support preventive maintenance.

The owners were then asked what percentage of revenue was routinely spent to improve business operations. The majority of owners (41%) spent between 1-5% of revenue to improve operations, followed by 27% of owners who spent between 6-10%. Interestingly, less than 1% spent zero on business improvements, while 8% spent over 20% (see Table 3).

Another intriguing finding was that in those firms that spent at least 16% of their revenue on improving business operations, female owners tended to outspend males two to one (see Table 4). Also, as the age of the owners increased, so did the amount of spending on operational improvements. This finding found weak but statistically-significant differences ($r = .153$ $p .007$).

TABLE 3. COMPARISON OF REVENUE BY FIRM SIZE

Firm's Size	Percent of Revenue Spent to Improve Operations					
	Zero	1-5%	6-10%	11-15%	16-20%	> 20%
< 500K	1.1%	35.8%	25.3%	18.9%	9.5%	9.5%
500-1,000K	2.4%	53.7%	14.6%	7.3%	12.2%	9.8%
1-3 million		45.9%	29.5%	13.1%	6.6%	4.9%
3-10 million		43.9%	31.7%	4.9%	17.1%	2.4%
>10 million		30.8%	35.9%	5.1%	12.8%	15.4%
Total	0.7%	41.2%	27.1%	11.9%	10.8%	8.3%

TABLE 4. COMPARISON OF REVENUE BY GENDER

Gender	Percent of Revenue Spent to Improve Operations					
	Zero	1-5%	6-10%	11-15%	16-20%	> 20%
Female	2.8%	40.8%	18.3%	7.0%	14.1%	12.7%
Male	0.5%	39.5%	28.4%	12.1%	8.4%	6.5%
Total	0.7%	41.2%	27.1%	11.9%	10.8%	8.3%

Curiously, the “Other” category was the most apt to invest more than 20% on improvements. Finance and Healthcare led the spending in the 11-15% and 16-20% categories. This may be due to the technological dynamics that define these industries. Conversely, Food Services, Construction and Retail spent only 1-5% of revenues. No statistically-significant differences emerged due to gender, age of the owner, business classification or annual revenue. Hypothesis 3 was confirmed. The majority of the respondents agreed the money spent to improve their operating system was a wise investment (see Table 5). Only 13% did not feel this spending was prudent.

**TABLE 5. SPENDING FUNDS TO IMPROVE
THE OPERATING SYSTEM ADDS VALUE**

Never	Seldom	Occasionally	Usually	Always
0.7	12.4	30.6	36.2	18.6

However, an ANOVA was conducted to compare the manager’s age, business classification and business revenue. The only statistically-significant difference found concerned the firms’ revenues (see Table 6). $F = 8.28$, Performing post-hoc tests, the following differences were revealed (see Table 6):

Owners’ Perceptions	Significance
• Between 500K and 1-3 mil	= .021
• Between 500K and 10 mil	= .000
• Between 500K-1 mil and 10 mil	= .000

TABLE 6. PERCEPTIONS BY ANNUAL REVENUE

	< 500K	500-1 mil	1-3 mil	3-10 mil	>10 mil
Never	2.0%				
Seldom	18.2%	16.3%	7.9%	7.0%	
Occasionally	33.3%	44.2%	27.0%	32.6%	19.5%
Usually	33.3%	27.9%	39.7%	41.9%	39.0%
Always	12.1%	11.6%	23.8%	18.6%	41.5%

In summary, the higher revenue companies believed the money spent was a wise investment. This was much more apparent than for the companies with lower revenues. In the owners’ opinion, does the use of outside consultants improve their operations? Only 17.9% of the respondents to this survey agreed that using outside consultants improved the operational efficiency of the company. Also, the majority (54.4%) did not feel the outside consultants would provide helpful suggestions (see Table 7). An ANOVA was conducted to see if differences appeared between the age of the owners, the type of business, and the firms’ annual revenue. The ANOVA yielded a result of $F = 5.65$ Significance=.001 for the age of the manager. The Tukey post hoc test revealed differences between age groups:

Age groups	Significance
40-49 and 50-59	= .031
50-59 and 60-69	= .011
50-59 and over 70	= .020

TABLE 7. CONSULTANTS IMPROVING OPERATIONS BY AGE

	30-39	40-49	50-59	60-69	>70	Total
Strongly disagree	33.3%	29.4%	16.4%	31.0%	38.1%	24.1%
Disagree	33.3%	29.4%	25.5%	34.5%	42.9%	30.3%
Not sure	8.3%	22.1%	32.7%	22.4%	14.3%	24.1%
Agree	8.3%	8.8%	20.9%	5.2%		12.4%
Strongly agree	12.5%	2.9%	4.5%	3.4%	4.8%	5.5%

There were no statistically-significant differences based on gender, the type of the business or the annual revenues. This finding implies that regardless of the gender of the manager, the category of business or its size, the perception of consultants providing value was minimal.

The researchers sought to determine how operational problems were resolved and who was tasked with making the decisions. While many believe in the traditional autocratic style of management where the boss makes the decisions, this mode is rapidly losing traction for a number of reasons. The majority (nearly 70%) of respondents in this survey indicated both the employee and the supervisor working collaboratively solved the problems following proven methods (see Table 8).

