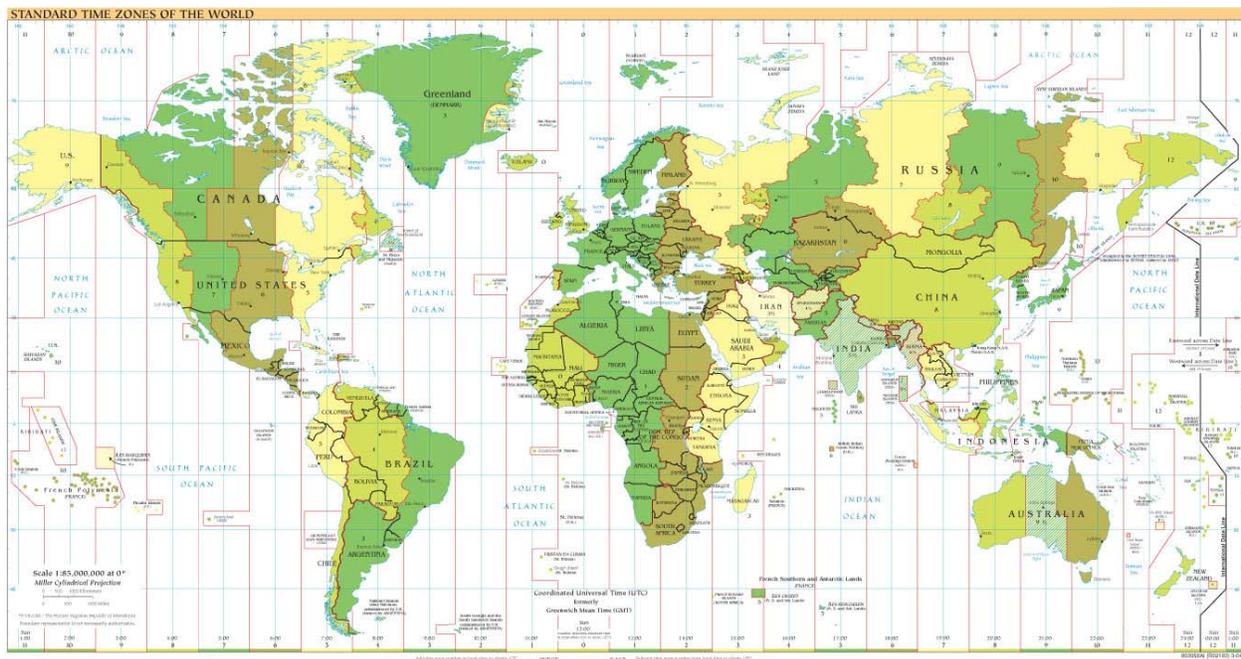


# PROCEEDINGS

of the

## IABE-2011 Barcelona- Summer Conference

Barcelona, Spain  
June 3 - 5, 2011



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Managing Editors

June 3, 2011  
Barcelona, Spain

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# DIVERSITY ISSUES IN INFORMATION TECHNOLOGY EDUCATION: THE ROLE OF CULTURAL VALUES IN PREDICTING TRAINING PREFERENCES AND SUBSEQUENT TRAINING EFFECTIVENESS

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## ABSTRACT

*Due to increased rates of immigration many educators are now responsible for training employees from a broad range of countries. As such it is important to understand both the role of cultural values in predicting training format preferences and how these culturally-based preferences may influence training effectiveness. Previous efforts to study this issue have proven inconclusive, possibly due to serious sampling limitations. This study uses Canadian government data collected from thousands of immigrants who received software application training while working in Canada. The data, based on a specialized government survey, includes a representative sample of organizations and industries. The dependent variables of self-reported training format preferences and time spent using the software application after having received training were both analyzed using numerous techniques. It was concluded that cultural values played a statistically significant but not substantive role in predicting training format preferences and subsequent training effectiveness. Interestingly other variables introduced as controls explained a much greater amount of variance in training format preferences. This has important implications for which aspects of diversity educators should focus on when trying to align training with learner preferences.*

**Keywords:** *cultural values, training format, training effectiveness, immigrants, diversity, information technology*

## 1. INTRODUCTION

Immigrant acculturation into the workplace is an important area of research since immigrants represent a significant proportion of the workforce in many countries. In Canada, they currently represent 20% of the workforce and 70% of the national labour force growth (Goldman, 2008; Zietsma, 2007), while 26% of the US workforce will consist of immigrants within 20 years (Hazlehurst, 2004). Unfortunately even highly skilled immigrants frequently report that they require job skills training almost immediately upon arrival in their new host country due to differences in workplace practices (Hofstede, 2001; House et al., 2004), and widespread credential and skill discounting (Statistics Canada, 2003; Krahn et al, 2000).

Results from the government-sponsored Longitudinal Survey of Immigrants in Canada, which is based on data from over 77,000 immigrants, indicated that 66.3% of newly arrived immigrants felt they needed to access further education to maximize their employment potential. A total of 45% felt the need to begin training within their first 6 months in Canada, while an additional 9% reported wanting to do so, but having no time (Statistics Canada, 2003). Their eagerness to begin makes sense. The Institute for Research on Public Policy has confirmed that receiving formal education within the new host country leads to improved employment outcomes for immigrants including higher earnings (Alboim, 2005). Furthermore, the same study found that the interaction between foreign and host country training was positive and significant, meaning that educational attainment within the host country increases the perceived value of prior foreign education, thereby mitigating credential discounting (Alboim, 2005).

Given the relevance of education for immigrants it is important to understand how to maximize training effectiveness for this group. Technology training is of particular interest for two reasons. First, technology plays a key role in most jobs in the North American labour market. For example, 61% of Canadian workers use a computer at work compared to a 17 country average of only 52%. In some countries, such as Portugal and Greece, the average is less than 30% (Brisbois, 2003). Second, immigration policy supports preferential recruiting for certain job skills. In Canada, current preferences include engineers and those with business management experience (Immigration Canada, 2008). These roles rely heavily on

computerized applications such as design tools and ERP systems. While many immigrants have been exposed to these technologies prior to coming to Canada, the specific applications may be different, requiring rapid acquisition of new skills.

Prior research has suggested that training contributes to technology acceptance and more effective computer application usage (i.e., Simon et al., 1996; Keil et al., 1998; Davis and Davis, 1990; Compeau and Higgins, 1995). Negative training experiences, however, can reduce perceptions of self-efficacy which is an important moderator of learning transfer (Burke, 2007). This means that a negative experience with technology training can stifle one's ability to learn in the future, and a positive experience can build a long-lasting confidence that will carry over to other technology skills acquisition (Compeau & Higgins, 1995). In sum, not only is training important, but providing a positive experience has the potential to have a lasting impact on later skill acquisition.

The need for positive training experiences emphasizes the importance of understanding what constitutes a positive learning environment for employees. One poorly understood source of variation in learning preferences is national culture and associated cultural values (Hofstede, 2001). This study seeks to identify how cultural factors influence technology training format preferences among immigrant workers. We consider how culture influences learning format preferences and also the impact of culture on learning effectiveness as measured by subsequent technology usage. The latter analysis makes this research unique because we are able to link learning preferences to a concrete and important learning outcome: subsequent technology usage.

## 2. LITERATURE REVIEW

### Cultural Differences in Values

There is a significant body of research devoted to describing and quantifying cultural values across countries. One of the most frequently cited studies is Hofstede's seminal 1980 work, which was updated in 2001. Initially Hofstede measured the values of 116,000 IBM employees in 72 countries. Later he successfully replicated the results from that study with a sample of 362 managers from 30 countries (Hofstede, 2001). Analysis of his data led to the identification of cultural values on five dimensions, which were then used to group individual countries into clusters or groups sharing relatively homogeneous values. The dimensions he used originally (1980) included power distance, uncertainty avoidance, individualism versus collectivism, and masculinity. Long-term versus short-term orientation was added to his analysis in the 2001 publication. For definitions see Table A.

**TABLE A: HOFSTEDE'S DIMENSIONS OF CULTURE (Hofstede, 2001)**

<b>Dimension</b>	<b>Definition</b>
Power Distance (PDI)	Degree of acceptance that power is distributed unequally.
Uncertainty Avoidance (UAI)	Preference for structured, predictable versus unstructured situations.
Individualism versus Collectivism (IDV)	Degree to which people prefer to act as individuals or members of a group.
Masculinity versus Femininity (MAS)	Measures whether society places higher value on assertive, competitive behaviours and material wealth; or relationships, concern for others and compassion.
Long-term versus Short-term Orientation	Degree to which people tend to look forward and value persistence and thrift compared to looking to the present or present and valuing tradition and social connection.

When the dimensions were analyzed eight distinct country clusters were identified, though it was noted that some countries with separate language groups (such as Switzerland), could possibly appear in different clusters depending on which population was surveyed. These clusters are shown in Table B.

**TABLE B: HOFSTEDE'S COUNTRY CLUSTERS (Hofstede, 2001)**

Cluster name	Defining Characteristics	Countries Included
Anglo	Low to mid PDI and UAI, high IDV and MAS	Australia, Canada, Great Britain, Ireland, New Zealand, USA, South Africa
Nordic	Low PDI and MAS, low to mid UAI, mid to high IDV	Denmark, Finland, Netherlands, Norway, Sweden
Germanic	Low PDI, mid IDV, mid to high UAI and MAS	Austria, Israel, Germany, Switzerland
Near Eastern	High PDI and UAI, low IDV, mid MAS	Greece, Iran, Turkey, Yugoslavia
Less Developed Asian	High PDI, low to mid UAI, low IDV, mid MAS	Pakistan, Taiwan, Thailand, Hong Kong, India, Phillipines, Singapore
More Developed Asian	Mid PDI and IDV, high UAI and MAS	Japan
Less Developed Latin	High PDI and UAI, low IDV, low to mid MAS	Colombia, Mexico, Venezuela, Chile, Peru, Portugal
More Developed Latin	High PDI and UAI, mid to high IDV, mid MAS	Belgium, France, Argentina, Brazil, Spain, Italy

Ronen and Shenkar (1985) reviewed and synthesized eight empirical studies (including the 1980 Hofstede work) that compared general attitudes towards work within specific country clusters. They found that, regardless of whether the original studies used factor analysis or non-metric multivariate techniques such as smallest space analysis, results were highly replicable across studies. For example, all the studies that included Europe, save one, placed Austria and Switzerland outside the Anglo cluster.

One perceived weakness of these prior studies was the lack of thorough, culturally sensitive analysis of Asian cultural variables. This was addressed in a 1987 study (Chinese Cultural Connection) using a tool called the Chinese Values Survey. It was administered to 1150 students in 23 countries (50 males and 50 females per country). The results from the work showed a high degree of correlation with Hofstede PDI, MAS and IDV dimensions. However, no analog to the UAI dimension was identified. Instead Bond, the project lead, identified a new dimension termed Confucian Dynamism, which looked primarily at future life goals versus past/present life goals. The former implies an emphasis on perseverance and thrift, whereas the latter implies an emphasis on reciprocity, social connection, stability and respect for tradition. The Confucian Dynamism dimension was transformed into the long term/short term orientation added to Hofstede's 2001 work.

The GLOBE project (House et al., 2004) represents the most recent comprehensive effort to map cultural dimensions and relate them to workplace behaviours. This study surveyed 17,000 managers in three industries (financial services, food processing, and telecommunications). The managers were recruited from 951 organizations and represented 62 distinct cultures and 59 countries. It measured nine dimensions of culture and their impact on perceptions of acceptable workplace behaviours. Three of the dimensions are conceptually similar to those examined by Hofstede (1980). These include uncertainty avoidance, power distance, and in-group collectivism. The GLOBE project, however, added a second measure of collectivism that looked at the institutional level rather than the organizational/group level. House also divided Hofstede's masculinity dimension into separate measures of gender equality and assertiveness. Finally, he added measurements for three types of orientation: future, performance and humane (see Table C). One of the most interesting components of the GLOBE study was that, when measuring values, they separated out actual practice from ideal values, measuring each separately.

**TABLE C: GLOBE ORIENTATIONS (House et al., 2004)**

Orientation	Definition
Future Orientation	Value placed on planning and delayed gratification.
Performance Orientation	Degree to which performance improvement and excellence are rewarded.
Humane Orientation	Degree to which fairness, altruism, kindness, and generosity are rewarded. Includes a high tolerance for mistakes.

The GLOBE study identified the following regional country clusters: Anglo, Latin Europe, Nordic Europe, Germanic Europe, Eastern Europe, Latin America, Middle East, Sub-Saharan Africa, Southern Asia, and Confucian Asia (Table D). These align reasonably well with the clusters identified by Hofstede, with a few notable exceptions. For example, GLOBE added clusters for Eastern Europe and Sub-Saharan Africa, two parts of the world that had been previously neglected. GLOBE also put Greece into the previously non-existent Eastern European cluster due to historical and geographic similarities. Brazil was placed within the Latin America cluster, India within Southern Asia, and Japan within Confucian Asia. These slight differences from the Hofstede clusters can lead to different findings when using each cluster classification in analysis so testing both Hofstede and GLOBE clusters is an emerging practice.

**TABLE D: GLOBE COUNTRY CLUSTERS (House et al., 2004)**

<b>Cluster name</b>	<b>Countries Included</b>
Anglo	Australia, Canada, Great Britain, Ireland, New Zealand, USA, South Africa
Latin Europe	France, Israel, Italy, Portugal, Spain
Nordic Europe	Denmark, Finland, Sweden
Germanic Europe	Austria, Germany, Netherlands, Switzerland
Eastern Europe	Albania, Georgia, Greece, Hungary, Kazakhstan, Poland, Russia, Slovenia
Latin America	Argentina, Bolivia, Brazil, Columbia, Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Venezuela
Sub-Saharan Africa	Namibia, Nigeria, Zambia, Zimbabwe
Middle East	Egypt, Kuwait, Morocco, Qatar, Turkey
Southern Asia	India, Indonesia, Iran, Malaysia, Philippines, Thailand
Confucian Asia	China, Hong Kong, Japan, Singapore, South Korea, Taiwan

Discriminant analysis confirmed the viability of the GLOBE clusters. They do reflect relatively homogeneous groups, as indicated by the fact that their initial sample gave a 96.7% correct classification score. On the whole the GLOBE study found that cluster effects account for 65% of the intersocial variation in the workplace practices they examined. "Thus the majority of societal effects on an individual's practices are explained by the cluster factor. This suggests that the societal cluster is an appropriate and relevant unit of analysis" (House et al, 2004, p.201).

Hofstede, in a paper published in 2006, disputed the validity of the GLOBE results based on numerous factors. These included the methods they used to operationalize the cultural dimensions, which he felt might reflect economic rather than cultural characteristics. Hofstede argued that when economic variables were controlled for, the GLOBE results identified only five dimensions that were strongly analogous to his own. Hofstede also believed that the validity of the GLOBE items was questionable because he felt the items used to derive the value scores were presented at an overly high level of abstraction such that it was difficult for respondents to relate the items to values in business whereas his questions were more tailored to the business environment. Finally he noted that countries often had negative correlations between ideal values and actual practice, a result also noted in the GLOBE publication. The GLOBE study, however, interpreted this as people wanting to correct the most visible issues within their organizations or culture (for example, if you feel that gender equality is lacking for you personally you may hold the ideal more strongly than if you are never exposed to overt inequality); whereas Hofstede interpreted it as methodological weakness. Javidan, a co-author of the GLOBE study, responded to these criticisms (Javidan et al, 2006). Their work further explained and defined their operationalizations and provided significant back-up regarding the validity of all their identified dimensions.

Today active debate continues between supporters of the Hofstede dimensions and country clusters and supporters of GLOBE dimensions and their slightly modified country clusters. As we will see shortly, however, the majority of researchers conducting academic research have relied on Hofstede scores such that using these scores increases comparability across studies. Modeling both sets of scores is also an increasingly common practice in the cross-cultural management literature in general, if not the education

literature in particular (i.e. Smith, Peterson, and Thomason, 2011; Gray, 2010; Garcia, Posthuma, and Roehling, 2009).

### Cultural Values and Training Preferences

Cultural dimensions play an important role in defining what is and is not a positive training experience. Specifically, culture influences learning styles and preferences related to training format and pedagogical approach (Hofstede and Hofstede, 2005; Abraham, Keating, and Lane, 1996; Guglielmino, 2006; Lum, 2006). Hofstede and Hofstede, in their 2005 book "Cultures and Organizations: Software of the Mind", theorized the following relationships between the Hofstede cultural dimensions and training:

**TABLE E: THEORETICAL LINKAGES BETWEEN CULTURAL VALUES AND TRAINING (Hofstede and Hofstede, 2005)**

Dimension	Impact
Power distance	Students from high power distance cultures treat instructors with deference and expect them to share their personal knowledge as a "guru." Young teachers are suspect since they are perceived as having less direct experience. Learning is usually teacher focused. Students from low power distance countries treat instructors as equals and expect them to share an objective truth. Young teachers are often liked since they are perceived as being more equal with the students. Learning is usually student focused.
Uncertainty avoidance	Students from high uncertainty avoidance prefer instructors who are experts. They also prefer assignments in which there are right and wrong answers and they know exactly what is expected of them. They are likely to attribute success to luck or circumstance. Those from low uncertainty avoidance cultures do not require instructors who are experts. They are comfortable with assignments in which answers are not necessarily right or wrong but instead require exploration of gray areas. They are likely to attribute success to their own efforts.
Individualism/collectivism	Students from individualistic countries are usually comfortable with independent learning and are more likely to ask questions and challenge instructors. Those from collectivist cultures are usually comfortable with group-based learning and are unlikely to challenge instructors.
Masculinity/femininity	Students from masculine cultures are usually achievement focused and want to excel and be the best in the class. Failure is perceived to be caused by personal inadequacies. Those from feminine cultures are focused on passing rather than excelling, flaunting one's personal excellence is considered socially inappropriate. Failure is seen as a sign that more support is needed.

Numerous studies have examined cultural values and how they relate to preferred learning styles (i.e. Kolb and Kolb, 2005; Barmeyer, 2004; Jaju et al., 2002; Jackson, 1995; Manikutty, Anuradha, and Hansen, 2007; Ramburuth and McCormick, 2001; Yamazaki and Kayes, 2004; You and Jia, 2008; Auyeung and Sands, 1996; Jaju, Kwak, and Zinkhan, 2002). Although the researchers' definitions of learning style do vary somewhat, the majority of these studies use Kolb's classification system, which separate learners into four categories (accommodators, divergers, convergers, and assimilators) based on preferences for experimentation, concrete experience, abstract conceptualization, and reflective observation (Kolb and Kolb, 2005; Auyeung and Sands, 1996; Barmeyer, 2004; Hanisch, 2003; Jaju, Kwak, and Zinkhan, 2002, Lam, 1998) In the most recent effort, Holtbrugge and Mohr (2011) collected data from 939 university students in 10 different countries. They found that both masculinity and individualism predicted preferences for learning style. Both dimensions were positively associated with preferences for combining abstract conceptualization and experimentation, known as the convergent learning style.

While the findings related to preferred learning style are interesting they offer little insight into preferred training format. Each learning style could be accommodated in many contexts such as the classroom,

peer-led training, or computerized self-directed learning. There are, in fact, very few empirical studies testing the theoretical relationships between cultural values and preferred training format. Numerous practitioners have written papers about learning format preferences based on their own informal observations in the field and the experiences of their colleagues (Weech, 2001; Hough, 1997; Rothstein-Fisch and Trumbull, 1999). They made numerous observations. Hough (1997) felt that cultures with low uncertainty avoidance encourage peer-assistance in the classroom while ones with high uncertainty avoidance find it threatening and uncomfortable, preferring expert instructors or independent computer-led training. Rothstein-Fisch and Trumbull (1999) observed that those with a high collectivist orientation seem to perform better in group learning situations that emphasize social ties and peer support rather than learning from “outsiders,” even if those outsiders are subject matter experts. Weech (2001) felt that those with a high power distance tend to discount peer advice, preferring to learn from the “expert.” None of these publications include firm evidence to support their views and the methods used to derive their conclusions do not even attempt to meet standard academic definitions of rigor. As such they represent little more than opinion, albeit the opinion of experienced field practitioners. Since formal qualitative methodologies were not used in these studies their conclusions are also highly vulnerable to various forms of cognitive bias including confirmation bias, expectancy effects, and stereotyping.

A very limited number of empirical studies about learning format and cultural values have been conducted. Guglielmino and Guglielmino (2006) surveyed 3,519 adults in five countries and found that self-directed learning readiness was positively associated with individualism and negatively associated with power distance. Nield (2004) surveyed 25 Chinese students studying in Hong Kong to test assumptions that they prefer passive training formats. He found that they did express a liking for videos and conventional lectures but the highest ranked learning method was working independently, a counter-intuitive finding given their cultural emphasis on collectivism. Rodrigues (2005) surveyed 181 domestic and 129 foreign students at an American university. He asked them to rate 10 different learning techniques and found that students from high power distance, high uncertainty avoidance countries showed a very slight preference for classroom presentations and computerized learning. No other significant relationships between cultural values and learning format preferences were found. Downey, Wentling, and Wadsworth (2004) assessed the relationship between cultural values and the perceived useability of an e-Learning system. They found that uncertainty avoidance was positively associated with experiencing frustration while using the system. Power distance was negatively associated with useability such that people from low power distance cultures were more likely to find the system easy to use. Tapanes, Smith, and White (2009) conducted surveys with 40 students in online learning environments and found that students from countries high in uncertainty avoidance were more reluctant to participate in on-line forums.

Finally, Prowse and Goddard (2010) conducted an interview-based case study with six instructors from Canada and four instructors from Qatar. They found differences in learning preferences which they attributed to Hofstede’s dimensions of cultures. Their methodology, however, makes their findings vulnerable to being heavily influenced by perceptual biases. They use the concept of values to theoretically derive hypothesis related to preferences. They also use cultural values to enable post hoc explanation for variance across cultures without explicitly testing the relationship between national level values and learning preferences directly. As such, they make assumptions about the relationship between cultural values and preferences that may not be warranted since other, unrecognized factors may also explain the variation they observe.

Unfortunately, all existing studies document extremely specific contexts and populations. For example the Nield study from 2004 looked at Northern Chinese students who were between 18-20 years old and used e-Learning in academic programs in restaurant management, while the Guglielmino study (2006) included students from only five countries. Small samples are also a problem in the existing research base. In sum, our current understanding of the impact of cultural dimensions on preferred training format has suffered from a lack of adequate research attention and the high contextual specificity of current research, which generally looks at one or two learning goals in a single environment with a single application and limited national diversity. This study seeks to address that gap by examining the issue with a large, representative population in an effort to discover if hypotheses regarding culture and

preferred training format display consistency across organizations, applications, and ethno-cultural populations.

Another weakness of the existing literature is that it tends to examine preferences without considering actual learning outcomes. Just because students state a preference for a particular learning format does not mean that it is actually the most effective technique when learning outcomes are measured objectively. This study will also address that gap by investigating the relationship between cultural values, learning format preferences, and actual technology usage after training occurs.

### **3. HYPOTHESIS DEVELOPMENT**

Researchers have long argued that matching or mismatching of instructional format and cognitive style impacts learning effectiveness. Pask (1975) conducted numerous studies on this topic in the 1970s. These studies, summarized by Ford (2000), consistently demonstrated improved learning performance when presentation style and cognitive style were aligned. Ford and Chen (2001) partially replicated these findings in their own experiment conducted with 73 postgraduate students. They found that a mismatch between presentation style and cognitive style negatively impacted learning for males only. More recently, an experiment with 68 undergraduate students showed that matching had no significant impact on initial learning outcomes (Hsu et al., 2009), demonstrating that more research is needed to clarify the relationship between alignment and learning effectiveness. Inconsistencies in published results are only one of the limitations of the current research. In addition these papers looked at matching of cognitive style along criteria other than culture, such as preferences for linear versus non-linear flow (Hsu et al., 2009) or preferences related to starting with details or the “big picture” (Pask, 1976). We know very little, therefore, about the impact of matching between learning format and cultural values, although it seems reasonable to anticipate that alignment would improve learning effectiveness.

#### **Power Distance**

Power distance, as defined by both the Hofstede and the GLOBE studies, reflects beliefs about the appropriateness of hierarchy in society. As such, we would anticipate that people from countries high in power distance would be more comfortable with formalized authority structures in which each person's place on the hierarchy was clear and learners are clearly distinguished from instructors. This aligns with Hofstede and Hofstede's (2005) expectation that learners from high power distance countries would prefer mature, expert instructors with extensive life experience who could be considered “gurus”. We would anticipate that peer instruction would make people from high power distance cultures uncomfortable since they would not perceive a peer as qualified to provide instruction.

H1a: Power distance is positively associated with a preference for formal employer-sponsored training.

H1b: Power distance is positively associated with a preference for formal self-selected training.

H1c: Power distance is positively associated with a preference for formal university training.

H1d: Power distance is negatively associated with a preference for on-the-job peer-led training.

H1e: Power distance moderates the relationship between training format and technology usage such that people exposed to formal employer-sponsored training will have higher rates of application usage when they are from a country with a high power distance than people from low power distance countries.

H1f: Power distance moderates the relationship between training format and technology usage such that people exposed to formal self-selected training will have higher rates of application usage when they are from a country with a high power distance than people from low power distance countries.

H1g: Power distance moderates the relationship between training format and technology usage such that people exposed to formal university training will have higher rates of application usage when they are from countries with a high power distance than people from low power distance countries.

H1h: Power distance moderates the relationship between training format and technology usage such that people exposed to on-the-job peer-led training will have lower rates of application usage when they are from countries with a high power distance than people from low power distance countries.

### **Uncertainty Avoidance**

Uncertainty avoidance, as defined in both the Hofstede and the GLOBE studies, reflects comfort levels with ambiguity. People who are uncomfortable with ambiguity may prefer to learn from experts rather than peers, believing that experts are less likely to make errors. Since they attribute success to luck or circumstance (Hofstede, 2005) they may also be intimidated by training formats that make them completely responsible for outcomes, such as self-directed or self-selected training.

H2a: Uncertainty avoidance is positively associated with a preference for employer-sponsored formal training.

H2b: Uncertainty avoidance is positively associated with a preference for formal university training.

H2c: Uncertainty avoidance is negatively associated with a preference for self-selected formal training.

H2d: Uncertainty avoidance is negatively associated with a preference for on-the-job peer-led training.

H2e: Uncertainty avoidance is negatively associated with a preference for self-directed training.

H2f: Uncertainty avoidance moderates the relationship between training format and technology usage such that people exposed to employer-sponsored formal training will have higher rates of application usage when they are from countries high in uncertainty avoidance than people from countries that are low in uncertainty avoidance.

H2g: Uncertainty avoidance moderates the relationship between training format and technology usage such that people exposed to formal university training will have higher rates of application usage when they are from countries high in uncertainty avoidance than people from countries that are low in uncertainty avoidance.

H2h: Uncertainty avoidance moderates the relationship between training format and technology usage such that people exposed to self-selected formal training will have lower rates of application usage when they are from countries high in uncertainty avoidance than people from countries that are low in uncertainty avoidance.

H2i: Uncertainty avoidance moderates the relationship between training format and technology usage such that people exposed to on-the-job peer-led training will have lower rates of application usage when they are from countries high in uncertainty avoidance than people from countries that are low in uncertainty avoidance.

H2j: Uncertainty avoidance moderates the relationship between training format and technology usage such that people exposed to self-directed training will have lower rates of application usage when they are from countries high in uncertainty avoidance than people from countries that are low in uncertainty avoidance.

### **Individualism/Collectivism**

Individualism (Hofstede), and in-group collectivism (GLOBE), reflect a focus on the individual versus a focus on the group. The Hofstede and GLOBE constructs are conceptually similar but reverse coded. People from collectivistic cultures are likely to prefer group-based learning and peer support whereas those from individualistic cultures will appreciate learning environments in which they are solely responsible for their success.

H3a: The Hofstede dimension of individualism is positively associated with a preference for self-selected formal training.

H3b: The Hofstede dimension of individualism is positively associated with a preference for self-directed training.

H3c: The GLOBE dimension of in-group collectivism is negatively associated with a preference for self-selected formal training.

H3d: The GLOBE dimension of in-group collectivism is negatively associated with a preference for self-directed formal training.

H3e: The Hofstede dimension of individualism is negatively associated with a preference for on-the-job peer-led training.

H3f: The GLOBE dimension of in-group collectivism is positively associated with a preference for on-the-job peer-led training.

H3g: The Hofstede dimension of individualism moderates the relationship between training format and technology usage such that people exposed to self-selected formal training will have higher rates of application usage when they are from countries that score high in individualism than people from countries that score low in individualism.

H3h: The Hofstede dimension of individualism moderates the relationship between training format and technology usage such that people exposed to self-directed training will have higher rates of application usage when they are from countries that score high in individualism than people from countries that score low in individualism.

H3i: The GLOBE dimension of in-group collectivism moderates the relationship between training format and technology usage such that people exposed to self-selected formal training will have lower rates of application usage when they are from countries that score high in in-group collectivism than people from countries that score low in in-group collectivism.

H3j: The GLOBE dimension of in-group collectivism moderates the relationship between training format and technology usage such that people exposed to self-directed formal training will have lower rates of application usage when they are from countries that score high in in-group collectivism than people from countries that score low in in-group collectivism.

H3k: The Hofstede dimension of individualism moderates the relationship between training format and technology usage such that people exposed to on-the-job peer-led training will have lower rates of application usage when they are from countries that score high in individualism than people from countries that score low in individualism.

H3l: The GLOBE dimension of in-group collectivism moderates the relationship between training format and technology usage such that people exposed to on-the-job peer-led training will have higher rates of application usage when they are from countries that score high in in-group collectivism than people from countries that score low in in-group collectivism.

### **Masculinity/Femininity and Performance/Humane Orientation**

People from masculine cultures seek personal recognition and take pride in visible accomplishments whereas those from feminine cultures are focused on harmony and getting along with others (Hofstede, 2001), preferring not to bring attention to personal accomplishments. The GLOBE researchers divided Hofstede's masculinity construct into separate measures of assertiveness and gender equality, however their measures of performance and humane orientation are much more conceptually similar to what

Hofstede meant by masculinity/femininity. People with a performance orientation value personal excellence and achievement while those with a humane orientation are more concerned with displaying kindness and generosity. In the context of learning new skills, formal training, particularly conventional classroom-based training, offers more opportunity to demonstrate personal excellence since testing, grading, and ranking are standard components of these learning formats. Self-directed training also offers the opportunity to visibly excel since skill acquisition is fully attributed to the individual rather than the instructor.

H4a: Masculinity is positively associated with a preference for university training.

H4b: Masculinity is positively associated with a preference for self-directed training.

H4c: Performance orientation is positively associated with a preference for university training.

H4d: Performance orientation is positively associated with a preference for self-directed training.

H4e: Masculinity is negatively associated with a preference for on-the-job peer-led training.

H4f: Humane orientation is positively associated with a preference for on-the-job peer-led training.

H4g: Masculinity moderates the relationship between training format and technology usage such that people exposed to university training will have higher rates of application usage when they are from countries that score high in masculinity than people from countries that score low in masculinity.

H4h: Masculinity moderates the relationship between training format and technology usage such that people exposed to self-directed training will have higher rates of application usage when they are from countries that score high in masculinity than people from countries that score low in masculinity.

H4i: Performance orientation moderates the relationship between training format and technology usage such that people exposed to university training will have higher rates of application usage when they are from countries that score high in performance orientation than people from countries that score low in performance orientation.

H4j: Performance orientation moderates the relationship between training format and technology usage such that people exposed to self-directed training will have higher rates of application usage when they are from countries that score high in performance orientation than people from countries that score low in performance orientation.

H4k: Masculinity moderates the relationship between training format and technology usage such that people exposed to on-the-job peer-led training will have lower rates of application usage when they are from countries that score high in masculinity than people from countries that score low in masculinity.

H4l: Humane orientation moderates the relationship between training format and technology usage such that people exposed to on-the-job peer-led training will have higher rates of application usage when they are from countries that score high in humane orientation than people from countries that score low in humane orientation.

Table F on next page summarizes the hypotheses.

**TABLE F: SUMMARY OF HYPOTHESES**

<b>Main Effects</b>		
<b>Hypotheses</b>	<b>Cultural Value</b>	<b>Dependent Variable &amp; Directionality of Association</b>
H1a	Power distance	Employer sponsored, positive
H1b	Power distance	Self-selected, positive
H1c	Power distance	University, positive
H1d	Power distance	On-the-job peer-led, negative
H2a	Uncertainty avoidance	Employer sponsored, positive
H2b	Uncertainty avoidance	University, positive
H2c	Uncertainty avoidance	Self-selected, negative
H2d	Uncertainty avoidance	On-the-job peer-led, negative
H2e	Uncertainty avoidance	Self-directed, negative
H3a	Individualism	Self-selected, positive
H3b	Individualism	Self-directed, positive
H3c	In-group collectivism	Self-selected, negative
H3d	In-group collectivism	Self-directed, negative
H3e	Individualism	On-the-job peer-led, negative
H3f	In-group collectivism	On-the-job peer-led, positive
H4a	Masculinity	University, positive
H4b	Masculinity	Self-directed, positive
H4c	Performance oriented	University, positive
H4d	Performance oriented	Self-directed, positive
H4e	Masculinity	On-the-job peer-led, negative
H4f	Humane orientation	On-the-job peer-led, positive
<b>Moderation Effects</b>		
<b>Hypotheses</b>	<b>Cultural Value</b>	<b>Dependent Variable &amp; Directionality of Association</b>
H1e	Power distance	Employer sponsored, higher
H1f	Power distance	Self-selected, higher
H1g	Power distance	University, higher
H1h	Power distance	On-the-job peer-led, lower
H2f	Uncertainty avoidance	Employer sponsored, higher
H2g	Uncertainty avoidance	University, higher
H2c	Uncertainty avoidance	Self-selected, lower
H2i	Uncertainty avoidance	On-the-job peer-led, lower
H2j	Uncertainty avoidance	Self-directed, lower
H3g	Individualism	Self-selected, higher
H3h	Individualism	Self-directed, higher
H3i	In-group collectivism	Self-selected, lower
H3j	In-group collectivism	Self-directed, lower
H3k	Individualism	On-the-job peer-led, lower
H3l	In-group collectivism	On-the-job peer-led, higher
H4g	Masculinity	University, higher
H4h	Masculinity	Self-directed, higher
H4i	Performance oriented	University, higher
H4j	Performance oriented	Self-directed, higher
H4k	Masculinity	On-the-job peer-led, lower
H4l	Humane orientation	On-the-job peer-led, higher

#### 4. METHODS

##### Data Source

We used the Workplace and Employee Survey (WES) data collected by Statistics Canada in 2003 to test our hypotheses. Statistics Canada draws their sample from the Business Registration List, which contains

all businesses operating in Canada. They select employers using a stratified sampling method based on industry, region, and size. The employee sample is then drawn based on lists provided by each responding employer. Twenty-four employees are randomly selected from each company, and all employees are surveyed if the company has fewer than 4 employees. Annual response rates to the WES exceed 80%.

In this study, we used data from the 2003 employee survey to measure the dependent variables, predictors and control variables. The dataset consisted of 20,834 employees; however we focused only on those employees who reported that they had not been born in Canada. In addition, respondents who did not use computerized applications as part of their job and/or did not report receiving training related to their primary software application were eliminated. Finally some respondents were difficult to categorize culturally or were bi-cultural (more information on this appears under the description of the country cluster measure) and were therefore removed. The final sample differed slightly when analyzing Hofstede and GLOBE dimensions since there are differences between the studies in the countries for which cultural value scores were generated.

## Measures

**Immigrant status:** Immigrant status was obtained from an item on the employee survey asking respondents whether or not they were born in Canada. People who immigrated as infants or as very young children (i.e. less than 10 years old) were eliminated from the sample since these individuals are more likely to be bicultural, having been raised largely in Canada.

**Country cluster:** Country clusters are groupings of countries that share very similar value profiles. The use of clusters rather than individual countries in analysis enables larger sample sizes, which is appropriate for regression analysis since countries with relatively few respondents can still be included. The clusters used in this study have been extensively validated by the Hofstede and GLOBE research teams.

Country of origin was obtained from an item on the employee survey asking respondents who had immigrated about their country of origin. The countries were then grouped into the country clusters identified in the Hofstede and GLOBE publications respectively. Since Hofstede and GLOBE analyzed somewhat different groups of countries this means that the sample used to analyze Hofstede clusters and that used to test GLOBE clusters differ slightly. Some clusters, such as the Hofstede cluster that consists solely of Japan, could not be included due to sample size limitations. Dummy variables representing each cluster for which there were more than 30 respondents were created. The Anglo cluster was used as a reference sample since they are in the same cluster as Canada and therefore we would anticipate the smallest amount of cultural difference between these immigrants and people born in Canada.

A very small number of countries, such as South Africa, have different value profiles for different sub-populations. In that case country of origin was cross-referenced with self-reported ethnicity to ensure appropriate grouping. For example Hofstede scores published for South Africa reflect values for white South Africans only, as such one immigrant who reported being from South Africa and being black was removed from the sample. Immigrants who reported being from a country for which we did not have either Hofstede or GLOBE scores were excluded by necessity from the analysis since they could not be accurately placed in an appropriate country cluster. Finally self-declared ethnicity and country of origin were cross-referenced such that individuals who had a strong likelihood of having been acculturated into a second culture prior to arrival in Canada could be identified. In a hypothetical example a person may report coming to Canada from Colombia, but self-declare as Japanese. This scenario makes appropriate cultural identity more difficult to determine. Seven respondents fell into this category and were removed from the sample.

**Special note about variable usage: clusters, countries, and value scores:** Country clusters were used in the first phase of the analysis in order to maximize the sample size. Sample size considerations differ, however, when conducting binary logistical regression as compared to HLM. The second part of the analysis uses HLM and examines individual countries instead of clusters. This is partially due to

different sampling concerns (see analysis section for more details) but it is also necessary because there are some minor variations in value scores within clusters. For example the Anglo cluster includes England, Australia, Canada, and the US which all score very high in individualism. The individualism scores for each country, however, vary from 80-91. While this minor intra-cluster variation does not invalidate the cluster groupings (the variation between 80-91 is small when you consider that the scale begins at 0) it does necessitate the assignment of scores based on country not cluster.

**Culture values scores:** Cultural value country scores from the Hofstede (1980, 2001) and GLOBE studies (House et al., 2004) were used. For the GLOBE study “practice” rather than “ideal” scores were used as these reflect perceptions of actual day-to-day practice. The country data available differs somewhat between the publications. This resulted in slightly different samples for the Hofstede score-based analysis and the GLOBE score-based analysis. We considered using a single sample consisting only of respondents from countries for whom both Hofstede and GLOBE scores were available; however this would have reduced our respondent pool such that we would have reduced the number of countries that could have been included when conducting our HLM analysis.

**Preferred Learning Format:** This variable was derived from a survey question asking which type of training format was perceived as most effective in helping the respondent learn how to use their primary application. Available responses included self-directed learning, employer-sponsored formal training (such as having an expert from the software company come on-site), self-paid formal training, on-the-job peer-led training, university or college courses, and other. The category “other” was eliminated from analysis since it offered no insight into how they learned.

**Time Spent Using Primary Application:** This variable was derived from a survey question that asked how many hours they spent using their primary application in an average week.

**Controls:** We controlled for gender, industry, and occupation type. Gender has been associated with differences in learning preferences (i.e. Sadler-Smith, Allinson, and Hayes, 2000) and there may also be unrecognized aspects of occupational or industrial culture that influence preferences. Industry and occupational factors also help determine day-to-day tasks, thereby heavily influencing time spent using an computerized application.

We controlled for industry by creating a set of 12 dummy variables encoded using the 2002 NAIS industry categories. Categories included forestry and mining, finance and insurance, real estate, business services, education/health, information services and culture, manufacturing, construction, transportation and wholesalers, communication, retail services, and other. While running the regression the category “business services” was used as a comparison standard.

We controlled for occupational category by creating a set of six dummy variables indicating professional, managerial, administrative, sales/marketing, skilled trades, and production/unskilled. The dummy variables were derived from a WES variable entitled occupational group which already divided respondents into the aforementioned categories. While running the regression managers were used as a comparison standard.

We also controlled for language used in the home, alignment between language used in the home and in the workplace, and prior experience using computers. It is possible that certain learning formats, such as university lectures, are more challenging when there is a language barrier. Language use in the home (reported as English, French or other), while not a perfect measure, gives some indication of who may be less fluent in the official languages.

The alignment variable was created by comparing their primary language spoken in the home and their primary language spoken at work. A dummy variable was created with 0 indicating alignment and 1 a lack of alignment. Prior experience using a computer was derived from a question asking how many years of experience they had using a computer.

## 5. ANALYSIS

The hypotheses that dealt with main effects as opposed to moderation were each tested using binary logistical regression. Dummy variables were created and two binary logistical regressions were conducted for each learning format; one using Hofstede clusters as predictors and the other using GLOBE clusters as predictors. The regressions were conducted in six steps with country clusters entered first followed by control variables. Language variables were entered in the second step, gender in the third, industries in the fourth, occupational groups in the fifth, and prior experience using computers in the sixth step. Appendix A shows results of the equations predicting preferred learning format based on country cluster, language variables, gender, industry, occupation type, and prior computer usage.

We tested the moderating influence of cultural values on preferred training format using Hierarchical Linear Modeling (HLM). See Table F for a list of the hypotheses tested using HLM. The use of HLM addresses a common weakness associated with cross-cultural research. Hofstede and GLOBE scores represent national level cultural values that may not apply to each individual within any given country. In the past it has been common, albeit flawed, practice to assign these scores to individuals based on their country of origin without explicitly testing whether or not this assumption is valid. In addition, if the sample has a highly disproportionate representation amongst the countries being examined, this can result in skewed results unless appropriate weighting techniques are used. Hierarchical Linear Modeling (HLM) gets around this problem as it allows the researcher to treat each country equally without explicitly having to deal with the issue of weighting. In other words, when data exists at multiple levels (i.e. at the individual and group level) HLM allows one to separate individual level effects from group level effects (Raudenbush and Bryk, 2002). As such, HLM is an appropriate analysis tool to use in this study because learning format preferences represent individual level data and cultural values represent national level data. However, with respect to HLM, the focus of this study is to examine moderating effects of cultural values upon technology usage; therefore, we will be confining our use of HLM to the slopes-as-outcomes model.

Furthermore we had to decide whether it was more appropriate to use national culture values one at a time or simultaneously because multiple predictors can potentially "affect the relationship between a given source and an outcome. In instances where the predictors each come from the same project, either Hofstede or GLOBE, including multiple predictors is problematic because the within-subject standardization used in both of these projects creates dependencies among national culture predictors. In addition, in instances where the predictors come from different projects (some from Hofstede and others from GLOBE), using multiple predictors would reduce the number of nations that can be included." (Smith, Peterson, and Thomason, 2011, p. 23). As such, to use only one nation-level predictor at a time while testing our hypotheses.

## 6. RESULTS

When looking at main effects (the country cluster analysis), the Hofstede sample consisted of 1,502 respondents of whom 49.9% were women and 51.1% were men. The sample size for each country cluster ranged from 55 – 605. The GLOBE sample consisted of 1,653 respondents of whom 48.3% were women and 51.7% were men. The sample size for country clusters ranged from 36 – 605.

When examining the moderating effects of cultural values upon application usage using HLM, our cutoff point for each country was set at 10 respondents that fit the criteria as outlined previously. As such, we were able to use 36 countries when looking at Hofstede's values and 26 countries when looking at GLOBE values. The number of individual respondents was 1,766 for Hofstede and 1,550 for GLOBE.

### Binary logistical regressions predicting preferred learning format

Full results for each regression can be seen in Appendix A. Please note that when the hypotheses were originally presented they were ordered by cultural value since that made sense in the context of hypothesis development. The results, however, are best understood when presented by learning format

preference. This may create some confusion regarding the numbering of the hypotheses so charts have been included to assist in summarizing the findings.

In order to interpret the results, some comments on the meaning of Nagelkerke R<sup>2</sup> statistics are required. "While pseudo R-squareds cannot be interpreted independently or compared across datasets, they are valid and useful in evaluating multiple models predicting the same outcome on the same dataset. In other words, a pseudo R-squared statistic without context has little meaning. A pseudo R-squared only has meaning when compared to another pseudo R-squared of the same type, on the same data, predicting the same outcome. In this situation, the higher pseudo R-squared indicates which model better predicts the outcome." As such, while we do report Nagelkerke R<sup>2</sup> values for each regression model in total, the truly salient findings are the changes in the Nagelkerke R<sup>2</sup> values that occur as we add additional variables to each model.

### Self-Directed Learning

We anticipated that in-group collectivism and uncertainty avoidance would be negatively associated with preferences for self-directed training (H3d, H2e) and that individualism, masculinity, and performance orientation would be positively associated with preferences for self-directed learning (H3b, H4b, H4d).

For the Hofstede clusters omnibus tests indicated that all equations were statistically significant and the overall model was significant ( $p < .001$ ). Table G demonstrates the total Nagelkerke R<sup>2</sup> that was reported at each stage of the regression along with the significance of each distinct step in the regression and the significance of the overall model. The overall model accounted for 10.7% of the variation in preferences for self-directed learning while the country clusters alone only accounted for 1.1%. Much greater variance was explained by gender and occupational group than country clusters (2.6% and 4.3% respectively). This finding suggests practitioners looking to maximize the effectiveness of training interventions would be better off tailoring programs by aspects of diversity other than culture; notably gender and occupation. The findings about occupation are particularly striking when you consider that the comparison group was managers, suggesting that there is a substantial difference between the training preferences of managers and the preferences of their subordinates. Since those same managers are likely to be making training decisions for their subordinates this finding is worth noting.

**TABLE G: NAGELKERKE SCORES FOR STAGED REGRESSIONS – SELF-DIRECTING TRAINING**

Step #	Nagelkerke	Step Sig.	Step #	Nagelkerke	Step Sig.
<i>Hofstede</i>			<i>GLOBE</i>		
1 – Culture	.011	.006	1 – Culture	.009	.039
2 – Language	.019	.004	2 – Language	.011	.001
3 – Gender	.045	<.001	3 – Gender	.046	.000
4 – Industry	.059	.005	4 – Industry	.051	.005
5 – Occupation	.102	<.001	5 – Occupation	.090	<.001
6 – Computer Exp.	.107	.002	6 – Computer Exp.	.091	.003
<b>Model sig.</b>		<b>&lt;.001</b>	<b>Model sig.</b>		<b>&lt;.001</b>

Significant control variables included gender, all occupational groups, and prior experience with computers. Males had an odds ratio of 1.664 ( $p < .001$ ), meaning that they were 66.4% more likely to prefer self-directed learning than females. All the occupational groups were positively associated with preferences for self-directed learning; however the odds ratio was particularly high for production workers, who were 926.6% more likely to prefer self-directed training than managers ( $p < .001$ ). Administrative staff were 138.2% more likely to prefer self-directed training than managers ( $p < .001$ ), while professional, trades, and sales and marketing staff had odds ratios of 1.388 ( $p = .016$ ), 1.628 ( $p < .001$ ), and 1.940 ( $p = .035$ ) respectively.