TABLE 8. HOW OPERATIONAL PROBLEMS ARE RESOLVED

	Agree	Disagree
By Employee alone	19.1	50.5
By Employee and Supervisor	69.6	10.9
By Supervisor alone	38.4	25.4

When examining the response by gender, a very slight but statistically significant relationship was found of $r = .151$ $p .012$. While the overall responses were similar, female owners were much more adamant that problems were not solved by the employee alone (see Table 9).

TABLE 9. PROBLEMS SOLVED BY EMPLOYEE ALONE

	Female	Male
Strongly Disagree	42.4%	12.1%
Disagree	12.1%	37.2%
Not Sure	27.3%	31.4%
Agree	16.7%	17.9%
Strongly Agree	1.5%	1.4%

An ANOVA was conducted and revealed $F = 3.281$ Significance = .012 due to the differences between firms with annual revenues of less than \$500,000 and \$10 million was .006 (see Table

10). This shows that smaller firms were much more apt to solve operational problems by the supervisor alone. However, the owners' age, gender, or business type revealed no statistically significant differences.

TABLE 10. PROBLEMS SOLVED BY SUPERVISOR ALONE

	Revenues					Total
	< 500K	500-1,000K	1-3 mil	3-10 mil	>10 mil	
Strongly Disagree	4.1%	9.8%		7.0%	13.2%	5.7%
Disagree	15.5%	7.3%	30.0%	23.3%	31.6%	20.8%
Not Sure	37.1%	43.9%	36.7%	34.9%	36.8%	37.6%
Agree	32.0%	29.3%	30.0%	32.6%	13.2%	28.7%
Strongly Agree	11.3%	9.8%	3.3%	2.3%	5.3%	7.2%

The hypothesis H4 was disproved as the majority of owners and employees worked together. The qualities of trust, training and empowerment are critical components of this participative management style.

CONCLUSION AND IMPLICATIONS

The Appalachian Region has lower income and higher unemployment than other regions in Maryland. Because of this, Appalachian firms are disadvantaged. However, the results of this study show a vastly different reality. The large majority of Appalachian firm owners (84%) understand the importance of having a cost-efficient operating system. Many firm owners (58.1%) understand the need to continually reinvest back into the firm in order to remain competitive, leading to them spending 6% or more of revenue to improve operations. In fact, less than 1% of firm owners spent nothing on business improvements. In addition, when things are running smoothly, these business owners are not all content to sit back. Our study reveals that a large number of firms (30%) continually seek improvements even when their system is functioning properly. Different types of businesses seemed to have different views on seeking out new methods, with Manufacturing firms (51%) and Healthcare firms (48%) being the most active.

Appalachia firm owners generally frown upon the use of consultants (54.4%), as they did not perceive outside consultants have the knowledge or expertise to solve their problems. Only 17.9% of the respondents to this survey felt that outside consultants improved the operational efficiency of the company. Although the traditional, autocratic style of management was expected to be the most popular, our study found that only 38.4% of businesses agreed with this method. Instead, the majority (69.9%) of respondents indicated that the preferred style used to solve problems was for both the employee and the supervisor to work together. Seeing the majority of firms solving problems in a participative way is encouraging for Appalachia's future,

as these owners realize greater employee input can lead to better solutions and greater productivity.

Overall, our researchers expected larger firms to be more proactive in improving their business operations than small firms. However, most owners, regardless of size, understood the importance of having, maintaining, and improving an effective operating system, as indicated in our survey results. While many expect firms in Appalachia to lag behind other Maryland firms in spending money to improve their operations, the data shows something quite different. Nearly universally, Appalachian firms do spend money on operational improvements. In fact, the spending of these firms is very efficient and capable. Our survey focused on the perceptions business owners in the Appalachian region of Maryland had about their operational systems. The results we found show that the majority of business owners have a good appreciation for their operational systems and seek out improvements to these systems. However, some of the findings lead to new questions for future studies to focus.

FUTURE RESEARCH

This study focused on five counties in Appalachia, and its findings may not necessarily be transferred to other populations. Although all the counties surveyed are in Appalachia, different results may be found in other areas in Appalachia with markedly different characteristics. A metropolitan area outside of Appalachia will differ from the study as well. A comparison study to other low-income areas of the United States would be beneficial for a deeper understanding of the businesses in impoverished rural areas. The study could also be expanded to include the length of time the firms had been in operation and the ethnicity of the manager to see if these factors make a statistically-significant difference in the firm's operation.

In relation to the findings on consultants, a new question was raised. Do Appalachian business owners have close-minded perspectives? In order to further study this mindset, the concept of internal consultants (employees) and business owner's perceptions on them could be evaluated. The prevalence of collaborative problem solving between employee and supervisor brought up a question on changes in Appalachian management. Is this movement from autocratic to participative management due to training, the educational level of the workforce, or just due to the firms adapting to a changing world? Furthermore, more investigation on the specifics of how operational problems are solved could be beneficial to the study. For example, are standard operating procedures, creative brainstorming, decision-trees, or logic used? The findings of our study shine a new light on the businesses of Maryland's Appalachia region; however there is much more to be answered. New studies on businesses in rural and impoverished areas and further studies on Maryland's Appalachian businesses are needed for us to gain a deeper understanding of these businesses and their operational systems.

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