Only one country cluster was significant: the less developed Latin cluster had an odds ratio of 2.158 ( $p = .003$ ). People from this cluster were 115.8% more likely to prefer self-directed training than the reference sample of the Anglo cluster. This fails to support H3b and H4b because the Anglo cluster scores high in

individualism and masculinity while the less developed Latin cluster scores low on individualism and in the mid range of masculinity. As such we would have anticipated the opposite relationships. The less developed Latin cluster scores high on uncertainty avoidance as compared to the reference sample, so H2e is also not supported.

For the GLOBE clusters omnibus tests indicated that all equations were statistically significant and the overall model was significant ( $p < .001$ ). While the overall model accounted for 9.1% of variation in preferences for self-directed learning the country clusters alone only accounted for 0.9%. Similar to the Hofstede model, much greater variance was explained by gender (3.7%) and occupational group (3.9%) than country clusters.

Significant control variables included gender, all occupational groups, and prior experience with computers. Males were 66.9% more likely to prefer self-directed training than females ( $p < .001$ ). Production workers again had the largest odds ratio, being 859.3% more likely to prefer self-directed training than the reference group of managers. Odds ratios for administrative staff, professionals, tradespeople, and marketing/sales staff were 2.406 ( $p < .001$ ), 1.383 ( $p = .018$ ), 1.601 ( $p < .001$ ), and 1.851 ( $p = .05$ ) respectively.

In the GLOBE model two country clusters were significant: the Southern Asian cluster and the Confucian Asian cluster. They had odds ratios of 1.412 and .652 respectively, indicating that as a group people in the Southern Asian cluster are 41.2% more likely to prefer self-directed learning than the Anglo cluster while Confucian Asians are 45.8% less likely to prefer it. The Southern Asian and Confucian Asian clusters are typified by high scores in in-group collectivism so this finding fails to support hypothesis H3d. The Southern Asian cluster also has mid-range scores for performance orientation while both the Anglo cluster and the Confucian cluster score high in performance orientation so this finding fails to support H4b.

While H4b was clearly rejected using both samples it is worth noting that there is overlap in value scores between the GLOBE Southern and Confucian Asian clusters and the Hofstede less developed Latin cluster. All three clusters score low in individualism and high in in-group collectivism. The results therefore suggest a consistent relationship between individualism/collectivism and preferences for self-directed training. The relationship is, however, the opposite of what was anticipated. The effect is also small, as indicated by the marginal Nagelkerke  $R^2$  scores associated with the first stage of the regression.

**TABLE H: SELF-DIRECTED TRAINING – SUMMARY OF RESULTS**

Hypotheses	Cultural Value	DV and Direction	Outcome
H2e	Uncertainty avoidance	Self-directed, negative	Not supported
H3b	Individualism	Self-directed, positive	Not supported
H3d	In-group collectivism	Self-directed, negative	Not supported
H4b	Masculinity	Self-directed, positive	Not supported
H4d	Performance oriented	Self-directed, positive	Not supported

### Employer Sponsored Formal Training

We anticipated that power distance and uncertainty avoidance would be positively associated with preferences for employer-sponsored formal training (H1a and H2a).

For the Hofstede clusters omnibus tests indicated that the first equation (country cluster alone) was not statistically significant but most of the later steps were, excepting step 6 when the “prior experience with computers” variable was added. The overall model was significant ( $p = .002$ ). These findings suggest that culture is not a substantial factor influencing preferences for employer-sponsored formal training. The other variables did, however, explain 3.3% of the variance in preferences, most notably language and gender which explained 1.3% and 1.5% respectively.

**TABLE I: NAGELKERKE SCORES FOR STAGED REGRESSIONS – EMPLOYER-SPONSORED FORMAL TRAINING**

Step #	Nagelkerke	Step Sig.	Step #	Nagelkerke	Step Sig.
<b>Hofstede</b>			<b>GLOBE</b>		
1 – Culture	.008	.641	1 – Culture	.005	.274
2 – Language	.021	.030	2 – Language	.017	.049
3 – Gender	.036	.007	3 – Gender	.030	.024
4 – Industry	.039	.002	4 – Industry	.032	.018
5 – Occupation	.040	<.001	5 – Occupation	.035	.010
6 – Computer Exp.	.041	.596	6 – Computer Exp.	.036	.593
<b>Model sig.</b>		<b>.002</b>	<b>Model sig.</b>		<b>.016</b>

Significant control variables included speaking French in the home, gender, and being in the education and health, wholesaler, or manufacturing industries. Speaking French in the home was negatively associated with preferences for employer sponsored formal training with an odds ratio of .393 ( $p = .001$ ). Males were 29.7% less likely than females to prefer employer sponsored training ( $p = .010$ ). All three significant industries were less likely to prefer employer-sponsored training than the reference industry of business services, with odds ratios of .550 ( $p=.015$ ), .551 ( $p=.020$ ), and .587 ( $p=.024$ ) respectively.

Two country clusters had significant results in the full model: the Nordic cluster and the Less Developed Latin cluster. They had odds ratios of .432 ( $p=.015$ ) and .579 ( $p=.044$ ) respectively, indicating that they are 56.8% and 42.1% less likely to prefer employer-sponsored training than people from the Anglo cluster. The Nordic and Less Developed Latin clusters score on opposite ends of the continuum for power distance and uncertainty avoidance though so our hypotheses are not supported. In addition the effects are significant but not substantive, as indicated by the low Nagelkerke  $R^2$  and lack of significance in the first step of the model.

For the GLOBE clusters omnibus tests indicated that the first equation was not statistically significant but later stages were, excepting step 6 when prior experience using computers was added. The overall model was significant ( $p=.016$ ) but it explained only 3.6% of variation in preferences for employer-sponsored formal training. Again, these findings suggest that culture is not a substantial factor influencing preferences for employer-sponsored formal training.

The following control variables were also significant in the GLOBE model: speaking French in the home, gender, and being in the education and health, manufacturing, or wholesaler industries. All of the significant control variables were negatively associated with preferences for employer-sponsored formal training, just as in the Hofstede model. In the GLOBE model, however, the country clusters were not significant.

**TABLE J: EMPLOYER-SPONSORED TRAINING – SUMMARY OF RESULTS**

Hypotheses	Cultural Value	DV & Directionality	Outcome
H1a	Power distance	Employer sponsored, positive	Not supported
H2a	Uncertainty avoidance	Employer sponsored, positive	Not supported

### Self Selected Formal Training

We anticipated that power distance and individualism would be positively associated with preferences for self selected formal training (H1b, H3a), and that uncertainty avoidance and in-group collectivism would be negatively related to the same preference (H2c and H3c). For both the Hofstede and GLOBE clusters omnibus tests indicated that all six equations were statistically insignificant so none of the hypotheses were supported.

## On-The-Job Peer Training

We anticipated that power distance, uncertainty avoidance, individualism, and masculinity would be negatively associated with preferences for on-the-job peer led training (H1d, H2d, H3e, H4e), and in-group collectivism and humane orientation would be positively associated with the same preference (H3f, H4f).

For the Hofstede clusters omnibus tests indicated that the first equation (country cluster alone) was not statistically significant but all later steps were significant. The overall model was significant ( $p < .001$ ) with a Nagelkerke  $R^2$  of .103. Analysis of the Nagelkerke  $R^2$  scores across each stage of the regression indicate that gender and occupation have a much greater influence on preferences for on-the-job peer training than cultural factors since country cluster was not significant in isolation. The variance explained by gender and occupation were 2.2% and 4.4% respectively.

**TABLE K: NAGELKERKE SCORES FOR STAGED REGRESSIONS – ON-THE-JOB PEER-LED TRAINING**

Step #	Nagelkerke	Step Sig.		Step #	Nagelkerke	Step Sig.
<b>Hofstede</b>				<b>GLOBE</b>		
1 – Culture	.005	.176		1 – Culture	.003	.345
2 – Language	.019	<.001		2 – Language	.018	<.001
3 – Gender	.041	<.001		3 – Gender	.042	<.001
4 – Industry	.056	.002		4 – Industry	.053	.013
5 – Occupation	.100	<.001		5 – Occupation	.101	<.001
6 – Computer Exp.	.101	.019		6 – Computer Exp.	.103	.024
<b>Model sig.</b>		<b>&lt;.001</b>		<b>Model sig.</b>		<b>&lt;.001</b>

Significant control variables included gender, speaking French in the home, being in the education and health industry, being part of the trades, administrative, and production occupational groups, and prior experience with computers. Speaking French in the home was positively associated with preferences for on-the-job peer-led training with an odds ratio of 2.776 ( $p < .001$ ). Males were 29.9% less likely to prefer on-the-job peer-led training than females ( $p < .001$ ). People in education and health were 48.7% more likely to prefer this training than the reference industry of business services. People in the trades, administrative, and production occupations were 46.9%, 62.8%, and 88.2% less likely to prefer on-the-job peer-led training than the reference group of managers ( $p < .001$ ). Prior experience with computers was negatively associated with preferences for peer-led training ( $p = .020$ ).

The country cluster representing less developed Asian countries was significant in the full model ( $p = .020$ ) with an odds ratio of .744. The Less Developed Asian cluster has similar scores for uncertainty avoidance as the reference group (the Anglo cluster), however their scores for power distance are much higher and their individualism and masculinity scores are much lower. As such this finding fails to support H1d and H2d but does support H3e and H4e. In addition to not supporting the hypotheses the cultural effects that were observed were very small as indicated by the lack of significance in the first step of the model.

For the GLOBE clusters omnibus tests indicated that the first equation was not significant but all subsequent equations were significant. The full model was also significant ( $p < .001$ ) and explained 10.3% of preferences for on-the-job peer-led training. Again this, combined with the Nagelkerke  $R^2$  scores, demonstrates that variables other than culture have a much greater impact on preferences for on-the-job peer-led training and are therefore more deserving of attention by practitioners looking to optimize training effectiveness. Gender, for instance, explained 2.4% of the variance in preferences for on-the-job peer-led training while occupation accounted for 4.8% of the variance.

Significant control variables include gender, speaking French in the home, being in the real estate or education and health industries, the occupational groups of trades, administration, and production, and prior experience using a computer. Full results can be viewed in Appendix A but the pattern of findings is

consistent with the findings from the Hofstede clusters. The language and industry variables are positively associated with preferences for on-the-job peer-led training. Being male, having more computing experience, or being in trades, administration, or production roles was negatively associated with the same preference.

The Southern Asian cluster was significant in the full model with an odds ratio of .692, indicating that people from Southern Asia are 30.8% less likely to prefer on-the-job peer training than people from the Anglo cluster. The Southern Asian cluster scores higher than the Anglo cluster for both in-group collectivism and humane orientation so this supports H3f and H4f. The model was not significant when only country clusters were included though so this finding, while significant, is not substantive enough to reasonably influence practice. Findings related to gender and occupation type are much more substantive and therefore should be of more interest to practitioners.

**TABLE L: ON-THE-JOB PEER-LED TRAINING – SUMMARY OF RESULTS**

Hypotheses	Cultural Value	DV & Directionality	Outcome
H1d	Power distance	On-the-job peer-led, negative	Not supported
H2d	Uncertainty avoidance	On the job peer-led, negative	Not supported
H3e	Individualism	On-the-job peer-led, negative	Supported
H3f	In-group collectivism	On the job peer-led, positive	Supported
H4e	Masculinity	On the job peer-led, negative	Supported
H4f	Humane orientation	On the job peer-led, positive	Supported

### University or college

We anticipated that power distance, uncertainty avoidance, performance orientation, and masculinity would be positively associated with preferences for university or college training (H1c, H2b, H4a, and H4c).

For the Hofstede clusters omnibus tests indicated that the first, third, and fourth steps in the equation were not significant but steps two and five were significant and the overall model was significant ( $p < .001$ ). This means that only language and occupation were significant when added to the model while gender, industry and prior computer usage were not. The overall model explained 6.4% of the variance in preferences for university training. Once again this indicates that culture has a marginal impact on preferences for university-based instruction while other variables, notably language and occupation, have a more substantial influence.

**TABLE M: NAGELKERKE SCORES FOR STAGED REGRESSIONS – UNIVERSITY OR COLLEGE TRAINING**

Step #	Nagelkerke	Step Sig.		Step #	Nagelkerke	Step Sig.
<i>Hofstede</i>				<i>GLOBE</i>		
1 – Culture	.015	.079		1 – Culture	.010	.098
2 – Language	.032	<.001		2 – Language	.027	<.001
3 – Gender	.032	.538		3 – Gender	.027	.559
4 – Industry	.037	.819		4 – Industry	.032	.809
5 – Occupation	.061	<.001		5 – Occupation	.058	<.001
6 – Computer Exp.	.064	.067		6 – Computer Exp.	.061	.074
<b>Model sig.</b>		<b>&lt;.001</b>		<b>Model sig.</b>		<b>&lt;.001</b>

Only two control variables were significant: speaking French in the home was negatively associated with preferences for university or college with an odds ratio of .458 ( $p=.017$ ), as was being in a professional occupation (odds ratio .661,  $p=.009$ ).

The Less Developed Asian cluster was significant in the full model with an odds ratio of 1.835, indicating that they are 83.5% more likely to prefer university training than people from the Anglo cluster. Since the Less Developed Asian cluster scores high on power distance and the Anglo cluster scores low this finding

supports H1c. The Anglo cluster, however, scores higher on masculinity and similarly on uncertainty avoidance so H2b and H4a are not supported. Despite these significant findings it must be remembered that the effect sizes are marginal at best, indicating that practitioners seeking to optimize training effectiveness in a diverse environment would be better off focusing on other aspects of diversity rather than national culture.

For the GLOBE clusters omnibus indicated that the first, third, and fourth steps in the equation were not significant but steps two and five were significant and the overall model was significant ( $p < .001$ ). This means that only language and occupation were significant when added to the model while gender, industry and prior computer usage were not. The full model accounted for 6.1% of the variance. The only significant controls were speaking French in the home and being in a professional occupation, which were negatively associated with preferences for university training.

The Confucian Asian cluster was significant in the full model with an odds ratio of 3.306, indicating that people from this group are 230.6% more likely to prefer university training than the reference group (Anglo cluster). The Confucian Asian cluster scores similarly to the Anglo cluster in performance orientation so this finding fails to support H4c.

**TABLE N: UNIVERSITY OR COLLEGE TRAINING – SUMMARY OF RESULTS**

Hypotheses	Cultural Value	DV & Directionality	Outcome
H1c	Power distance	University, positive	Supported
H2b	Uncertainty avoidance	University, positive	Not supported
H4a	Masculinity	University, positive	Not supported
H4c	Performance oriented	University, positive	Not supported

### **HLM Predicting Time Spent Using One’s Primary Application**

Although we anticipated a plethora of moderating effects of cultural values upon the relationship between preferred training format and time spent using the application, none of the hypotheses were supported.

Looking at the results for the Hofstede scores, the only finding that was significant was that masculinity had a negative moderating effect on the relationship between university training and time spent using the application ( $\gamma = -.14$ ;  $t_{34} = -2.5$ ;  $p < .02$ ), which was opposite to the hypothesized relationship. Turning to the results for the GLOBE scores, although none of the hypotheses were supported, two relationships were significant but in the opposite direction as that hypothesized. Uncertainty avoidance had a negative moderating effect on the relationship between employee sponsored training and time spent on the application ( $\gamma = -3.30$ ;  $t_{24} = -2.1$ ;  $p < .05$ ). Uncertainty avoidance also had a positive moderating effect on the relationship between on-the-job peer-led training and time spent using the application ( $\gamma = 2.79$ ;  $t_{24} = 2.1$ ;  $p < .05$ ). These findings suggest that cultural values have minimal impact on training effectiveness as measured by the ability of cultural values to moderate the effectiveness of particular training formats.

### **Supplementary Analysis**

There were two major surprises in our analysis. Our first major surprise was that culture appears to have a very minimal influence on training preferences. The second surprise was that cultural values do not, for the most part, moderate the relationship between training format experienced and subsequent technology usage. In order to better understand these findings some supplementary analysis was conducted.

It is possible that the usage of country clusters as our independent variable predicting learning format preferences masked some variation that would have emerged had we analyzed individual countries instead. As mentioned previously there is some intra-cluster variation in scoring for various values. We therefore selected 20 countries that had samples in excess of 15 and also represented extreme ends of the value continuum, meaning that as a group people from these countries have particularly high or low means on at least one cultural value of interest. Since these countries represent extremes of the continuum any culture-based effects should be highlighted.

Dummy variables were created for each country with 1 indicating that the person had been born in that country and 0 indicating they had not. These country dummies were used as the independent variables for binary logistical regressions that used the preferred learning styles as dependent variables. Canadians were used as the reference sample. For employer paid formal training, self-paid formal training, on-the-job peer training, and university training the model was not significant. This offers compelling evidence that culture has little to no impact on preferred training format, strengthening our previous findings. The model was significant for self-directed learning with people from the Philippines being more 84.3% more likely to prefer self-directed training ( $p=.005$ ) and people from the USA being 45% less likely to prefer self-directed training. This is also consistent with our prior findings, which suggested that the relationship between individualism and preferences for self-directed training were the opposite of that originally hypothesized. The Nagelkerke  $R^2$  for the self-directed learning model was only 1.3% however, so even these effects were weak.

As mentioned previously our second surprise was the relative dearth of moderation effects. The lack of moderation, taken in isolation, is difficult to interpret. It may mean that culture is irrelevant to the effectiveness of various learning formats as measured by subsequent technology usage. It may mean that culture instead has a direct effect on technology usage. We tested for direct effects by running two linear regressions predicting time spent using one's primary application (one for Hofstede country clusters and one for GLOBE). The regressions were set-up in 6 steps. The first step included the country clusters, the second language variables, the third gender, the fourth industry, the fifth occupation, and the sixth prior experience using computers.

Full results of the linear regressions predicting technology usage can be seen in Appendix B. Results from this model echo results from earlier logistical models that predicted preferred learning format. For the Hofstede version each step in the model was significant and the overall model was significant but the  $R^2$  indicates that country clusters only explained 1% of the variation in the model while gender, industry, and occupation each explained more variation. In the GLOBE model each step was also significant and the overall model was significant but country clusters explained only 1.5% of the variation, and again gender, occupation, and industry each explained more.

## 7. DISCUSSION

The impact of culture on preferred training format has been of interest to researchers and training practitioners for quite some time. A great deal of practitioner time and effort is focused on dealing with diversity issues. Given the inevitable resource limitations that occur in almost every organization it is important for practitioners to understand how to maximize the value of their diversity-related efforts, including maximizing the value of training that is tailored specifically for diverse audiences. It is impossible to address every aspect of diversity; we need to focus our attention where it can have the most benefit. As such if culture is NOT relevant to learning preferences it is important to recognize that fact so that researchers and practitioners can move on to other areas that are more deserving of our attention and are more likely to inform practice in a meaningful way.

Previous studies examining the link between culture and training preferences have suffered from a range of methodological issues, most notably limitations in sample size and sample representativeness. This has led to confusion among researchers and practitioners alike since results from these small studies have often been difficult to interpret or contradictory. This study makes a significant contribution because it is based on a large and very representative sample that includes people from dozens of countries rather than only 2-5 countries. As such the null findings are more credible than when similar null findings are presented in studies that only examined one or two small groups. This paper is therefore important because it can redirect the debate towards more productive areas of research.

It should be noted that some hypotheses were indeed supported. Power distance was positively associated with preferences for university based training. Individualism and masculinity were both negatively associated with preferences for on-the-job peer-led training. In-group collectivism and humane orientation were positively associated with preferences for on-the-job peer-led training. Extensive analysis of these findings would be disingenuous, however, because the variance explained is minimal.

The lack of variance explained implies that if practitioners catered to these preferences their efforts would have minimal positive impact on workplace learning. Analysis of our control variables suggests, however, that paying greater attention to gender differences and occupational differences in learning format preferences may have greater potential to positively influence learning outcomes. The findings regarding occupation are particularly interesting because they suggest a large gap between what the managers who are making training decisions perceive as effective training and what the subordinates they supervise consider effective training. The disconnect between managers and subordinates was especially large for production employees, a finding that deserves more research attention.

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## Appendix A

### Binary Logistical Regressions Predicted Preferences for a Given Learning Format

#### 1. Self-Directed Learning:

<i>Hofstede</i>				<i>GLOBE</i>			
Variables	B	Sig.	Exp(B)	Variables	B	Sig.	Exp(B)
Nordic	.131	.651	1.140	East Europe	-.146	.557	.864
Germanic	-.073	.742	.929	Latin Amer.	.038	.896	1.039
Near East	-.461	.112	.631	Latin Euro.	-.081	.615	.922
Less Dev As.	.187	.147	1.206	Confucian	-.427	.008	.652
Less Dev Lat	.769	.003	2.158	Southern As	.345	.031	1.412
More Dev Lat	-.066	.706	.937	Germanic	.124	.544	1.132
				Middle East	.034	.926	1.035
Lang. align	-.121	.591	.886	Lang. align	-.164	.464	.849
L. @ home Fr	.134	.558	1.144	L. @ home Fr	.151	.510	1.163
L. @ home ot	.176	.451	1.192	L. @ home ot	.343	.151	1.409
Gender	.509	.000	1.664	Gender	.512	.000	1.669
Ind Forest	-.322	.351	.725	Ind Forest	-.348	.311	.706
Ind Finance	.133	.450	1.142	Ind Finance	.176	.319	1.192
Ind Real Est.	-.064	.791	.938	Ind Real Est.	-.073	.762	.930
Ind. EdHealth	-.106	.536	.900	Ind. EdHealth	-.134	.433	.875
Ind. Info	-.181	.375	.835	Ind. Info	-.181	.375	.834
Ind. Mfg	.143	.365	1.154	Ind. Mfg	.116	.463	1.123
Ind. Constuct	-.236	.334	.790	Ind. Constuct	-.233	.340	.792
Ind. Trans.	.244	.177	1.276	Ind. Trans.	.251	.165	1.285
Ind. comm	.196	.432	1.216	Ind. comm	.177	.478	1.194
Ind. retail	.294	.222	1.341	Ind. retail	.313	.193	1.367
Occ. Pro	.328	.016	1.388	Occ. Pro	.324	.018	1.383
Occ. Trade	.488	.000	1.628	Occ. Trade	.471	.000	1.601
Occ. Mktgsale	.663	.035	1.940	Occ. Mktgsale	.616	.052	1.851
Occ. Admin	.868	.000	2.382	Occ. Admin	.878	.000	2.406
Occ. Product	2.329	.000	10.266	Occ. Product	2.261	.000	9.593
Yrs compute	.016	.017	1.016	Yrs compute	.015	.023	1.016
Constant	-5.852	.000	.003	Constant	-5.259	.001	.005

## 2. Employer Sponsored Formal Training

<i>Hofstede</i>				<i>GLOBE</i>			
Variables	B	Sig.	Exp(B)	Variables	B	Sig.	Exp(B)
<b>Nordic</b>	-.839	.015	.432	<b>East Europe</b>	-.031	.926	1.032
<b>Germanic</b>	-.034	.917	.967	<b>Latin Amer.</b>	-.285	.421	.752
<b>Near East</b>	.273	.543	1.313	<b>Latin Euro.</b>	-.057	.792	.945
<b>Less Dev As.</b>	-.189	.271	.828	<b>Confucian</b>	.113	.621	1.120
<b>Less Dev Lat</b>	-.547	.044	.579	<b>Southern As</b>	-.126	.541	.882
<b>More Dev Lat</b>	.159	.525	1.173	<b>Germanic</b>	-.463	.074	.629
				<b>Middle East</b>	-.037	.937	.963
<b>Lang. align</b>	-.041	.883	.960	<b>Lang. align</b>	-.037	.893	.963
<b>L. @ home Fr</b>	-.934	.001	.393	<b>L. @ home Fr</b>	-.849	.002	.428
<b>L. @ home ot</b>	-.367	.211	.693	<b>L. @ home ot</b>	-.429	.156	.651
<b>Gender</b>	-.352	.010	.703	<b>Gender</b>	-.330	.015	.719
<b>Ind Forest</b>	-.573	.237	.564	<b>Ind Forest</b>	-.564	.244	.569
<b>Ind Finance</b>	-.219	.405	.803	<b>Ind Finance</b>	-.247	.347	.781
<b>Ind Real Est.</b>	-.338	.326	.713	<b>Ind Real Est.</b>	-.345	.315	.708
<b>Ind. EdHealth</b>	-.598	.015	.550	<b>Ind. EdHealth</b>	-.595	.016	.552
<b>Ind. Info</b>	-.047	.886	.954	<b>Ind. Info</b>	-.061	.852	.941
<b>Ind. Mfg</b>	-.533	.024	.587	<b>Ind. Mfg</b>	-.520	.028	.595
<b>Ind. Constuct</b>	-.203	.590	.817	<b>Ind. Constuct</b>	-.211	.576	.810
<b>Ind. Trans.</b>	-.595	.020	.551	<b>Ind. Trans.</b>	-.578	.023	.561
<b>Ind. comm</b>	-.576	.100	.562	<b>Ind. comm</b>	-.569	.104	.566
<b>Ind. retail</b>	-.055	.881	.947	<b>Ind. retail</b>	-.062	.864	.940
<b>Occ. Pro</b>	.128	.514	1.136	<b>Occ. Pro</b>	.149	.447	1.160
<b>Occ. Trade</b>	.359	.060	1.431	<b>Occ. Trade</b>	.373	.050	1.453
<b>Occ. Mktgsale</b>	-.222	.579	.801	<b>Occ. Mktgsale</b>	-.193	.631	.825
<b>Occ. Admin</b>	.153	.459	1.165	<b>Occ. Admin</b>	.157	.448	1.170
<b>Occ. Product</b>	.072	.882	1.075	<b>Occ. Product</b>	.094	.847	1.098
<b>Yrs compute</b>	.005	.595	1.005	<b>Yrs compute</b>	.005	.593	1.005
<b>Constant</b>	3.542	.109	34.546	<b>Constant</b>	3.105	.166	22.298

### 3. On-The-Job Peer-Led Training

<i>Hofstede</i>				<i>GLOBE</i>			
Variables	B	Sig.	Exp(B)	Variables	B	Sig.	Exp(B)
Nordic	-.138	.646	.871	East Europe	-.039	.873	.961
Germanic	.187	.424	1.205	Latin Amer.	.244	.418	1.277
Near East	.277	.391	1.319	Latin Euro.	.014	.931	1.014
Less Dev As.	-.295	.020	.744	Confucian	.062	.710	1.064
Less Dev Lat	-.165	.472	.847	Southern As	-.368	.015	.692
More Dev Lat	-.028	.878	.973	Germanic	-.011	.956	.989
				Middle East	-.376	.317	.687
Lang. align	.104	.660	1.109	Lang. align	.138	.561	1.148
L. @ home Fr	1.021	.000	2.776	L. @ home Fr	1.015	.000	2.759
L. @ home ot	.282	.245	1.326	L. @ home ot	.212	.397	1.237
Gender	-.355	.000	.701	Gender	-.348	.000	.706
Ind Forest	.173	.638	1.189	Ind Forest	.204	.578	1.227
Ind Finance	-.117	.505	.890	Ind Finance	-.143	.414	.867
Ind Real Est.	.499	.050	1.648	Ind Real Est.	.515	.044	1.674
Ind. EdHealth	.397	.027	1.487	Ind. EdHealth	.408	.023	1.504
Ind. Info	.157	.464	1.170	Ind. Info	.168	.434	1.183
Ind. Mfg	.168	.304	1.183	Ind. Mfg	.202	.216	1.224
Ind. Constuct	.447	.091	1.564	Ind. Constuct	.465	.080	1.591
Ind. Trans.	.023	.898	1.023	Ind. Trans.	.023	.899	1.023
Ind. comm	.019	.938	1.019	Ind. comm	.049	.841	1.051
Ind. retail	-.408	.077	.665	Ind. retail	-.404	.081	.668
Occ. Pro	-.230	.132	.794	Occ. Pro	-.226	.141	.798
Occ. Trade	-.633	.000	.531	Occ. Trade	-.637	.000	.529
Occ. Mktgsale	-.565	.061	.568	Occ. Mktgsale	-.541	.074	.582
Occ. Admin	-.989	.000	.372	Occ. Admin	-1.001	.000	.368
Occ. Product	-2.141	.000	.118	Occ. Product	-2.116	.000	.121
Yrs compute	-.016	.020	.984	Yrs compute	-.016	.025	.984
Constant	1.432	.353	4.188	Constant	1.620	.303	5.052

4. University or college based training

<i>Hofstede</i>				<i>GLOBE</i>			
Variables	B	Sig.	Exp(B)	Variables	B	Sig.	Exp(B)
Nordic	1.640	.107	5.153	East Europe	.236	.542	1.266
Germanic	.419	.337	1.520	Latin Amer.	-.116	.775	.891
Near East	.091	.841	1.096	Latin Euro.	.182	.498	1.199
Less Dev As.	.607	.011	1.835	Confucian	1.196	.001	3.306
Less Dev Lat	-.168	.612	.845	Southern As	.136	.579	1.145
More Dev Lat	.211	.481	1.235	Germanic	.845	.074	2.327
				Middle East	.371	.555	1.449
Lang. align	-.069	.839	.933	Lang. align	.045	.901	1.046
L. @ home Fr	-.782	.017	.458	L. @ home Fr	-.835	.011	.434
L. @ home ot	-.477	.186	.621	L. @ home ot	-.705	.068	.494
Gender	.011	.946	1.011	Gender	-.003	.984	.997
Ind Forest	1.369	.185	3.931	Ind Forest	1.356	.190	3.880
Ind Finance	.334	.277	1.396	Ind Finance	.305	.323	1.356
Ind Real Est.	-.442	.206	.643	Ind Real Est.	-.438	.212	.645
Ind. EdHealth	.301	.297	1.351	Ind. EdHealth	.354	.222	1.425
Ind. Info	.282	.428	1.326	Ind. Info	.289	.419	1.335
Ind. Mfg	-.017	.946	.983	Ind. Mfg	.003	.991	1.003
Ind. Constuct	-.288	.446	.750	Ind. Constuct	-.298	.432	.742
Ind. Trans.	.360	.249	1.434	Ind. Trans.	.342	.276	1.408
Ind. comm	.652	.192	1.919	Ind. comm	.694	.166	2.003
Ind. retail	.327	.441	1.387	Ind. retail	.350	.411	1.419
Occ. Pro	-.414	.009	.661	Occ. Pro	-.458	.006	.632
Occ. Trade	-.258	.288	.773	Occ. Trade	-.224	.355	.799
Occ. Mktgsale	.444	.492	1.559	Occ. Mktgsale	.535	.409	1.707
Occ. Admin	-.093	.737	.911	Occ. Admin	-.092	.741	.912
Occ. Product	18.762	.998	1.406E8	Occ. Product	18.864	.998	1.557E8
Yrs compute	-.019	.122	.982	Yrs compute	-.018	.128	.982
Constant	-25.101	.997	.000	Constant	-25.230	.997	.000

Appendix B

Linear Regressions Predicting Time Spent Using One's Primary Application  
Hofstede Country Clusters

Model	R	R Squared	Adjusted R Square	Std. Error of the Estimate
1	.098 <sup>a</sup>	.010	.007	10.61377
2	.111 <sup>b</sup>	.012	.008	10.60644
3	.174 <sup>c</sup>	.030	.026	10.51105
4	.324 <sup>d</sup>	.105	.097	10.12114
5	.366 <sup>e</sup>	.134	.125	9.96522
6	.375 <sup>f</sup>	.141	.131	9.93071

ANOVA<sup>h</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2449.063	6	408.177	3.623	.001 <sup>a</sup>
	Residual	253467.398	2250	112.652		
	Total	255916.461	2256			
2	Regression	3136.779	9	348.531	3.098	.001 <sup>b</sup>
	Residual	252779.682	2247	112.497		
	Total	255916.461	2256			
3	Regression	7773.328	10	777.333	7.036	.000 <sup>c</sup>
	Residual	248143.133	2246	110.482		
	Total	255916.461	2256			
4	Regression	26866.360	20	1343.318	13.114	.000 <sup>d</sup>
	Residual	229050.101	2236	102.437		
	Total	255916.461	2256			
5	Regression	34365.859	25	1374.634	13.842	.000 <sup>e</sup>
	Residual	221550.602	2231	99.306		
	Total	255916.461	2256			
6	Regression	35996.123	26	1384.466	14.039	.000 <sup>f</sup>
	Residual	219920.339	2230	98.619		
	Total	255916.461	2256			

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
6	(Constant)	11.852	1.048		11.310	.000
	Nordic cluster	-1.578	1.368	-.023	-1.154	.249
	Germanic	-3.787	1.046	-.072	-3.622	.000
	Near Eastern	.224	1.382	.003	.162	.871
	Less Dev Asian	-.211	.594	-.008	-.356	.722
	Less Dev Latin	-2.346	1.064	-.044	-2.205	.028
	More Dev Latin	-.401	.818	-.010	-.490	.624
	LangAlign	-.367	1.028	-.016	-.357	.721
	LFrinhome	.940	1.070	.019	.879	.380
	Lotinhome	1.199	1.071	.052	1.119	.263
	GENDER	1.950	.456	.092	4.274	.000
	Ind_ForestMine	-.718	1.651	-.009	-.435	.664
	Ind_FinancInsu	.882	.821	.027	1.074	.283
	Ind_Realestate	-2.608	1.127	-.052	-2.314	.021
	Ind_EdHealth	-7.449	.808	-.237	-9.216	.000
	Ind_Infoculture	.836	.975	.020	.858	.391
	Ind_Mfg	-3.344	.745	-.127	-4.487	.000
	Ind_construction	-1.669	1.164	-.032	-1.434	.152
	Ind_transwhole	-.058	.831	-.002	-.070	.944
	Ind_comm	-3.558	1.158	-.068	-3.074	.002
	Ind_retail	-3.963	1.099	-.084	-3.607	.000
	OCP_PRO	2.696	.661	.110	4.076	.000
	OCP_TRADE	.205	.630	.009	.325	.745
	OCP_MKTSALE	3.707	1.428	.056	2.595	.010
	OCP_ADMIN	4.572	.715	.172	6.394	.000
	OCP_PROD	-4.008	1.732	-.048	-2.314	.021
	NO_CPU	.129	.032	.084	4.066	.000

ANOVA<sup>h</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2449.063	6	408.177	3.623	.001 <sup>a</sup>
	Residual	253467.398	2250	112.652		
	Total	255916.461	2256			
2	Regression	3136.779	9	348.531	3.098	.001 <sup>b</sup>
	Residual	252779.682	2247	112.497		
	Total	255916.461	2256			
3	Regression	7773.328	10	777.333	7.036	.000 <sup>c</sup>
	Residual	248143.133	2246	110.482		
	Total	255916.461	2256			
4	Regression	26866.360	20	1343.318	13.114	.000 <sup>d</sup>
	Residual	229050.101	2236	102.437		
	Total	255916.461	2256			
5	Regression	34365.859	25	1374.634	13.842	.000 <sup>e</sup>
	Residual	221550.602	2231	99.306		
	Total	255916.461	2256			
6	Regression	35996.123	26	1384.466	14.039	.000 <sup>f</sup>
	Residual	219920.339	2230	98.619		
	Total	255916.461	2256			

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
6	(Constant)	11.852	1.048		11.310	.000
	Nordic cluster	-1.578	1.368	-.023	-1.154	.249
	Germanic	-3.787	1.046	-.072	-3.622	.000
	Near Eastern	.224	1.382	.003	.162	.871
	Less Dev Asian	-.211	.594	-.008	-.356	.722
	Less Dev Latin	-2.346	1.064	-.044	-2.205	.028
	More Dev Latin	-.401	.818	-.010	-.490	.624
	LangAlign	-.367	1.028	-.016	-.357	.721
	LFrinhome	.940	1.070	.019	.879	.380
	Lotinhome	1.199	1.071	.052	1.119	.263
	GENDER	1.950	.456	.092	4.274	.000
	Ind_ForestMine	-.718	1.651	-.009	-.435	.664
	Ind_FinancInsu	.882	.821	.027	1.074	.283
	Ind_Realestate	-2.608	1.127	-.052	-2.314	.021
	Ind_EdHealth	-7.449	.808	-.237	-9.216	.000
	Ind_Infoculture	.836	.975	.020	.858	.391
	Ind_Mfg	-3.344	.745	-.127	-4.487	.000
	Ind_construction	-1.669	1.164	-.032	-1.434	.152
	Ind_transwhole	-.058	.831	-.002	-.070	.944
	Ind_comm	-3.558	1.158	-.068	-3.074	.002
	Ind_retail	-3.963	1.099	-.084	-3.607	.000
	OCP_PRO	2.696	.661	.110	4.076	.000
	OCP_TRADE	.205	.630	.009	.325	.745
	OCP_MKTSALE	3.707	1.428	.056	2.595	.010
	OCP_ADMIN	4.572	.715	.172	6.394	.000
	OCP_PROD	-4.008	1.732	-.048	-2.314	.021
	NO_CPU	.129	.032	.084	4.066	.000

**GLOBE Clusters**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.123 <sup>a</sup>	.015	.012	10.58652
2	.125 <sup>b</sup>	.016	.011	10.59092
3	.184 <sup>c</sup>	.034	.029	10.49529
4	.327 <sup>d</sup>	.107	.099	10.11246
5	.368 <sup>e</sup>	.136	.126	9.95896
6	.377 <sup>f</sup>	.142	.131	9.92649

**ANOVA<sup>h</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3860.962	7	551.566	4.921	.000 <sup>a</sup>
	Residual	252055.500	2249	112.074		
	Total	255916.461	2256			
2	Regression	3988.246	10	398.825	3.556	.000 <sup>b</sup>
	Residual	251928.215	2246	112.168		
	Total	255916.461	2256			
3	Regression	8627.179	11	784.289	7.120	.000 <sup>c</sup>
	Residual	247289.283	2245	110.151		
	Total	255916.461	2256			
4	Regression	27361.076	21	1302.908	12.741	.000 <sup>d</sup>
	Residual	228555.385	2235	102.262		
	Total	255916.461	2256			
5	Regression	34743.149	26	1336.275	13.473	.000 <sup>e</sup>
	Residual	221173.313	2230	99.181		
	Total	255916.461	2256			
6	Regression	36281.655	27	1343.765	13.637	.000 <sup>f</sup>
	Residual	219634.806	2229	98.535		
	Total	255916.461	2256			

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
6 (Constant)	11.698	1.045		11.196	.000
Eastern Europe	-1.072	1.143	-.019	-.938	.348
Latin America	-.892	1.332	-.013	-.670	.503
Latin Europe	-1.230	.746	-.035	-1.648	.099
Confucian Asia	.793	.762	.024	1.040	.298
Southern Asia	.383	.712	.011	.538	.591
Germanic Europe	-3.019	.945	-.064	-3.196	.001
Middle East	3.511	1.708	.041	2.056	.040
LangAlign	-.335	1.033	-.015	-.325	.746
LFrinhome	1.063	1.069	.022	.994	.320
Lotinhome	.819	1.101	.036	.744	.457
GENDER	1.967	.455	.092	4.321	.000
Ind_ForestMine	-.824	1.652	-.010	-.499	.618
Ind_FinanceInsu	.801	.821	.025	.975	.330
Ind_Realestate	-2.491	1.128	-.049	-2.208	.027
Ind_EdHealth	-7.451	.809	-.237	-9.210	.000
Ind_Infoculture	.781	.974	.018	.802	.423
Ind_Mfg	-3.418	.746	-.129	-4.582	.000
Ind_construction	-1.596	1.165	-.030	-1.370	.171
Ind_transwhole	.022	.831	.001	.026	.979
Ind_comm	-3.550	1.159	-.068	-3.064	.002
Ind_retail	-4.108	1.098	-.087	-3.741	.000
OCP_PRO	2.795	.662	.114	4.222	.000
OCP_TRADE	.330	.630	.014	.524	.601
OCP_MKTSALE	3.954	1.429	.060	2.766	.006
OCP_ADMIN	4.625	.716	.174	6.461	.000
OCP_PROD	-3.750	1.733	-.045	-2.164	.031
NO_CPU	.125	.032	.082	3.951	.000

a. Dependent Variable: APP1\_TIM

# THE GLOBALIZATION STRATEGIES OF THAI CORPORATIONS

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## ABSTRACT

*This research is to identify strategic importance in globalization, and develop a model to investigate the strategic direction, strategic competencies and going global factor influencing level of globalization in Thai firms. A field survey was conducted with 163 top executives in Thailand. The multiple regressions were chosen to analyze the data and assess the impact of the strategic components on level of globalization. Two out of three hypotheses were accepted. This indicated that perceived going global and strategic management competencies perspectives of firms were strong influences to firms' globalization level. In addition, the impacts of specific variables on level of globalization were found in this study. The findings provide useful information for the executives in Thailand and other developing economies in developing their position in world market and also useful to the government in designing and drafting a globalization policy to enhance the scope and development of international trade among countries.*

**Keywords:** *Globalization Strategy, Strategic Development, Strategic Direction, Management Competencies, Going Global Actions, Thai firms*

## 1. INTRODUCTION

The forces of the globalization have elevated the traditional boundaries and made it possible for businesses on the resources, information and technology to contribute and synergize from all around the world. Both benefits and costs from globalization effects have caused firms to adapt their strategies (Jones, 2002; Knight, 2000). The global market opportunities enable firms to access worldwide resources and expand into many new foreign markets; thus, enhance firm international performance (Jones, 2002). Oppositely, global market threats can reduce firm outcomes due to an increasing number of competitors and an intensity of competition (Eng, 2001; Geyer, 2003; Hammond and Groose, 2003; Jones, 2002). How to adopt and implement this world trend and development opportunity and promote the global competitiveness to meet this globalization challenge has become one of the most important tasks for executives at present (Chang and Lin, 2005). Firms that respond to these trends have been found to improve their performance (Knight, 2000) and have to act swiftly and effectively in formulating an strategy in order to keep staying in business (Ng and Li, 2003). An appropriate strategy will affect firm's internalization level as business unit's financial and non financial performance (Wan and Hoskisson, 2003). For instance, a business's global market participation can reduce the risk associated with an individual market, while its integrated competitive moves can help leverage its competitive position across the markets (Palpacuer and Parisotto, 2003). Product standardization and co-ordination and concentration of value-adding activities can lead to significant economies of scale and improved profitability (Czinkota and Ronkainen, 2005; O'Higgins, 2003; Palpacuer, 2006; Tolbert et al., 2002).

One of the most critical research issues in international business is the need to better understand how to utilize strategies in globalization era, as much discussion of globalization effect at the moment is essentially descriptive and ad hoc. Although many scholars have often discuss on the effects of globalization on firm's performance, a review of related literature reveals that empirical work on such factors influencing globalization level is still limited (Clougherty, 2001; Eden and Lenway, 2001; Oxley and Schnietz, 2001). Since the effects that strategy developments have on globalization are mostly under explored, this study is designed to find out the relationships between the strategy components and level of globalization in the organizations. Hence, investigating the magnitude and directions of this relationships will help us gain a better understanding about the directions of the effects, and determine appropriate strategies to better manage these effects and help firms stay competitive in a globalizing era.

## 2. LITERATURE REVIEW

### 2.1 Globalization and firm responses

Due to the emergence of global market opportunities and threats evoked by globalization, firms have been forced to respond quickly to those effects, thus, have to adapt their organizational strategies, structures, and competencies (Garrette, 2001; Jones, 2002). Firms that appropriately respond to these trends have been found to improve their business performance (Cox and Bridwell, 2007; Knight, 2000). Czinkota and Ronkainen (2005) found that firms will continue their globalization efforts in two significant ways. First, they will pursue economies of scale through standardization and the ability to leverage resources (such as knowledge) across borders. Second, at the same time, globalization will result in significant internal organization changes, especially in terms of the efficiency of organizational competencies and strategies to detect both commonalities and differences, and in terms of securing the best talent and competencies worldwide (Lichtenthaler, 2005; Tolbert et al., 2002). While extending from home to host countries, various external aspects, such as local cultures, regulatory environments and global standards, must all be taken in to consideration (Galbreath (2006); Huggins and Izushi 2008). In all of these areas, corporations meet the situation in which they have to cope with external drivers (i.e. political and economic forces, national identities and cultural difference etc.).

Czinkota and Ronkainen (2005); Palpacuer (2005); Tolbert et al. (2002) proposed major forms of business strategy in response to the dramatic changes brought by globalization include, for example: investments in new technologies, downsizing and reengineering, the formation of strategic alliances and networks, a shift from international and multinational to global, value added activities (e.g. launched new products, extended operation to new territories, outsourcing, engaged in M&A), transnational strategies (e.g. reduction of costs through economies of scale and standardization)

Amongst these various forms of business improvement to manage globalization level, strategy development is considered the most important business trend (Czinkota and Ronkainen, 2005; Kasmal and Iijima, 2002). It is of interest to both academics and practitioners to explore how corporate strategy development helps firms achieve superior international performance (i.e., increasing sales abroad, expanding overseas market and accessing global customer) in the globalization era.

A list of important constructs and definitions of the key concepts in this study for companies involved in international business has been summarized in Table 1.

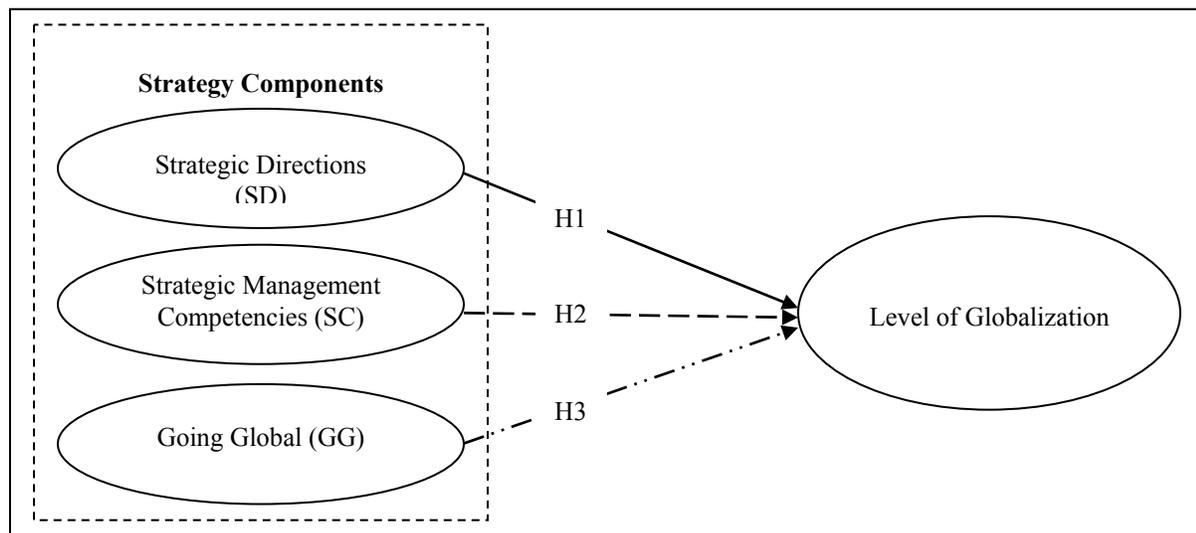
**TABLE 1: CONSTRUCTS AND DEFINITIONS**

Construct	Definition
<p><b>1. Strategic Direction (SD)</b></p>	<p>“The company’s present strategies and current situations to successfully address opportunities by external trends and serve as the foundation for developing corporate strategy related to the achievement of globalization challenging (Westphal and Frederickson, 2002)”.</p>
<p><b>2. Strategic Management Competencies (SMC)</b></p>	<p>“The integral management of strategic competencies that used to build a framework for analyzing the current capabilities and resources available of organization to achieve business strategies (Assen, 2000), and they are also the components of strategic development process in management competencies of the company (May, 1999)”.</p>
<p><b>3. Going Global (GG)</b></p>	<p>“Going global business actions are company’s international activities that emphasis on international business with focusing on similarities, standardization, homogenization, concentration (Keegan and Green, 2000), and coordination on a worldwide basis to create a winning offering on a global business scale (i.e. economies of scale, sourcing advantages, exploiting a global network, and enhancing bargaining (Yip, 2003)”.</p>
<p><b>4. Level of Globalization (LG)</b></p>	<p>“The level or quantity of a firm’s active in international market. As a result of globalization increases, firms face increasing the number of sales abroad, asset abroad, international employees and oversea investments (Harris, 2002; Luo, 2005; PriceWaterhouseCoopers, 2006)”.</p>

**2.2 Conceptual Model and Hypotheses Development**

A conceptual model and hypotheses for strategic direction, strategic management competencies and going global on the effects of level of globalization is proposed in Figure 1.

**FIGURE 1: THE CONCEPTUAL MODEL AND A FULL SET OF HYPOTHESES**



This section will describe the effects of the independent variables strategic direction, strategic management competencies and going global on globalization level. Previous research has investigated these issues as the followings:

### ***Strategic Direction Impact on Level of Globalization***

The firms, which emphasize a rapidly respond to change, combine competitive strategy and consider risk factor (Kendrick, 2004; Noy and Ellis, 2003) within their strategic direction, were more likely to identify and assess new opportunities as an important part of good business practice for their business in high uncertainty of global market (Erdogan and Bauer, 2005; Seibert et al., 2001) and maybe best positioned for success in global business with more efficient operations, higher efficiency, better understanding of the competitive business change and expansion at international level via well-planned and well-executed strategy (Bourlakis and Bourlakis, 2001; Fuller-Love and Cooper, 2000). Based on this theatrical ground, therefore:

**H1:** The more effective strategic direction the significantly higher level of globalization.

### ***Strategic Management Competencies Impact on Level of Globalization***

Competency based approaches have proved to be a critical tool in international business organizations and became more and more important, such as achieve business strategy and performance appraisal (Draganidis and Mentzas, 2006; Hellstrom et al., 2000; Ley and Albert, 2003). This enables the company to gain a high level of globalization over rivals and show that the development competencies are superior to the competition. The recognition of the performances and their capabilities may be useful in maintaining their competitive advantage in international market (Hoffmann, 1999). Consequently, the proposed hypothesis:

**H2:** The higher level of strategic management competencies the significantly higher level of globalization.

### ***Going Global Impact on Level of Globalization***

The going global actions of companies is a key element of the approach to strategic international business (Keegan, 2004) which the focused attention on global issues is a huge challenge in globalization era in order to create competitive advantage, and achieve global position (Morrison and Beck, 2000). Athanassiou and Nigh (2002) found important relationships between international emphasis and firm level outcomes and most enterprises have a global focus in the expansion of their activities and, thus, in the creation of their oversea investment projects (Bitzenis, 2004). As such, hypothesis may be stated as:

**H3:** The more going global the significantly higher level of globalization.

## **3. METHODOLOGY**

This study comprises of identified constructs and formulated hypotheses based on previous studies, together with results from the literature reviews, experts' in-depth interviews and pre-test study conducted in Thailand. A major field survey was conducted with responses from the 163 executives in Thailand. Exploratory factor analysis (EFA) was employed to confirm the measurement items. The multiple regressions technique was chosen to analyze the data and assess the impact of the strategic direction, strategic management competencies and going global on the level of globalization by using SPSS. Strategic direction, strategic management competencies and going global construct in the model exhibited high levels of reliability and validity.

### 3.1 Data collection method

The objectives of this study involved acquiring information from Thai executives on their perceptions of strategic impacts on firm's globalization level. The target respondents were people in top management level of firms, who were responsible for strategy and business development and familiar with the international business function. As a result, a combination of self-administered questionnaire through electronic mail, postal mail and personal hand-in was implemented for this study.

### 3.2 Target population

The target population in this study was defined as all firms in Thailand, which are conducting businesses in international scale. There are classified by three groups of firms. The first group consists of the most recognized companies in Thailand according to international rankings (Forbes, 2008). They consist 13 corporations such as PTT Public Company, Siam Cement, and AIS etc. This group will serve as the benchmark set of corporations. Second and third groups are 212 public and 435 exports firms, which operate mainly in manufacturing, service, energy, and telecommunication. Second and third groups were selected as the comparison population base of this study.

### 3.3 Profile of respondents

The data collected from 163 Thai executive divided into global firms (n = 50), public companies (n=55) and export firms (n = 58). They were mostly president/CEO/managing director of Thai companies, who had worked in the strategy and business development, with 22 percent of overall response rate.

## 4. RESEARCH FINDINGS

Regression analysis is the major statistical tool adopted for the investigation of relationships between variables. The proposed model was tested in stages by multiple regression analysis to examine the effects of strategic direction, strategic management competencies and going global on the level of globalization.

The initial model building began with the three key variables as they covered the main areas of strategy in globalization as shown in Model 1. After looking at the basic set of relationships, the specific variables related to strategic direction, strategic management competencies and going global were focused to study how those variables affected globalization level among Thai firms as proposed in Model 2.

### 4.1 Model 1: Strategy components on Level of Globalization

Regression analysis was conducted for three key strategy components, which are; strategic direction, strategic competencies, and going global. Table 2 shows the model is significant and the independent variables account for three-fifth of variance. Strategic management competencies are negatively and significantly related to the level of globalization. Going global is positively and significantly related to the level of globalization. This result also shows that going global is substantially more influential than strategic management competencies.

**TABLE 2: REGRESSION OF STRATEGY COMPONENTS ON LEVEL OF GLOBALIZATION**

Independent Variable	B	Beta	t	Sig.
Strategic Direction	-.085	-.046	-.460	.646
Strategic Management Competencies	-.403	-.270	-2.571	<b>.011</b>
Going Global	.599	.535	6.542	<b>.000</b>

**Note:**  $R^2 = .213$ ,  $F(3, 163) = 14.358$ ,  $sig. = .000$

### 4.2 Model 2: Strategic Directions, Strategic Management Competencies and Going Global components on Level of Globalization

Regression analysis was conducted with Level of Globalization as a dependent variable and strategic direction (SD), strategic management competencies (SMC), and going global (GG) components as independent variables, as shown in Table 3. These variables explain 40.6 percent of the variance in globalization level. Related to specific variables relating to globalization, customer oriented, global standard, and global performance are positively and significantly related to the level of globalization. This result also shows that global standard has substantially more influence than global performance and customer oriented. Global performance has substantially more influence than customer oriented.

**TABLE 3: REGRESSION OF STRATEGIC DIRECTION, STRATEGIC MANAGEMENT COMPETENCIES AND GOING GLOBAL COMPONENTS ON LEVEL OF GLOBALIZATION**

Independent Variable	B	Beta	t	Sig.
Proactive	-.239	-.172	-1.624	.106
Innovative	-.161	-.136	-1.548	.124
Deliberate	-.043	-.040	-.558	.578
Competitive	.105	.083	1.107	.270
Customer Oriented	.160	.166	2.450	<b>.015</b>
Economic Focus	-.140	-.115	-1.510	.133
Strategy Process	.056	.044	.321	.749
Competitive Capabilities	-.055	-.038	-.355	.723
Organizational Design	-.115	-.086	-.747	.456
Global Projects	-.002	-.003	-.024	.981
Global Standard	.504	.481	4.218	<b>.000</b>
Global Knowledge Management	-.032	-.030	-.275	.784
Global Partnership	-.013	-.015	-.151	.880
Global Performance	.359	.376	5.264	<b>.000</b>

**Note:**  $R^2 = .406$ ,  $F(14, 163) = 7.222$ ,  $sig. = .000$

## 5. DISCUSSION

From the conceptual model presented, three hypotheses were developed and tested in this study. The results of hypothesis testing are summarized in Table 4.

**TABLE 4: SUMMARY OF HYPOTHESES AND RESULTS**

Hypothesis	Expected sign	Result	Indicators ( $\beta$ )
H1: Strategic Direction will significantly affect level of globalization	+	Not Supported	-
H2: Strategic Management Competencies will significantly affect level of globalization	+	Supported	-.270
H3: Going Global will significantly affect level of globalization	+	Supported	.535

The results show that there were two relationships between independent and dependent variables were significant. Two constructs, namely strategic management competencies (SMC) and going global (GG) showed statistically significant affects on the level of globalization in Thai firms. Relationships of another construct, namely strategic direction (SD), were rejected in this study. These findings show that H1 is not

supported, H2 is supported, and H3 is also supported with stronger relationship to globalization level as following details.

### **5.1 Hypothesis 1: Strategic Direction will significantly affect Level of Globalization**

This hypothesis is not supported. Both multiple and logistic regression analysis indicate no statistically significant influence of strategic directions on the globalization level. This is rather unexpected because Thai executives who are highly experienced in international business are likely not to recognize and emphasize that strategic direction influences the company's globalization level. This finding contradicts the review of the literature, which states that the firms emphasizing a rapid response to changes and are competitive within their strategic direction, are more likely to identify and assess new opportunities as a part of good business practice in a highly uncertain global market. These business actions maybe best positioned for success in global business with more efficient operations, and understanding of the dynamic of changes in business and expansion at international level via well-planned and well-executed strategies (Bourlakis and Bourlakis, 2001; Erdogan and Bauer, 2005; Fuller-Love and Cooper, 2000; Kendrick, 2004; Noy and Ellis, 2003). It is important to note that this study is conducted amongst Thai executives from predominantly domestic-focused companies, slow response to changing market dynamic (Rodsutti & Swierczek, 2002; (Wongtada & Rice, 2008) and it might be lack of global strategic direction with well-planned and well-executed global strategies. Furthermore, the possible explanation is that the Thai executives may not pay enough attention in entering into the world market or internationalized business at the time of data collection as it is in the period of global economic crisis. The find maybe better determined in long run once global economic crisis is recovered.

### **5.2 Hypothesis 2: Strategic Management Competencies will significantly affect Level of Globalization**

Hypothesis 2 is supported. This finding indicates a statistically significant and negative influence of strategic management competencies (SMC) toward level of globalization (LG). This is a surprising and fascinating finding, because firms which focus highly on developing company's knowledge, expertise, adaptive capability, and competitive advantage, are more likely to have a low level of globalization. The finding clearly contradicts the review of past literature, as they largely agree that competency-based approaches are proven to be a critical tool in international business organizations, because they enable the companies to gain a high level of business performance over rivals and escalate their development capabilities in global competition (Draganidis and Mentzas, 2006; Ley and Albert, 2003). Furthermore, the feedback from the expert interviews also indicates that the strategic management competencies are strategically important to a firm's international performance. Without these competencies, a firm cannot succeed, especially, when facing high global competition or dramatically changing environments in globalization. The possible explanation for this negative correlation can be that certain aspects of Thai firms, related to the Thai style of management, unlike company from western countries, Thai companies are moving slowly in the transition from being domestic to become more international. This slow transition is related to commercial organizations, which are characterized by industrial associations, that are conservative to short term local interests, and may possess a high level of fear of failure in the family dominant management style (Wongtada & Rice, 2008). Additionally, the nature of protected market positions in Thailand may have caused the lower global competitiveness in Thai firms as compared to most developed countries with highly open and competitive market (ASEAN-UNCTAD (2006); Forbes (2009); IMD (2008); WEF (2008-2009)

### **5.3 Hypothesis 3: Going Global will significantly affect Level of Globalization**

This hypothesis is well supported. The going global actions of Thai executives have a strong and positive relationship with the level of globalization. This simplifies that the higher the perception of global a firm has, the higher level of globalization a firm will be. To increase the globalization level, Thai executives should emphasize on implementing the international business activities in standardization, concentration, and creation of winning offerings via worldwide coordination. These actions will significantly improve the international presence of the company. This finding well aligns with previous studies of Athanassiou and Nigh (2002); Bitzenis, (2004); Keegan, (2004); Morrison and Beck, (2000) that the relationship between firms' international

emphasis and organizational outcomes is important as most global enterprises set their global view to focus on the expansion of their business activity by having a clearly stated vision to be global, improving quality, performing at a global standard, enhancing customer preference, combining global resources and knowledge, and exploiting global network. This finding is also in accordance with expert in-depth interviews that a company's global emphasis impacts the level of globalization, because global emphasis allows companies to set clear global visions and to implant companies' strengths on the international stage in creating a solid path into the global arena.

In addition, the effects of specific related factors in strategic direction, strategic management competencies, and going global constructs on level of globalization were found through the analysis in Model 2 by explaining the impact of strategy components on level of globalization. The results from the relative influence of each component on the level of globalization show that most respondents tend to emphasize in customer oriented, global standard and global performance. This model also finds that industry type and market value are related to level of globalization. These specific variables are listed in Table 5.

**TABLE 5 THE IMPACT OF SPECIFIC FACTORS ON LEVEL OF GLOBALIZATION**

Constructs	Specific factors	Impacts	Influences
			Multiple Regression ( $\beta$ )
Strategic Direction (SD)	Customer Oriented	Customer oriented have a significantly and positively affect on level of globalization	.176
Going Global (GG)	Global Standard	Global standard have a significantly and positively affect on level of globalization	.390
	Global Performance	Global performance have a significantly and positively affect on level of globalization	.344

#### **5.4 The impact of specific variables related to strategic direction and going global on the level of globalization**

This finding illustrates that Thai executives' perception in customer orientation, has a statistically significant and positive effect on the level of globalization. Thai firms did focus on superior customer value by building customer equity and responding to differences in customer needs and preferences. This result is also supported by some empirical studies that customer orientation is a significantly and positively related to business performance. They also suggest the customer orientation is a critical to competitive advantage, profitability and superior business performance (Appiah-Adu and Singh, 1998; Morgan et al., 1998).

From the impact of specific variables related to going global construct on level of globalization in simple regression analysis, perceived global standard and global performance of Thai executives have a strong and positive relationship with globalization level. In other word, the higher the perceived global standard and global performance a company has, the higher level of globalization a company possess. This finding is in accordance with various studies that companies with focus on global standard and global performance by paying concurrent attention to globalization issues and managing or organizing on global basics is a key element of the approach to strategic international business in order to create competitive advantage and achieve global position by increasingly larger portions of the global economy and expecting to result in improving their operating performance, and which, in turn, leads to enhanced international business performance for their firms (Keegan, 2004; Morrison and Beck, 2000).

## 6. IMPLICATIONS OF RESEARCH FINDINGS

The implications on the research findings will be examined in this section starting with theoretical implication and following by managerial implications.

### 6.1 Theoretical implications

A gap in the existing body of knowledge regarding perception of executive in the impact of strategic direction, strategic management competencies and going global on the level of globalization lacks in explanatory models and theory building studies, especially in Thai context. The hypotheses in this study that perceived going global (GG) is the most important factor influencing the level of globalization, then followed by strategic management competencies (SMC) are supported. This study simultaneously provides results to fill existent gaps and makes a contribution to the theory of the impact of strategy component on the level of globalization by supplying knowledge from rather under-explored international firms and settings.

### 6.2 Managerial implications

Globalization has caused significant changes in the business environment and the emergence of global market opportunities and threats. Firms have been forced to respond quickly and focus strategies in terms of emphasis on their organizational direction, competencies and going global perspectives. In Thailand, firms should adapt their strategic focus in specific ways based on the key success factors associated with international performance. The knowledge of strategic management competencies and going global factors influence globalization level of firms, and coupled with effective items of measurement can be useful for organizations to prioritize their resources in terms of manpower, investment, infrastructure, materials, information, and technology, in the most effective and efficient way. For examples, going global is the most important construct that influences level of globalization of firms, and two specific factors influence this globalization level namely **global standard and global performance**.

In order to increase firm's level of globalization, companies must ensure that they emphasize enough in implementing the international business operations with more attention to both external and internal issues by managing and organizing on global basis to support global standard. Increasing global projects to achieve higher global performance will significantly improve the international presence of the company in global market. This strategic approach can be accomplished by working with global partners, investing abroad, and expanding international sales and assets through participating in a global value chain.

Additionally, companies must try to reduce the degree of influence of certain constructs strategic management competencies. In this case, perceived strategic management competencies have a negative impact on level of globalization in Thai firms. This construct is effectively measured by **strategy process, competitive capabilities** and **organizational design**. Strategies could be adopted to improve the international strategic management competencies of firms instead the domestic market focused include gaining more knowledge, expertise and capabilities which have been collectively learned by a firm which enable it to distinguish its performance from global competitors and enhance capabilities to meet global customer needs. Thai companies need global vision, and to benchmark global companies with high international standard. This is the most important of strategic competencies in today global competition.

## 7. LIMITATIONS OF THE STUDY

The research has focused on the executives of only one particular country, Thailand. The findings can be better confirmed from other emerging countries in order to enhance the generalization of the conclusion and strengthened the results obtained. Additionally, the number of respondents in this survey is not high for each firm type. A larger sample size, if possible, would provide better investigation of the strategy impact on level of globalization and firm development better by improving the ability to estimate parameters.

## 8. SUMMARY

The findings suggest that to increase the globalization level, Thai executives should focus on global standards, implementation of the international business operations, working with potential global partners, and increasing global projects to achieve higher global performance. These actions will significantly improve the international presence of the company. This strategic approach can be accomplished by working with global customers, investing abroad, and expanding international sales and assets through participating in a global value chain will help Thai firms reach a high level of competency in international operations. In addition, global benchmarking and global vision will compel Thai companies with high international standard.

The results of this study may advance companies to better plan international business strategy, overseas investment and align their organization's resources to meet global consumer needs. Furthermore, these findings also give valuable input that will help the executives plan and execute appropriate international business activities, and better serve the need of global consumers and relationship with global partners, and, ultimately, increase the level of global business performance. Finally, these findings may also proceed as a good resource for the Thai government agents in order to improve the international trade status and outward FDI.

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## AN EXPLORATORY RESEARCH OF INSTRUCTORS' ATTITUDE TOWARD ERP EDUCATION IN SOUTHEAST ASIA

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### ABSTRACT

*In preparation for a globally diversified workforce, many Southeast Asia countries are providing or will provide ERP courses for their universities' students. This study is a first step of a larger research project that aims to develop appropriate research frameworks for investigating ERP education in today's learning environment. A review of past and present literature related to Technology Acceptance Model, e-Learning models, ERP localization, and ERP usability interface was performed in order to explore factors that may affect instructors' attitude toward ERP education as well as to investigate a possibility relationship between instructors' attitude toward ERP education and learning outcomes (i.e. the technology self-efficacy in ERP system usage). The research methodology was conducted using semi-structured interviews to deeper understand the problem domain. The results are likely to assist university administrators, educators, business students, software vendors, and other stakeholders in understanding attitudes of instructors in Southeast Asia's universities toward the use of the ERP education. Such understanding is expected to result in enhanced course planning and students' learning outcomes. These preliminary results are also likely to assist developing a research model for future quantitative approaches.*

**Keywords:** ERP and Education, Educational Technology, Southeast Asia, TAM, ERP Localization, ERP Usability Interface

### 1. INTRODUCTION

Enterprise Resource Planning (ERP) refers to software solutions or a business concept integrating all departments and functions throughout an organization into linked set of Information Technology (IT) systems for everyone involved with the organization to make decision. In another words, everyone involved with the organization will source, produce, and deliver the company's products or services with the same information in order to diminish redundancies, wasted time, and misinformation (Baltzan and Philips, 2010). ERP software has been implemented by numerous organizations throughout Southeast Asia (Kanthawongs and Kanthawongs, 2010b; Ngai, et al., 2008; Xue et al., 2005). Southeast Asia countries include Brunei, Burma, Cambodia, East Timor (Timor-Leste), Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam (Wikipedia.org, 2010). The economic growth of Southeast Asia has made this region become major target of ERP software vendors (BusinessNewsAmerica, 2010; Linker, 2010; Sawah et al., 2008). Nevertheless, the implementation of ERP systems in Southeast Asian countries are unlikely to follow the same implemented models as in Europe or U.S.A mainly because factors such as labor cost, skill base, research and development capacity, infrastructure, government policies, culture, and language factors of the Southeast Asian countries are significantly different from western countries as well as unconventional among themselves (Kanthawongs and Kanthawongs, 2010b; Robert, 2002; Soh et al., 2000). On one hand, a strong economy, an IT literate population, a strict government regulation, and a diverse ethnic/culture mix support Singapore's ubiquitous computing environment. To illustrate, in 1996-2000, seven public hospitals in Singapore implemented an ERP solution chiefly to resolve the Y2K problem (Soh et al., 2000). On the other hand, in 2002, many Philippine companies had not implemented ERP applications due to "high cost, lack of appreciation of the software, difficulties in application to the local environment, and the question of sustainability." During the Estrada administration, the Philippine economy suffered severely from the Asian financial crisis. For an expensive project like ERP to be implemented by a company depends on the financial viability of the corporation to use it given this larger picture of the economy (Roldan et al., 2002).

The Association of Southeast Asian Nations (ASEAN) has planned to create an ASEAN Economic Community by 2020, a single market in which goods/services, flows of capital, and skilled labor would

flow freely, providing the region success in unifying commercial policies across states (Plummer, 2006). Furthermore, the liberalization in manufacturing sector has been promoted by international/regional commitments such as the WTO, IMF, ASEAN Free Trade Agreement. If a company in the ASEAN region can successfully implemented ERP systems into its operations, the company is likely to be able to compete in the liberalized arena. For instance, "Indonesian trade liberalization in the manufacturing sector was faster than that of Thailand and could catch up with Malaysian trade liberalization" (Widodo, 2008). Organizations such as Communication Authority of Thailand and Telecom Public Company Limited have implemented ERP systems to support their global operations (Longsomboon, 2006). Indonesia stock exchange and Goodyear Indonesia implemented ERP systems in 2004 (Lianto et al., 2010; Lutfiyanti and Mutiara, 2004). Examples of global operations are "currency conversions, time and location adoption, consolidation across diverse accounting standards, multilingual facilities, and legal control" (Rudra et al., 2009). Moreover, the managers of Provincial Electricity Authority of Thailand expressed the efficiency in resource management such as accuracy/ transparency of recorded data and timeliness for decision, using the ERP system (Sajjamao, 2006). Huin suggests an agent-based model for coordinating the management of ERP in small and medium sized enterprises (SMEs) in South East Asia (SEA) region, so SMEs can better manage their ERP systems (Huin, 2004). ERP systems seamlessly support and automate business processes by linking the functional areas and sharing data in real time across the organization "locally, nationally, and globally" (Rudra et al., 2009).

While the major providers of ERP software include SAP (Systems, Applications and Products), Oracle, PeopleSoft and Microsoft, SAP is the German market leader in ERP software (Vluggen and Bollen, 2005). Many business schools are motivated to offer ERP concepts with hands-on experience into their curriculums through the SAP University Alliance Program (SAP UAP) in order to prepare students for job employment. SAP UAP provides full-scale SAP R/3 ERP software and data center support (University Competency Center, UCC). Advantages of this ERP alliance program in higher education are likely to support students' employability, hands-on experience in globalized context, and visualization of business process view. Additionally, instructors/researchers are likely to benefit from training and research opportunities offered through SAP UAP. However, decision makers/instructors/researchers of alliance universities may find disadvantages of the program such as high investment on purchasing supporting systems and difficulties in developing appropriate curriculum materials/ required expertise of ERP-related skills (Kanthawongs and Kanthawongs, 2010a). Although many business schools have struggled in incorporating ERP systems into their curriculum, the ERP skill shortage has reached an all time high especially the Southeast Asia region (Hawking et al., 2007). The implementation of SAP solutions within this region have been growing substantially with a 37% growth in software licenses in 2004 with the strongest growth in India and China (Hawking et al., 2007; Apotheker, 2005). Recently, SAP appoints a regional university alliance manager of the program attempting to strengthen the program; as a result, 170 universities joined the program as of December 31, 2009 (Woo, 2010). The 170 universities of the SAP UAP Asia Pacific Japan (APJ) (2010) include 45 universities in India, 35 universities in China, 22 universities in Australia, 22 universities in Japan, 14 universities in Thailand, 12 universities in Singapore, 9 universities in Philippines, 3 universities in Indonesia, 3 universities in New Zealand, 2 universities in South Korea, 1 university in Pakistan, Macau, and Malaysia (Kanthawongs and Kanthawongs, 2010a).

Therefore, this study explores attitude of the instructors toward the use of SAP software in Southeast Asia's universities. The researchers believe that this study provides an alternative lens and meaningful results in the ERP teaching/learning process. The overarching research question of this study is: what is the attitude of instructors regarding the utilization of the SAP software system in the teaching of business processes in Southeast Asia's universities?

## **2. LITERATURE REVIEW**

In the past, Theory of Reasoned Action (TRA) is a well-known influential attempt to test a general theory of attitude-behavior links. "Attitude is a person's consistency favorable or unfavorable evaluation, feeling, and tendency towards an object, behavior, or idea" (Choi et al., 2007). Then, TRA was developed into Technology Acceptance Model (TAM) to illustrate and predict individuals' attitudes and acceptance of information systems (Davis, 1989). Davis (1989) adapted TAM to predict user's acceptance of information technology and introduced two important constructs, perceived usefulness and perceived

ease of use. He defined perceived usefulness as “the degree to which a person believes that using a particular system would enhance his/her job performance” and perceived ease of use as “the degree to which a person believes that using a particular system would be free of physical and mental effort” (Davis, 1989). Many researchers especially those in Southeast Asia have applied TAM to ERP concepts (EIShinnawy, 2010; Vathanophas & Stuart, 2009; Choi et al., 2007; Roca et al., 2006).

Furthermore, Lopes and Costa (2008) revealed the ERP localization process specifically focusing on the language. The paper clearly shows the differences between European and Brazilian Portuguese. The analysis was created using three translation catalogue files PO extension (English, Brazilian Portuguese, and European Portuguese) from ERP software to identify specific linguistic differences. The linguistic differences according to organizational fields such as Financial, Production, Marketing/CRM and Information System were all also investigated. Although the advantages of global expansion of ERP systems have been stated, researchers have pointed out that language can be one of many factors affecting business in international context for Asian countries (Hawking, 2007). Moreover, customization of the systems has been a problem by the Philippine companies; however, the researcher proposes designing ERP applications locally and customizing them for each particular industry. This would save times and amount of study per industry (Roldan et al., 2002). Wahid and Setyono (2010) reported that end-users were not ready to use the ERP system due to lack of English proficiency.

A comparative study of students’ learning outcome in non web-based and web-based ERP-simulated classroom environments reveals that language barrier is a reason behind low performance in students’ learning outcome. Translation of English language of the ERP-simulated software screens into students’ native language is recommended for a successful simulation (Kanthawongs et al., 2010). In addition, The SAP ERP system suffers from complex user interfaces. The complexity of these user interfaces negatively affects the usability of these systems. Singh and Wesson (Singh and Wesson, 2009) show that need exists to improve the overall usability of ERP systems. Specific methods and criteria for assessing the usability of ERP systems have not been developed or widely published. Several researchers emphasize that easy to use learner interface is a significant factor because students should not spend a large amount of time learning to interact with the technology; otherwise, they would have less time to focus on the lesson (Choi et al., 2007). Most of usability issues with ERP system include navigation to information, “presentation of screen output”, “appropriateness of task support”, “degree of ease to learn how to use the system effectively”, and ease of customizing the system to ensure alignment among the system/user/business processes (Singh and Wesson, 2009). Sun et al. (2008) and Daneshgar et al. (2010) developed and tested an integrated e-learning model between TAM and Expectancy Disconfirmation Theory (EDT) (Oliver, 1980) with six dimensions: learners, instructors, courses, technology, design, and environment. In the learner dimension, *learner attitude toward computers*, *learner computer anxiety*, and *learner Internet self-efficacy* were three identified factors. The factor of *instructor response timeliness* was illustrated in the instructor dimension. *E-learning course flexibility* and *e-learning course quality* were included in the course dimension. The technology dimension factors were *technology quality* and *Internet quality*.

Lastly, *perceived usefulness* and *perceived ease of use* were revealed in design dimension and *diversity in assessment* and *learner perceived interaction with others* in the environmental dimension. The researchers claimed that these factors cover nearly all aspects of e-learning environments (Daneshgar et al., 2010; Sun et al., 2008). Nevertheless, this integrated model was based on e-learning in higher education, and the assumptions of ERP learning environment in higher education are different. As this study emphasizes on exploring attitude of the instructors toward ERP learning, this research will extend previous e-learning models to ERP learning model for higher education. In the context of this study, the authors focus on ERP learning with a specific SAP UAP’s system. SAP has been the frontrunner in facilitating the usage of their software for educational purposes through SAP Education Alliance since 1996 (Bradford et al., 2003). The SAP University Alliance Program (SAP UAP) for higher education has been significantly expensive. The program first charged \$8K including membership, access to mySAP solutions, faculty workshops, and no limits to size or additional costs to the number of the courses of students (Bradford et al., 2003). Moreover, there was a \$7,500 annual fee for the CBA to be a member of the University Alliance in the USA (Becerra-Fernandez et al., 2000). Even though the new versions of SAP solutions such as Application Service Provision (ASP) or the University Competence Centres (Al-

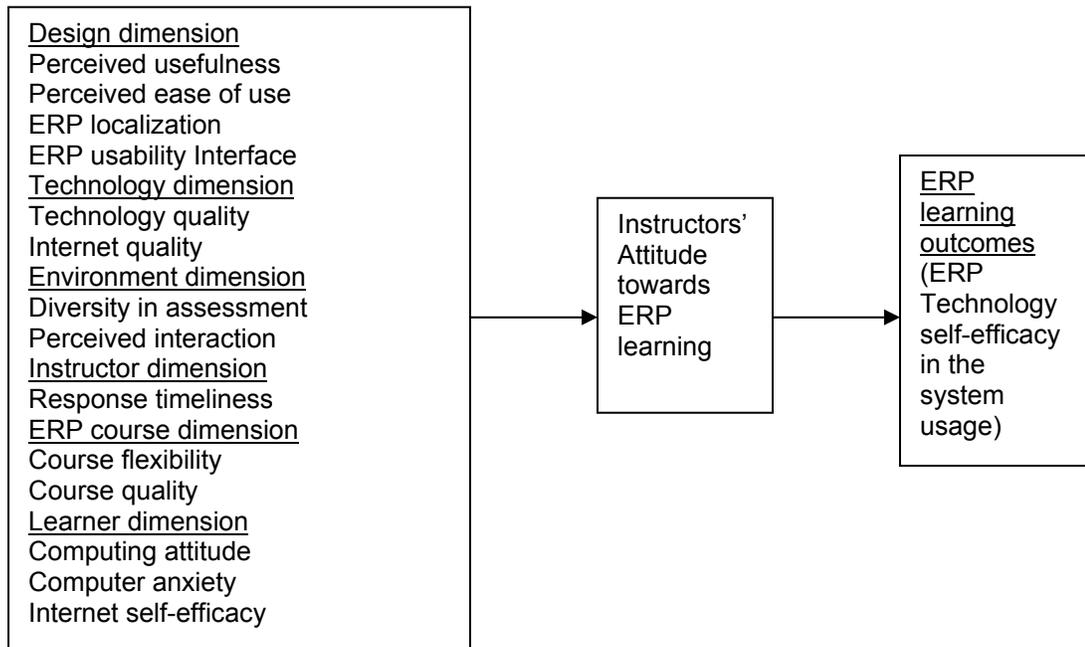
Mashari et al., 2003) and a faculty approach (by Victoria University in Australia) have facilitated the entrance of new universities into the alliance, the costs of joining alliance are still as high as \$43 or up to \$115 dollars per year per student depending on the levels of the packages (Woo, 2010; Hawking et al., 2007). Even though SAP simulator created by Simha R. Magal and Jeffrey Word (Magal and Word, 2009) in partnership with SAP has been offered to instructors in Southeast Asia, the new version of this simulator requires users to be members of SAP UAP. Thus, the costs of this SAP UAP investment are still high for developing countries in Southeast Asia (Hawking et al., 2007). The SAP University Alliance Program has been found in China for many years involving 10 universities. Nevertheless, their universities found it difficult to develop and implement ERP related curriculum because of high investment on purchasing supporting systems, development of appropriate curriculum materials, development of required expertise and ERP-related skills (Bradford et al., 2003). However, in January 2007, the Ministry of Education of the People's Republic of China and SAP China signed an agreement to promote ERP education in Chinese universities (Hawking et al., 2007).

Wahid and Setyono revealed a study identifying misfits in an ERP system implementation in a university context in Indonesia. Various misfits involved with business, information systems, and human resources areas. Significant role of top management support, the importance of stakeholders' involvement, "the importance of well prepared blueprint document, the criticality of considering the context", and the importance of attention to change management process are critical success factors for an ERP implementation in a university context in Indonesia (Wahid and Setyono, 2010). Attitude is identified by the person's subjective probability of the consequence of a particular behaviors, weighted by individual evaluation of those consequences in the theory (Ajzen and Fishbein, 1980). Thus, attitude can cause not only positive outcomes but also negative outcomes such as over-involvement and addiction to the Internet or to video games (Agarwal and Karahanna, 2000). In TRA, an instructor's perception of the ERP learning with the SAP software determine attitude towards using the SAP system for ERP learning, which in turn influences individual behavior of mastering how to use the ERP system.

### **3. METHODOLOGY AND FINDINGS**

This exploratory and preliminary study was conducted using interviews. The purpose was to provide deeper understanding of the problem domain. Discovering/ identifying possible factors as well as validating the proposed factors would further develop conceptual framework. In-depth interviews of 10 instructors of Southeast Asia, including 3 instructors from Philippines, 4 instructors from Indonesia, and 3 instructors from Singapore who attended the SAP University Alliance Academic Conference in Southeast Asia 2010 in July 2010 at National University of Singapore. Additionally, 4 interviews with SAP Senior Manager, Solution Manager, VP of Global University Alliances, and SAP APJ Executive Director were also conducted. These interviews were largely guided by the interview protocol derived from the study's theoretical constructs as presented in Figure 1. For examples, "what is your attitude toward the use of the SAP software in your classroom environment in terms of technology (*technology quality, Internet quality*), design (*perceived usefulness, perceived ease of use, ERP localization, ERP usability interface*), environment (*diversity in assessment, perceived interaction*), ERP learning course (*ERP course flexibility, ERP course quality*), instructor (*response timeliness*), and learner (*computer attitude, computer anxiety, Internet self-efficacy*)?" "Have you ever had problems with your students in terms of lacking English language's proficiency at all? Please explain?" "Is it a wise idea or a pleasant idea to teach with the system? Please explain" "What are your learning outcomes (i.e. your students' confidence or abilities) in using SAP in your classroom environment?"

FIGURE 1: THE INTERVIEW PROTOCOL FROM THE STUDY'S THEORETICAL CONSTRUCTS



Data analysis was processed simultaneously with the collection of data, data interpretation, and narrative report writing, to allow insights gained from analyzing data to be clarified or more data collected. Data were coded for common categories and patterns in order to reduce the information to meaningful categories. Disagreements in coding were discussed and the differences resolved. Evidence of each dimension from the qualitative data of the respondents was interpreted in Table 1.

TABLE 1: ANALYSIS OF QUALITATIVE FINDINGS

<u>Respondents' Comments</u>	<u>No. of respondents mentioning</u>	<u>Theoretical Relevance</u>
<p>Indonesian and Singaporean instructors confirmed that their certified SAP students would get good job offers.</p> <p>"We (instructors) separate between English language ERP classes and Indonesia language ERP classes" (to cope with English language barriers for their students).</p> <p>"Students would get assignments to translate ERP English contents into Indonesian; nevertheless, all ERP exams are in English."</p> <p>"In Indonesia, we do have some ERP English language barrier."</p> <p>"SAP GUI is very old fashion; students need to spend times on every screen when the students first interact with the system."</p> <p>"SAP GUI is terrible, nobody likes it, it is confusing and there are too many screens and too many steps."</p> <p>"SAP screens are too gray."</p> <p>"We hope that SAP web interface would improve."</p> <p>"SAP screens are not easy to use because they are complex and tedious to use."</p>	<p>4</p> <p>2</p> <p>1</p> <p>2</p> <p>1</p> <p>2</p> <p>1</p> <p>1</p> <p>1</p> <p>Total of 15</p>	<p>Availability of Design (<i>perceived usefulness, perceived ease of use, ERP localization, ERP usability interface</i>) from TAM and its extension.</p>
<p>"We (Indonesian instructors) have problems with our bandwidth because we sometimes can upload with our UCC (their data center for SAP software) only 50% (of the system capacity)."</p> <p>"SAP UAP in Indonesia does not work well; we hope it would get better."</p> <p>"Before SAP UAP, we (Indonesian schools) have our own servers, we could manage our own network and scalability, we had no limitations on the number of users, and we can access the system whenever we want."</p> <p>"We have no technology problems in Indonesia."</p>	<p>1</p> <p>2</p> <p>2</p> <p>1</p> <p>Total of 6</p>	<p>Availability of Technology (<i>technology quality and Internet quality</i>) from previous e-learning models.</p>
<p>Filipino, Indonesian, and Singaporean instructors did not state different assessments such as quizzes or oral presentation in their ERP courses.</p> <p>Filipino and Singapore instructors interacted with their students related to the use of the system through discussion forums on regular basis.</p> <p>Indonesian instructors revealed mixed results when interact with the system.</p>	<p>5</p> <p>2</p> <p>Total of 7</p>	<p>Availability of Environment (<i>diversity in assessment and perceived interaction</i>) from previous e-learning models.</p>
<p>"If our (Indonesian) students have problems in using SAP system, they sometimes rely on ERP Internet community to solve the problem."</p> <p>"Instructors (in Singapore) would go in discussion forums online to response to our students. It is important for us to have enough times for our students in ERP courses, so they can learn from discussions Our discussion forums are 24 hours online."</p> <p>"We (Filipino instructors) would response to our</p>	<p>1</p> <p>1</p> <p>1</p>	<p>Availability of Instructor (<i>response timeliness</i>) from previous e-learning models.</p>

students' questions or problems in timeliness with e-mails or blackboard."	Total of 3	
"Our students (Indonesia students) are required to take Business Process Management 1 and 2, which already include the use of SAP software in their first year of the study at our school." "ERP course materials are quite heavy and we (Singaporean instructors) cannot teach every angle in one course."	1  1 Total of 2	Availability of Course ( <i>course flexibility, course quality</i> ) from previous e-learning models.
"Students (in Singapore) have gone through many computer related courses before taking SAP course; therefore, they had been coped with computer anxiety and have Internet/computer self-efficacy."	1  Total of 1	Availability of Learner ( <i>computing attitude, computer anxiety, Internet self-efficacy</i> ) from previous e-learning models.
"It can be mindlessly tedious tasks in using the system since the ERP contents are complex and rich"	1  Total of 1	Availability of <i>instructors' attitude towards ERP learning</i>
"The purpose of teaching SAP is for students to have confidence to compete in the job markets." "For advanced users, they would know how to deal with the system, but for beginners, they would complain that there was too much work load." "Students need SAP certificates to show that they master the use of the system."	1  1  1 Total of 3	Availability of <i>learning outcomes</i> (i.e. <i>technology self-efficacy in ERP system usage</i> ).

Note: The number of respondents mentioning refers to the number of participants who provided one or more of the responses shown in each respective category. Some respondents' responses fit more than one category.

#### 4. DISCUSSION OF FINDINGS

This study provides data in an initial attempt to integrate e-learning models, moving toward the model of ERP learning in higher education in Southeast Asia. Participants rated use of ERP learning modules in terms of Design (*perceived usefulness, perceived ease of use, ERP localization, and ERP usability interface*) both positively and negatively. The respondents' comments in design dimension are consistent with previous researches in TAM and ERP in higher education, ERP localization, and ERP usability interface (EIShinnawy, 2010; Wahid and Setyono, 2010; Singh and Wesson, 2009; Lopes and Costa, 2008; Choi et al., 2007; Roca et al., 2006; Davis, 1989). Then, the four factors in design are likely to be factors affecting ERP learning outcomes. Moreover, the result raised important issue and provided insight how *technology quality* could be a problem in ERP learning in Indonesia, but *Internet quality* may not be an issue in using ERP in SAP UAP. Although no instructors mentioned about a variety of ways in assessing their ERP environment such as quizzes or oral presentation and instructors showed mixed results when interacting with the system, *diversity in assessment* and *learner perceived interaction with others* are likely to be factors in environmental dimension. Many instructors perceived that instructor response timeliness could be an important issue in ERP learning. Interestingly, ERP courses in these countries did not seem to be flexible since students must take prerequisite courses before registering for SAP UAP courses. ERP course materials could be complex. Then, the terms of *course flexibility* and *course quality* may need to further research and revise. Last but not least, Singaporean instructor confirmed that students were unlikely to have problems with *computing attitudes* such as *computer anxiety* and *Internet self-efficacy* since they had gone through many computer related courses before taking SAP courses. Then, *technology quality, diversity in assessment, learner perceived interaction with*

others, instructor response timeliness from previous e-learning models (Daneshgar et al., 2010; Sun et al., 2008) can be additional factors affecting instructors' attitude toward ERP learning. While an instructor showed negative attitude toward ERP learning, there were mixed results related to learning outcomes in terms of technology self-efficacy in ERP system usage (master, confidence, or abilities in using the system). Therefore, there was likely a relationship between instructors' attitude toward ERP learning and ERP learning outcomes in terms of technology self-efficacy in ERP system usage. This relationship is similar to findings from Choi et al. (2007).

## 5. CONCLUSIONS, RECOMMENDATIONS, AND FUTURE WORK

At first glance, the only preliminary interview results of this study may cause some readers to question the value of incorporating TAM, e-learning models, ERP localization, and ERP usability interface into ERP learning. The ultimate question for ERP learning in higher education is how to optimize instructional design, technology, environment, course, instructor, and learner to maximize learning opportunities and achievements in Southeast Asia universities. Specially, the conditions for best promoting ERP learning success have not yet been fully explicated. Therefore, Design (*perceived usefulness, perceived ease of use, ERP localization, and ERP usability interface*), technology (technology quality), environment (*diversity in assessment and learner perceived interaction with others*), and instructor (*response timeliness*) dimensions are likely to be factors affecting instructors' attitude toward ERP learning. Nevertheless, course (*course flexibility and course quality*) may need to further examine. Also, there might be a relationship between *instructors' attitude toward ERP learning* and *ERP learning outcomes* in terms of technology self-efficacy in ERP system usage. This study provides insights for university administrators, educators, business students, software vendors, and other stakeholders to strengthen their ERP education implementations and further improve both learners and educators' satisfaction. Limitations of this study are limited time and resources to interview more respondents from more countries in Southeast Asia. Additionally, this work focuses on metrics from a specific ERP educational program (SAP UAP). The variance in different systems is not further investigated. Not only attitude of instructors, but also attitude of students toward ERP learning is likely to affect learning outcomes. Then, attitude of students in Southeast Asia should be further explored. Future research might incorporate more variables and examine variance across different ERP learning methods.

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**ASSET DEVALUATIONS:  
THE MOTIVATION BEHIND MANAGEMENT DECISIONS  
EVIDENCE FROM NEW ZEALAND FIRMS**

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**ABSTRACT**

*This study investigates the motivation behind management decisions to devalue fixed assets of New Zealand listed companies over the period 1999 to 2003.*

*Prior research on fixed asset write-downs (e.g., Moore, 1973; Strong and Meyer, 1987; Francis et al., 1996; Cotter et al., 1998) were found to be influenced by a company's capacity to absorb write-downs, declining financial performance, and management changes. This study provides no evidence to support the findings of the earlier research. It therefore finds no account of manipulation related to fixed asset devaluations.*

**Keywords:** *Fixed assets; Revaluation; Devaluation; Write-down*

**1. INTRODUCTION**

The revaluation of fixed assets has become a common practice in Australia and New Zealand. Fixed asset revaluations are also common practice in the United Kingdom and the Netherlands, and are permitted in France; they are not permitted in United States, Germany or Japan (Easton et al., 1993). In Canada revaluations were permitted until December 1990 (White et al., 2003). International Accounting Standards No.16 (Property, Plant and Equipment) now allows entities to choose between measuring assets at cost (the cost model) or at fair value (the revaluation model). Why, then, have fixed asset revaluations been allowed in New Zealand and elsewhere? The purpose of undertaking fixed asset revaluation is to provide more relevant information about an organisation's financial position to users of financial statements. In most countries whose accounting rules allow revaluation of assets, however, the decision to revalue assets is optional upon managers' discretion. The considerable inconsistency between the timing, frequency, and methods of revaluation practice raises the question as to whether the "relevance" is the sole reason of companies' asset revaluation decisions (Lin and Peasnell, 2000).

Earlier research (e.g. Brown et al., 1992; Strong and Meyer, 1987; Francis et al., 1996; Cotter et al., 1998; Holgate and Ghosh, 2000) revealed that a firm's decision as to whether or when to revalue fixed assets upwards or downwards could be partially explained by management incentives relating to commercial or political influences. This study attempts to investigate only the underlying management decisions to devalue fixed assets of New Zealand listed companies over the period 1999 to 2003.

The results provide no evidence to support the hypotheses that downward asset revaluations are motivated by a firm's financial capacity to absorb write-downs, declining financial performance and management changes.

The remainder of this study is organised as follows. Section 2 presents the prior literature and hypotheses development. The research design is developed in section 3 while section 4 presents the results of univariate and multivariate tests. Section 5 provides the discussion of the results and the section 6 contains the conclusions.

**2. PRIOR LITERATURE AND HYPOTHESES DEVELOPMENT**

Accounting standards provide companies some flexibility in choosing from alternative accounting methods when dealing with accounting issues that are complex and uncertain. Fixed asset

revaluation is one of the areas that grant such discretion. Traditional financial reports prepared under the historical cost accounting method are criticized for its lack of relevance to users of those financial reports. An asset revaluation modifies original historical costs of assets to current market value, thereby providing a more up-to-date value of a firm's assets to users (Brown et. al, 1992).

Prior studies tend to focus on upward revaluations only. However, in practice, the amount of revaluation can be either increments or decrements. Therefore, downward revaluation should also be considered in conjunction with upward revaluation to provide a fuller picture of New Zealand companies' revaluation practice from an overall perspective (see Seng and Su, 2010, on upward asset revaluations). It is therefore the objective of this paper to investigate only the underlying management decisions to devalue fixed assets. It is necessary to recognise that there are two kinds of asset write-downs. One is the downward asset revaluation (or devaluation) and another is the write-off of the impairment of non-revalued assets directly to a firm's statement of performance.

There has been limited research focused specifically on the incentives of downward asset revaluation. Most prior studies tend to focus on all asset write-down activities, which include both downward asset revaluations and asset impairment write-offs of non-revalued assets. Since asset write-off studies are the only research bases that can be related to the devaluation practice, their findings are assumed to be applicable to this study. Previous studies (e.g., Moore, 1973; Strong and Meyer, 1987; Francis et al., 1996; Cotter et al., 1998) have found that asset write-off decisions are related to asset capacity to absorb write-down, poor financial performance, and management changes.

## **2.1 Capacity to Absorb Write-Down**

In contrast with the upward asset revaluations that reduce debt ratio and restore borrowing capacity, devaluation decreases asset and equity and therefore increases leverage. Cotter et al. (1998) documented that firms with a greater capacity to absorb the financial statement effects of the write-downs are more likely to disclose greater write-downs. Management may take advantage of the low-debt status in that year to absorb the revaluation decrement, and thus avoid reducing the asset base in years with higher leverage ratio. Therefore, it is predicted that there is a negative relationship between a firms' leverage level and their downward revaluation decision.

*H1: Firms with a lower leverage level have greater capacity to absorb asset write-downs, and therefore they are more likely to devalue their fixed assets.*

## **2.2 Declining Financial Performance**

Declining financial performance of a firm can be understood as a signal of associated decline in asset value (Cotter et al., 1998). If management compensation is earnings-based, and if pre-write-down earnings are short of target, management has incentives to shift future write-offs into current periods. The associated decrease in depreciation expense will lead to a higher profit. This argument suggests that a negative correlation exists between pre-write-down earnings performance and write-offs (Francis et al., 1996). Therefore, a negative relationship is predicted between firms' performance and their devaluation decisions.

*H2: Firms experiencing declining financial performance are more likely to devalue their fixed assets.*

## **2.3 Management Changes**

It was believed that new managers and directors have greater incentives than their existing counterparts to write down poorly performing assets because they have no responsibility for the asset impairment that resulted from poor asset management decisions in the past (Weisbach, 1995, cited in Cotter et al., 1998). The devaluation of assets also improves investors' perceptions in terms of the firm's improved performance in later periods (Cotter et al., 1998). Therefore, it is believed that the greater number of management changes in a firm in the review year, the more likely the firm will have a downward asset revaluation in that year (Moore, 1973; Strong and Meyer, 1987; Francis et al., 1996; Cotter et al., 1998). However, empirical results were inconclusive (Fried et al., 1989, cited in Cotter et al., 1998).

H3: *Firms with a greater number of management changes are more likely to devalue their fixed assets.*

### 3. RESEARCH DESIGN

#### 3.1 Sample

The original sample consists of 170 firms listed on the New Zealand Stock Exchange (NZSE) for the financial years 1999 to 2003. This sample will be further refined by a number of exclusion criteria, as follows. First, previous studies of asset revaluation generally exclude companies in certain industries, such as banking, finance, and investment (Brown et al., 1992; Whittred and Chan, 1992). Generally, these companies do not need many fixed tangible assets to support their major business activities. The asset and capital structures of these companies are fundamentally different from industrials, and they may be regulated by industry-specific regulations which could potentially affect their asset revaluation policy (Whittred and Chan, 1992). Second, companies whose annual reports are not available in the data source are excluded from the sample. Third, new companies that provided only one year's annual report during the five review years are also excluded, as no comparison can be done for their revaluation behaviour in other years. The sample selection process is summarised as follows:

Original NZSE Listed Companies		170
Less: Bank, Investment, Finance	35	
Less: No Annual Report Available	16	
Less: Only One Year Report's Available	<u>14</u>	<u>65</u>
Final Adjusted Sample Companies		105

Thus, 105 firms are included in the sample. Over the five financial years from 1999 to 2003, a total of 411 company-years were collected. A single company-year is treated as one case in the study. The group classification as non-revaluer and devaluer during 1999 to 2003 is shown in Table 1.

**TABLE 1**  
**GROUP CLASSIFICATION**

Year	Non-Revaluer	Devaluer	Total (cases)
1999	60	7	67
2000	65	9	74
2001	80	6	86
2002	87	6	93
2003	85	6	102
Total	377	34	411

Firms' annual reports are sourced from the Web site of Datex Services Ltd. (<http://www.datex.co.nz>). That Web site's archives provide electronic versions of the previous five years' annual reports of currently listed New Zealand companies since the 1999 financial year. Information on management changes is collected from the New Zealand Company Register.

#### 3.2 Measurement of the Variables

The dependent variable is the management's decision to devalue fixed assets in any of the years under review. The word devaluation is used interchangeably with downward revaluation. Firms disclose their revaluation (upward and downward) activities in the notes of financial reports, with the net amount of revaluation recognised in asset revaluation reserve in the statements of movement in equity. The dependent variable is represented by D\_N. The variable has two possible values. In any

single review year, if the firm did not revalue assets (N), the value will be 0, and for firms that had a downward revaluation (D), the value will be 1.

### 3.2.1 Independent Variables

The independent variables for downward valuation are the capacity to devalue fixed assets, declining financial performance and management changes.

#### Capacity to devalue

The proxy for the capacity to devalue fixed assets is represented by firms' leverage level. The leverage level is measured by the ratio of total liabilities to total tangible assets (DEBT) prior to the revaluation adjustment. This ratio has been found as one of the commonly used ratios in debt contracts to limit the borrowing ability of a firm (Whittred and Zimmer, 1986; Emanuel, 1989; Law et al., 1993). Intangible assets are excluded from the calculation because they have no collateral value for the debts (Brown et al., 1992).

#### Declining financial performance

The decline in financial performance is captured by the change in return on total assets (ROA) over two years. Return is measured as the net profit before interest, tax, and other extraordinary items, as these items would bias the assessment of a firm's ability in generating profit from normal business routines. DEBT and ROA measures were used in the Cotter et al. (1998) study.

#### Management changes

Cotter et al. (1998) measured the management changes as the number of director, chief executive officer, and managing director changes in a sample year scaled by the total number of directors on the board. The term "changes" was not well explained in their study. Moore (1973) suggested that a management change should be deemed to have taken place if there has been changes involving top management positions, or managers described themselves as "new management." The latter is a rather ambiguous concept for measurement purposes. Therefore, in this study, the net change in management (MGMT) is defined as the number of newly appointed directors to the board or the appointment of a new CEO in the review year. The data for this variable were primarily obtained from the New Zealand Company Register by comparing appointments between years. Some missing data are complemented by information in Directory or Board of Directors obtained from the Datex database.

The summary of the measurement of the variables is shown below.

<i>Dependent Variable</i>	<i>Measured as</i>	<i>Represented by</i>
Revaluation Decision	0, if no revaluation; 1, if downward revaluation	D_N

<i>Independent Variables</i>	<i>Measured as</i>	<i>Represented by</i>	<i>Expected sign of relationship</i>
Capacity to devalue	Total debts/Total tangible assets (before the revaluation adjustment)	DEBT	-
Declining financial performance	Change in profit before interest and tax over two years/Total assets	ROA	-
Management changes	Number of new CEO and director in review year /Number of board and CEO	MGMT	+

Table 2 presents the descriptive statistics of the independent variables.

**TABLE 2**  
**DESCRIPTIVE STATISTICS**  
*(Pooled data from 1999 -2003)*

Variable	N	Mean	Standard Deviation	First Quartile	Median	Third Quartile
DEBT	411	.5173	.4035	.2973	.4831	.6472
ROA	385	-.0016	.6135	-.0500	.0000	.0400
MGMT	411	.0811	.1509	.0000	.0000	.1400

DEBT is the leverage level that is measured by the ratio of total liabilities to total tangible assets prior to the revaluation adjustment. ROA is the return on total assets. The change in ROA over two years captures the decline in financial performance. Return is measured as the net profit before interest, tax, and other extraordinary items. MGMT is the net change in management and is defined as the number of newly appointed directors to the board or the appointment of a new CEO in the review year.

The correlation matrix of coefficients is presented in Table 3.

**TABLE 3**  
**SPEARMAN CORRELATION COEFFICIENTS**  
*(Pooled data from 1999 -2003)*

Variable	DEBT	ROA	MGMT
DEBT	1.000		
Significant (2-tailed)			
ROA	-.072	1.000	
Significant (2-tailed)	.156		
MGMT	.056	.013	1.000
Significant (2-tailed)	.256	.794	

It appears that none of the correlation coefficients is significant at the 0.05 level.

### 3.3 Statistical Tests

Both univariate and multivariate methods are used to test the hypotheses developed above. Univariate methods evaluate the relationships between the individual explanatory variables and the dependent variable. Because most of the variables are not normally distributed, the Mann-Whitney U test was used. The Mann-Whitney U test is used to test for differences in the explanatory variables between two different groups of non-revaluers and devaluers.

A logistic regression is used for the multivariate test. Logistic regression does not rely on assumptions of normality, and it is particularly useful for situations in which the dependent variable is a dichotomous variable.

The general form of the logistic regression model is as follows:

$$Y_i = \alpha_0 + \alpha_1 \text{DEBT} + \alpha_2 \text{ROA} + \alpha_3 \text{MGMT} + \varepsilon$$

Where:

DEBT: Leverage level

ROA: Change in return on total assets

MGMT: Net change in management

$i = 0, 1$  (0, if no revaluation was made; 1 if downward revaluation was made)

$\varepsilon$  is an error term

The subscripts for firm  $j$  and for time  $t$  are omitted here for ease of exposition.  $Y$  represents the effect of accounting choice: zero if the firm chooses not to revalue its fixed assets (i.e., non-revaluer) and one if the firm chooses to revalue downward its fixed assets (i.e., devaluer).

## 4. RESULTS

### 4.1 Univariate Results

The Mann-Whitney U test is performed on the pooled sample. Brown et al. (1992) suggested that the estimation precision is improved by the increase in the pooled sample size, and since observations are pooled across a relatively short period (five years for this study), the non-stationary problem should not be serious for the pooling method. Anderson and Zimmer (1992) asserted that accounting choices are temporally independent in each year, and therefore the pooling method is reliable for research on accounting choice. The Mann-Whitney U test is also carried out on an individual year to provide comparison against the pooling results. Tests on year-to-year samples also provide consistent results with the pooled. For brevity, only pooled results are discussed here.

Table 4 compares the results of the independent variables for non-revaluers and devaluers. None of the explanatory variables of the devaluation decision is found to be significant. The mean rank of ROA for devaluers is lower than that of non-revaluers, but the difference is insignificant.

**TABLE 4**  
**UNIVARIATE TEST: MANN-WHITNEY U TEST**  
(Pooled data from 1999 -2003)

Variable	D_N*	N	Mean Rank	Test Statistics Significance (2-tailed)
DEBT	0	377	203.67	-1.324
	1	34	231.84	.185
	Total	411		
ROA	0	352	193.90	-.522
	1	33	183.35	.602
	Total	385		
MGMT	0	377	207.16	-.788
	1	34	193.16	.431
	Total	411		

\* D\_N = 0 No revaluation made by firms  
D\_N = 1 Downward revaluation made by firms

### 4.2 Multivariate Tests

The results of the logistic regression model for downward revaluation are shown in Table 5. They show that none of the three variables for devaluation was found to be significant. The results of multivariate tests are consistent with those obtained in univariate tests. However, it should be noted that the model's explanatory power is rather low as shown by the pseudo  $R^2$  (Nagelkerke) of .6%.

## 5. DISCUSSION

### 5.1 Capacity to Devalue

There is no significant difference between the leverage level of non-revaluers and that of devaluers. Univariate tests indicated that devaluers tend to have a slightly higher leverage than non-revaluers (see Table 5). This could probably be explained by the reason that highly leveraged firms may suffer from deteriorating performance, and therefore their assets' value may decline. This will be further explained in section 5.2. Francis et al. (1996) argued that major debt holders might be involved in the firm's corporate governance processes, and they may force highly leveraged firms to write down overvalued assets, thus leaving little discretion for management to move the asset revaluation to periods of lower leverage.

In addition, most revaluations in New Zealand were undertaken regularly to comply with companies' revaluation policy (see Table 5 of Seng and Su, 2010). Therefore, in bad years managers of devaluer companies might not have any other choice but to write down the asset value.

**TABLE 5**  
**MULTIVARIATE TEST: LOGISTIC REGRESSION**

Variable	Expected sign	Coefficient	Standard error	Wald-statistic	Significance level (2-ailed)
Constant	?	-2.468	.298	68.581	.000
DEBT	-	.317	.383	.685	.408
ROA	-	.004	.300	.000	.990
MGMT	+	-.875	1.364	.411	.521
Non-revaluer N =					377 (91.72%)
Revaluer N =					34 (8.28%)
Total N =					411
Test statistics					
-2 Log-likelihood					224.15
Chi-square					.621
Significance level					.431
% correctly classified					91.4%
Pseudo R <sup>2</sup> (Nagelkerke)					.6%

## 5.2 Declining Financial Performance

The average changes in ROA over two years for devaluers are lower than that of non-revaluers, but the difference is insignificant (see Table 5). Therefore, the hypothesis that devaluers tend to experience significantly lower performance is not supported by the results. This indicated that poor performance might not constitute a sufficient reason for firms to undertake devaluations.

## 5.3 Management Changes

The change in senior management was not found to drive the decision to devalue assets in this study. Again, this may be due to the firm's accounting policy and regularity of revaluation. If revaluer managers simply follow the required time interval of revaluation that was specified in a company's revaluation policy, then it leaves new managers little discretion over the timing of the downward asset revaluation.

## 6. CONCLUSIONS

This study examined the fixed asset devaluation behaviour of New Zealand companies during the period 1999 to 2003. It is hypothesized that downward revaluations are affected by companies' capacity to absorb write-downs, declining performance, and management changes.

The results did not support the three hypotheses and thus found no significant relationship between the explanatory variables and downward asset revaluation decisions. In conclusion, the study found no evidence of account manipulation related to fixed asset devaluations.

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## CHANGING THE ENTREPRENEURIAL LANDSCAPE THROUGH EFFECTIVE USE OF CASE STUDY ANALYSIS

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### ABSTRACT

*In most entrepreneurship and leadership courses students use cases about actual companies to practice strategic analysis and to gain some experience in the tasks of crafting and implementing strategy to lead their organization to economic success. A case sets forth, in a factual manner, the events and organizational circumstances surrounding a particular managerial or leadership situation. The purpose of this paper is to look at why case studies are used and recommendations for using them.*

**Keywords:** *Entrepreneurship, leadership, case study, analysis, critical thinking*

### 1. INTRODUCTION

The case method is an effective avenue for sensitizing students and faculty to the complexities and structures of entrepreneurial business organizations and leadership situations. Business cases are one of the most effective and convenient ways to introduce practice into the classroom, to tap a wide variety of experiences, and involve students actively in analysis and decision-making. Cases are not intended as examples of either weak or exceptionally good management practices. Nor do they provide examples of particular concepts. Faculty that utilize case analysis methods are up-dated as to current techniques, successes and failures of business allowing them to stay current.

The case approach to strategic analysis is, first and foremost, an exercise in learning by doing. Cases help substitute for on-the-job experience by (1) giving you broader exposure to a variety of industries, organizations, and strategic problems; (2) forcing you to assume a managerial role (as opposed to that of just an onlooker); (3) providing a test of how to apply the tools and techniques of strategic management; and (4) asking you to come up with pragmatic managerial action plans to deal with the issues at hand. Cases attempt to reflect the various pressures and considerations that professionals of all varieties confront in the workplace. Using complex, realistic open-ended problems as a focus, cases are designed to challenge you and help you develop and practice skills that you may need in your future careers. Cases are also an excellent way to see how abstract principles learned in class are applied to real world situations.

#### **Why Use Cases in Entrepreneurship and Leadership Courses?**

Learn Different Perspectives - Group discussion can help you understand how others might view an issue and what the valid points are. Real-life Scenarios - Cases allow students to apply classroom principles to real situations.

Solve Ambiguous Problems - Few problems in the real world are as clean cut as those in a textbook. Cases can help you develop skills to analyze the more complex problems you may encounter later.

Sort and Analyze Ambiguous Data - Case studies can help you learn strategies for sorting out seemingly unconnected bits of data and organizing them to understand the problem.

Communication Skills - Both group discussion and writing an analysis of the issues can improve your writing and speaking skills.

### 2. CASES REPLICATE REALITY

The case method is based on the principle that learning occurs most when people teach themselves through working on their own problems. You will gain a greater understanding and improve judgment skills when you work through an issue instead of just listening passively to a lecture. Many cases center around an ill-structured collection of ambiguous (occasionally contradictory) facts, opinions, incidents and

documents which you must organize into a coherent whole in order to analyze the problem and provide a viable solution.

You never have all the facts you would like and will have to exercise your best judgment which can be improved by discussion and consultation with others. Experiencing this process can be frustrating and confusing, but it is also practical and realistic. Like any expert, you will approach cases under the pressure of time, on the basis of limited facts and when facing the unknown. You may also be working on a case with other people whose opinions may differ from your own.

### **Common Elements**

Cases come in many shapes and sizes from a simple "What would you do in this situation and so what?" question to an elaborate role-playing scenario in which students must resolve a complex questions based on real-world data and documents. How simple or elaborate a case is depends on what you want your students to be able to do in the course.

### **Benefits of Case Studies**

Many courses use case studies in their curriculum to teach content, involve students with real life data or provide opportunities for students to put themselves in the decision maker's shoes. Some of the primary benefits include:

Real World Context - Not only do students see how the course material applies to the world outside the classroom, but they get to see how data is often ambiguous or not clearly defined in many situations.  
Explore Multiple Perspectives - Cases in which a decision is required can be used to expose students to viewpoints from multiple sources and see why people may want different outcomes. Students can also see how a decision will impact different participants, both positively and negatively.

Requires Critical Thinking and Analysis - Cases usually require students to analyze data in order to reach a conclusion. Since many assignments are open-ended, students can practice choosing appropriate analytic techniques as well. Students Synthesize Course Content - Many cases require students to pull in different analytic techniques and information from different areas of the course in order to provide an effective solution to the problem. In addition, a case assignment can require an initial statement of the facts and techniques used to reach the conclusion.

## **3. RECOMMENDATIONS FOR USING CASES**

There are many ways to use cases. Some instructors prefer to generate open class discussion. Others prefer to assign cases to student teams for oral presentations. Most like to have students write an analysis of the case, often as a final examination. Some other techniques and methods follow. There is no one best case study method for all situations. The following are some of the various case study methods and types available for use.

Case studies include a scenario, statement of the issues or problem(s), and a required assignment.

### **Types of Case Analysis**

#### **Class Case Discussion**

One approach is for the instructor to lead the discussion with penetrating questions and answers. Many strategic management, entrepreneurship and marketing professors like to begin the analysis with a few key questions and hope to get the students to take over the discussion. Some suggested steps for class case discussion:

Read the case over carefully before class. Review financial data, adjusting for inflation.

Define your objectives before entering the class. Identify key points. Organize the class into teams and have them role-play or analyze certain parts of the case and present them to the class.

Begin with basic information. Have a student identify the facts of the case. Request students to describe the firm. Outline in the black or white board key material or points. Under each identify alternatives with pros and cons for each. Force the class to make a decision. At the end of each class, sum up the

discussion and to point out the key learning objectives of the case discussion. Do not to carry a case over to the next class meeting. Students will forget and it will eliminate valuable time for t your next class gathering.

Explain what the outcome was to the students at the end of the case.

### **Student Oral Presentations**

Another approach commonly used with case studies is student oral presentations. Place the students into teams, each composed of three to five people. Each team is the assigned a case to present during the semester. This approach may be used during the second half of the semester instructor chooses to lead open discussion during the first half. It may also be used during the first half instead of open class case discussion if a simulation or project is planned for the second half of the course.

### **Written Case Analysis**

There are at least three approaches to use with written case analyses. One is the comprehensive student report that covers all the issues in the case. A second approach is the short report prepared in response to a specific question. A third approach is the strategic audit that is only a three- to five- page outline for expediency.

### **Grading of Written Comprehensive Case Reports**

The grading of a written and oral comprehensive report is often aided by the use of a case evaluation forms. Items to be addressed in the form or legibility, length of report, organization of report, spelling and use of grammar, effectiveness of writing style, use of references and exhibits, environmental scan assessment, achievement of goals and objectives, strategy formulation, implementation and audit assessment and recommendations. Written assignments can easily be developed using discussion questions and teaching notes for each case.

### **Role Play**

A common type of case assignment in which students are assigned roles to play in a scenario. Some scenarios can include developing a business plan or staging a mock trial; other role play scenarios can involve controversial issues. Role-playing is one way students can express different views in a relatively safe classroom climate.

### **Supporting Data and Documents**

Effective cases assignments typically provide real world artifacts for students to analyze. These can be simple data tables, links to real U R L 's, quoted statements or testimony, supporting documents, images, video, audio, or any appropriate material.

### **Open-Ended Problem**

Most case assignments require students to answer an open-ended question or develop a solution to an open-ended problem with multiple potential solutions. Requirements can range from a one-paragraph answer to a fully developed group action plan, proposal or decision.

Case assignments can be done in teams or independently. Typically, cases are done in teams so that the students can brainstorm solutions and share the work load.

Finally, it is possible to incorporate real world data into other assignments assignment's which are not necessarily open-ended and still realize the benefits of exposing students to realistic situations.

### **Web Search**

Another type of assignment in which students read and analyze authentic Web sites relating a particular issue or piece of course content and develop a synthesized answer at the end.

### **In Tray Diagnosis and Diagnosis the Problem**

This is also known as a complex case, the objective is of this case type is for students to diagnose the underlying problem based on case data. These issues are not easy to distinguish because they are submerged in a mass of data that includes irrelevant material and external issues used as distractions

(external and underlying issues are normally interdependent). This can also be an initial step for cases types in which a final decision is required.

A variant of this type of diagnosis case is the in-tray diagnosis in which students are presented of a number of documents that might be found in their in-trays. Some background information is provided, but learners are given a limited amount of time to determine and record their actions on each of the documents provided. This type of case study closely approximates real life job functions, and can be adapted to a number of professions. The in-tray case study is very useful for improving analytical skills, promoting creative thinking, and practicing decision-making.

### **Jigsaw**

Students are assigned a subsection of a larger topic or case (either in teams or individually), and then are responsible for researching it and teaching or giving their research results to the rest of the team or class.

### **Live**

The material for a live case study comes from events that are occurring at the current time. Usually only a newspaper article is used to provide students with the case study information. The instructor provides questions for thought in order to help begin the discussion. The answers are truly unknown when this case is presented. Only after a few days can the trainee's conclusions be compared with the actual decisions made. This is usually found in a follow-up newspaper article, or industry publication.

Because the information for a live case study is based on current events, it's difficult to plan and write the case study ahead of time (although lesser-known stories can be archived for future use in other types of case studies). When using a live case study, give the students up-to-date factual information from the beginning. A good summary exercise is to compare and evaluate a variety of solutions for the problem analyzed (i.e., comparing hypothetical solutions from the study group that contradict with the actual solutions that have been applied).

### **Pause the Action**

This is similar to the live case study in that an ongoing scenario (e.g. a role-playing scenario) is paused in mid-action and the class is given an opportunity to predict the outcome or suggest solutions. This is also known as a "sequential" case.

### **Create a Case**

Here, learners develop and present a case study to the group. The students can readily identify with this type of case since it is being conveyed (normally) by one of their peers. The advantages of this approach include greater learner involvement and interest, complex and challenging cases. In addition, there is an increased responsibility for students to research and contribute materials for the learning experience and depend less on the instructor who ordinarily presents it all. This type of case study can be used as a final class exercise by using the information presented during the entire course.

Here are some tips for effectively structuring and writing out a case assignment. It is important to make sure the background and assignments are clearly spelled out.

The following outlines some of the methods for developing each element to providing a successful case study analysis based on the above types of cases.

### **Scenario and Problem**

There are several possible approaches to writing a case (Herreid 1999, Davis and Wilcock 2004):

Developing a case based on a news item or research data

Real data set or finding a news item to match your case assignment objectives

### **Scenario**

In many cases, a scenario can be relatively easy to find from news items. Even more helpful, there may be List- servers or Web sites which specialize in monitoring news events in specific disciplines.

What's important is that the scenario present a real-world, complex, open-ended problem with multiple solutions. Many experts also recommend "high emotional impact," but that can range from the highly controversial story to the interesting field assignment.

### **Defining the Problem**

What can be tricky is making sure the issue is fully developed (Herreid, 1998) and matches your course objectives.

Spousal abuse  
Additional issues...

### **Other Role-Play Elements**

For role-playing cases, it may be necessary to define fictional characters, organizations, locales and other elements. If students are asked to all play one specific character (e.g. a judge, scientist, doctor), it is usually recommended that students be able to feel empathy for that character (Ortmeyer 1994, Herreid 1999).

### **Timeline**

If your case is taken from a scenario where events take place (or could take place) over a long period of time, a timeline is recommended, to help students gain a realistic view of the time frames involved. If events occur simultaneously, this should be noted as well (Kardos and Smith 1979).

### **Define the Assignment Criteria**

In order for a case assignment to be effective, it is important that the assignment be integral to your course objectives.

### **Match Objectives**

A case assignment can be structured in any number of ways depending in what concepts or techniques you want the student to extract from the case.

### **Restricting the Scope**

Make sure your assignment is defined to be doable given the amount of time allotted to the case. A paragraph may be enough for a simple case presented in class; more complex results would be expected from a case assignment lasting several weeks.

### **Style Notes - Narrative**

Many experts recommend writing the case as a narrative, almost like a short story, (Herreid 1999, Kardos & Smith 1979) in order to engage student interest. However, there may be instances when a more objective presentation is desired such as presenting clinical reports or official documents. In any case, it is important to find an appropriate format which engages student interest, yet presents the content appropriately. Excessive jargon should be avoided unless it is needed for the case structure.

### **Length**

Experts vary on how much detail is necessary, but it is important that enough material be written so that all the important background and data are included, but short enough so that students are not overwhelmed. A good index or detailed outline can help in assignments where large amounts of case background need to be presented.

### **Sequence of Data & Documents**

In most cases, supporting data and documents are sequenced according to the narrative of the case. If possible, short passages or tabular data can be embedded within the narrative in the appropriate location. For some case types however, documents can be organized out of sequence if the goal is for students to learn to organize and analyze a random collection of documents.

### **Categorize Cases by Level of Difficulty**

It is often beneficial to categorize cases by their level of difficulty. Cases to use early are generally easier to analyze and tend to generate a good level of student interest and enthusiasm. Quantitative analysis is minimal. Cases to use at mid-point are a little more complicated and involve more quantitative analysis. Cases to use late are generally complicated and difficult to analyze. They generally require a lot of quantitative analysis.

There is no “correct” answer to any case. There may be several “good” answers and many poor ones. The purpose of strategic management, marketing and entrepreneurship course discussions should be to help the student to understand the nature of “better” answers, what to look for, how to analyze alternatives, and how to see through the complexities of arriving at and implementing solutions in real organizations. The total number of variables in a real strategy situation is typically beyond the capacities of any one person or group to control them all. Hence, the students should be warned that they should not rely on what a company actually did to be a thorough guide to action. The company may be succeeded or failed – not because of its specific decisions – but they are in the right place at the right time currently. We all know that in a dynamic environment that their continued success will probably be challenged.

### **Additional Guidelines for Preparing Case Analyses**

We never have all the information to make decisions because of unavailability, cost, or time constraints. So, be practical and make assumptions based on the information available. There is no one best solution to a case study. The justification for the students recommended strategies are what are important, not the actual solution or decision that they came up with. No organization can possibly pursue all the strategies that could potentially benefit the firm. One must be realistic. Estimate how much capital will be required to implement what you recommend. Never make generalizations about cases. Be specific by telling what, why, when, how, where, and who. Encourage students to be open-minded and be creative and original. Do not necessarily recommend the course of action that the firm plans to take or actually undertook, even if those actions resulted in improved revenues and earnings.

### **4. SOME ADDITIONAL RECOMMENDATIONS IN STRUCTURING YOUR COURSE:**

Categorize your cases by strategic decision-making process. Establish strategy formulation in the beginning of the course, implementation, evaluation, and control toward the end of the course. There are other types of case studies, but the majority of different case study methods are variations to the above methods.

### **Difficulties for Students Using Case Analysis**

Students may be uncomfortable with open-ended assignments. Many students view education as a collection of well-defined facts that reach a common understanding and assignments as always having a single solution. Students often lack experience with an open-ended problem-solving format in the classroom. If the case assignment is too complex, the material may frustrate students and shut down the very critical thinking skills the assignment may be trying to foster.

If the case assignment is a team assignment, students may need to understand team dynamics in order successfully complete the tasks. A very controversial case could lead to extreme emotional reactions. A firm statement of the facts and rules of etiquette can help reduce tensions.

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# VERIFICATION OF INTEGRITY OF THE ASSESMENT TOOLS USED IN E-LEARNING: EMPIRICAL STUDY

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## ABSTRACT

*This paper reports on a study, which attempts to answer numerous questions regarding impact of an e-learning format on overall quality of educational experience. Specifically, this part of the study explains whether online testing implying an open book format is compromising integrity of assessment by encouraging cheating among students. Statistical experiment utilizing such variables as type of feedback and question randomization proved that cheating during online tests is more of a myth than reality.*

## 1. INTRODUCTION AND LITERATURE REVIEW

At this time of the world wide budgetary crisis leading to major cuts in resources allocated to education e-learning is becoming increasingly an attractive delivery format for training and education. It has been widely adopted by the corporate world as it is extremely cost effective in delivery of internal corporate training (Zhang, D., Nunamaker, J., 2003) in spite of some evident barriers exhibited especially among SMEs (Anderson, R., Wielicki, T., 2010). The same cannot be said about education – especially higher education, where objectives of instructional activities are broader and more complex than objectives of typical training. Also, universities seem to have more problems with incorporating this new technology into an overall strategy and business processes since – ironically – they are more resistant to change (Jones, N., O'Shea, J 2, 2004). This may be a reason for apparent differences between number of online credit courses and degree programs offered by lower tier unaccredited institutions and those fully accredited. Accredited degree programs seem to be much more cautious in adopting e-learning format out of concern about quality of education and requirements of accrediting institutions. Big part of this skepticism is attributed to legitimate questions about reliability of online testing and assessment, especially at the undergraduate level. Specifically, issue of security or lack of it in a web based testing has been preoccupying researches like Adams and Armstrong (1998) leading to numerous software solutions like their Eval program used for testing at undergraduate level.

Hodgins (2002) in his vision paper developed for the American Society for Training and Development (ASTD) emphasized “Assessment and Certification” as one of the main areas where impact of technology on e-learning has to be closely monitored and controlled. Similarly, Dobbs (2002) in his definition of the state of online learning is concentrating on four fundamental obstacles to high quality of e-learning. Number one problem identified by him is a flawed perception that “reading is learning”. He is suggesting that more interaction should be built into the e-learning as well as effective assessment mechanism.

Assessment seems to be an important part of study in the area of designing and evaluating online learning environment like the one proposed by Hoffman and Ritchie (2001). However, its impact on the quality of educational experience is hardly ever measured and assessed in empirical settings.

A series of quantitative studies based on a solid sample of web based students performance has been done in the past shedding more light on the issues of viability of e-learning (see Wei-Fan Chen, 2005).

At the same time some authors warned against Digital Doctrine that greatly overestimates impact of technology on economy and education (see – Albrecht and Gunn, 2000). Some anticipate that dot-com bust could be repeated with disappointments in the field of e-learning, due to irreproducibility of some important components of face to face learning process. This study attempts to continue a trend of verifying myths created around e-learning with statistically sound samples of data.

## 2. METHODOLOGY AND HYPOTHESIS

A sample of 230 students took an upper division undergraduate MIS course, which was delivered fully online using Blackboard LMS – a comprehensive e-learning environment. At the same time another 186

students took the same course with the same instructor and using the same text book but in a web enhanced mode. Web enhanced mode is defined here as a paperless class with all materials, handouts and communication delivered in a digitized form (using Blackboard content), with all tests administered online but with students still participating in a traditional lectures in classroom settings.

The following hypothesis were formulated addressing different dimensions of quality of assessment process:

- Online open book delivery format of quizzes and tests is conducive to cheating and abuse, therefore test scores will be impacted by the type of assessment feedback
- Online open book delivery format of quizzes and tests is conducive to cheating and abuse, therefore test scores will be impacted by the level of questions randomization used in the assessment
- Combined impact of type of feedback and question randomization will cause significant difference in the mean scores on online tests and quizzes due to cheating

### **3. EXPERIMENT DESIGN**

A sample of 416 students took 12 quizzes and 2 tests during one semester upper division MIS course. This means that total number of graded assignments (quizzes and tests) used in this study is equal to 5824. It has been insured that the level of difficulty was uniform for all students by using the same pools of questions, the same textbook and the same time frame for the assignments. About a half of the sample were web based students (online course), which had almost no face to face contact with the instructor and each other. The other half of the sample included students that participated twice a week in a regular lecture, knew each other and benefited from instructor's face to face consultation hours.

#### **3.1. Variables and Treatments**

Blackboard environment provides numerous settings for designing of an online test. Every design could be more or less conducive to cheating, depending on such parameters as:

- time allocated to every question,
- enforcement of sequential way of answering questions (one at a time) versus scrolling page,
- type of provided feedback (just the score, identification of questions missed and the score, identification of question missed and correct answer)
- questions randomization from a larger pool versus the same set of questions

Every combination of these parameters could be used as a statistical treatment. For purpose of this study only two of those parameters were used to create treatments in statistical analysis of scores:

- type of provided feedback and
- randomization

Those treatments represented arrangements under which cheating during an open book online quiz or test could be either very easy or very difficult. A variable that was measured for every treatment was an average score (class mean) on a given test or quiz with specific format. It was assumed that - should students abuse an online format of testing – the mean of scores should consistently drop as we move from “easy to cheat” treatments to “difficult to cheat” treatment. In other words – if there was any abuse of online testing among students, it was expected that difference between the mean scores will be statistically significant as we compare different combined setups shown in Table 2 below.

**TABLE 1. COMBINED SETUPS FOR DELIVERY OF ONLINE ASSIGNMENTS**

<b>SCA-NR</b>	show correct answers (SCR); the same set of questions -NR
<b>DRNA_NR</b>	show missed questions but no correct answer (DRNA; the same set of questions - NR
<b>SCO_NR</b>	show only total score; the same set of questions
<b>SCA-R</b>	show correct answers (SCA); randomized questions - R
<b>DRNA-R</b>	show missed questions but not correct answer; randomized questions
<b>SCO-R</b>	show only total score; randomized questions

It is reasonable to assume that above formats (assessment setups) represent an increasing degree of difficulty in cheating, therefore treatments from the first row to the last may be viewed as a scale of increasing “degree of difficulty in cheating.”

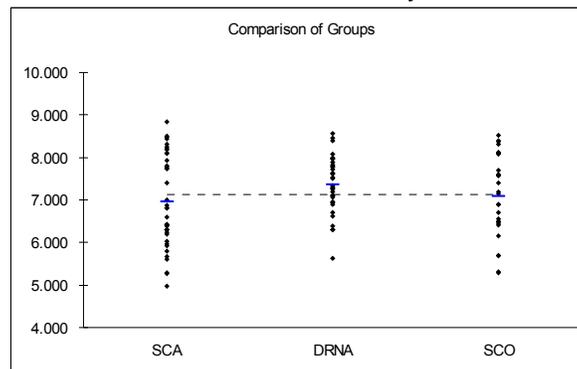
Separate statistical tests were conducted on quiz scores and tests scores due to the difference in settings of the assessment process in both cases. All remaining setup parameters of the assessment process were the same for all collected data: all questions were multiple choice questions, there was always 60 seconds time allocated to every question, and there was always a possibility of answering questions in any order (a scrolling mode enabling student to answer questions in any sequence).

**3.2. Statistical Tests**

Numerous statistical tests have been conducted to verify some of the hypothesis listed above. Primary focus of this analysis was on the issue of searching for statistically significant difference in the mean scores on online assignments administered under different settings, which were more or less conducive to cheating and abuse by the students.

The first test was conducted using One-Way ANOVA F-test for verification of significant difference among the mean scores on assignments administered with different level of **feedback** (treatments). Null hypothesis  $H_0$  about equal means on scores obtain in assignments delivered with different level of feedback could not be rejected even at  $\alpha = .05$  with value of  $F=1.77$  and  $p\text{-value} = .1759$ . Post hoc Tuckey analysis of p-values for pairwise t-tests confirmed this result.

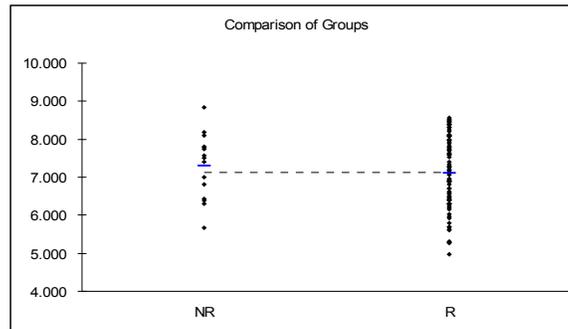
Lack of impact of type of feedback on the mean score is clearly visible on the Fig. 1 .



**FIG. 1. DISTRIBUTION OF MEANS OF SCORES BETWEEN THREE LEVELS OF FEEDBACK**

Similarly, One-Way ANOVA F-test was used for verification of significant difference in the mean scores obtained on online assignments administered with different form of **randomization** (treatments). Surprisingly, mean scores on assignments with and without randomized questions shown even more uniformity. Null hypothesis  $H_0$  about equal means on scores obtain in assignments delivered with and

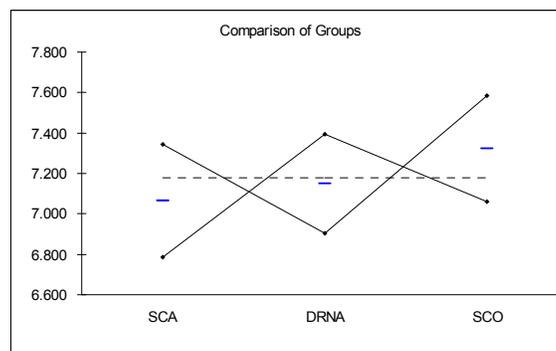
without randomized questions could not be rejected even at  $\alpha = .05$  with value of statistics  $F=0.60$  and  $p\text{-value} = .4406$ .



**FIG. 2. DISTRIBUTION OF MEANS OF SCORES BETWEEN TWO TYPES OF QUESTIONS RANDOMIZATION**

Lack of impact of questions randomization on the mean score is clearly visible on the Fig. 2 above. Post hoc Tuckey analysis of  $p\text{-values}$  for pairwise  $t\text{-tests}$  confirmed this result.

The next test utilized Randomized Block Design experiment with blocks identified as two different levels of **randomization** (R and NR) and treatments as three levels of **feedback**. Its intention was to remove any variance between investigated means that could be possibly caused by the fact that some assignments used randomized questions and some did not. Again, null hypothesis  $H_0$  about equal means on scores obtain in assignments delivered with combined settings of randomization and feedback could not be rejected even at  $\alpha = .05$ . Value of  $F=0.20$  for treatments (level of feedback) and  $F=0.33$  for blocks (randomization) with  $p\text{-values}$  equal respectively 0.83 and 0.62 would clearly indicate statistically solid uniformity of means. Combined and clearly inconsistent impact of feedback and randomization on the means of scores is shown below in Fig. 3.



**FIG. 3. COMPARISON OF IMPACT OF FEEDBACK AND RANDOMIZATION ON MEAN SCORES**

#### 4. PRELIMINARY RESULTS

Preliminary results seem to contradict couple of myths to which academic community often prescribes:

- in general, delivery of quizzes and tests in an online/ open book format does not seem to be conducive to cheating as it does not lead to variations in scores obtained by students under different assessment setups,
- it appears that making answers to questions available to students right after completion of an assessment (treatments SCA) does not have statistically significant impact on average score regardless whether questions were randomized or not,

- randomization of questions when delivering an online quiz or test does not cause statistically significant difference in the means of scores

There are some additional data available to author, which will require some continuing research.

## 5. CONCLUSIONS

An overall conclusion should perhaps be formulated in the following way: an average student taking an online class is less mischievous and interested in cheating as he/she is overworked, disconnected and ill organized to be an effective cheater. Cheating and abusing online testing environment can be easily made very time consuming and difficult for students by a skillful instructor. Randomization of the questions seems to have a minimal effect on mean scores, whereas revealing answers upon completion of the assignment does not increase possibility of cheating.

This study is ongoing and covers period from Fall of 2005 till present. Therefore, it will be possible to reformulate it in the future into longitudinal study and observe possible changes in the mean scores over time.

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# AN ANALYSIS OF THE RELATIONSHIP BETWEEN CRM AND THE SUCCESS OF MICRO E-COMMERCE ENTERPRISES IN THAILAND

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## ABSTRACT

*Customer relationship management has seldom been applied to micro e-commerce enterprises. The purpose of this paper is to explore a link between the role of the customer relationship management and the success of micro e-commerce enterprise based in Thailand. This study applies a qualitative approach with a cross-sectional survey for data collection from 312 Thai e-commerce entrepreneurs. The findings of this study illustrate that customer relationship management (CRM) factors including personalization, responsiveness, customer knowledge, self-service, and effectiveness, and the external factor of government support are positively associated to the success of micro e-commerce enterprises in Thailand.*

**Keywords:** CRM, E-commerce, Micro Enterprise, Entrepreneur

## 1. INTRODUCTION

E-commerce is growing at an incredible pace. The accessibility of the Internet makes electronics commerce a realistic possibility for SMEs. As the amount of business transacted over the web grows, the value of goods, services, and information exchanged over the Internet seems to double or triple each year (Sebora et al., 2009). E-commerce allows a firm to reach a large number of customers, anywhere around the globe. It can dramatically cut or eliminate marketing distribution channels and can facilitate customer services and relationship management (CRM) by interactive, one-to-one communication at a low cost. However, the increasingly importance of entrepreneurship and SMEs as an agent of economic development are supported by many studies both theoretically and empirically (Sebora et al., 2009). However, the role of entrepreneurship in economic development has been extensively studied in the richer Western (i.e., first world) countries, but it could be argued that entrepreneurship is even more vital in developing countries (Morris, Jones, and Nel, 1997). According to a study conducted by Global Entrepreneurship Monitor (GEM) in 2003 discovered that the levels of entrepreneurial activity are very high among the developing countries (Reynolds et al., 2003). Despite this, many of these countries were hit by Asian financial crisis of 1997-98 and the subsequent regional economic slowdown in 2001. Among those Asian developing countries struck by the financial crisis, Thailand was one of the most successful developing countries (Richter, 2006) and it impressively achieved the highest rate of entrepreneurial activity (18.9%) among 37 national economies (Reynolds et al., 2003). SMEs in Thailand, particularly the micro or small ones, could be considered to be crisis shock absorbers that not only could help provide employment during the economic crisis, but could also prepare new entrepreneurs to be ready to run a larger firm when the economy of Thailand recovered (Wiboonchutikula, 2001).

The focus of the present study is on micro enterprises in Thailand. An earlier study on Thai micro and small enterprises (MSE) in Thailand indicates that MSEs are increasingly seen as potential creators of new employment opportunities and additional incomes contributing to improve social and economic well-being, as well as the alleviation of poverty (Wasuntiwongse, 1999). The micro enterprises in this study is defined as companies with less than 5 employees and having a capital of up to B500,000 or USD17,000 (Ibid) which is consistent with the definition used by Thai authorities (ILO, 2000).

In addition, like the Internet phenomenon, CRM cannot be avoided nowadays. Both novelties however have had their share of disappointment and success stories but regardless, these new ways of doing business will gain more popularity and importance for reasons that fall outside the scope of the current article. The current study attempts to answer the following over-arching research question: *In what ways a customer relationship management (CRM) is positively associated to the success of micro e-commerce enterprises in Thailand?*

## 2. LITERATURE REVIEW

Over the past few years, increasing competition and decreasing customer loyalty in different industries had led to the emergence of Customer Relationship Management or CRM, a new management concepts that focus on the fostering of customer relationships. Due to its many great outcomes, namely as sustainable customer loyalty, higher profit and lower operational cost, nowadays, CRM has emerged as one of the key management tools in today's tough competitive environment. According to Christopher et al. (2002), CRM is emerged from the philosophy of relationship marketing by using information technology to enable a business to locate profitable markets. CRM is a business strategy the outcome of which optimization profitability, revenue and customer satisfaction by organizing customer segments, fostering customer-satisfying behaviors, and implementing customer-centric processes. In the current study CRM is defined as an integrated management approach combining business strategy and technology related to identify, attract and retain key profitable customers (Lee-Kelley et al., 2003). By interactively personalizing the service to an individual customer and utilizing customer knowledge and information technology effectively, CRM provides long-term relationship with customers that enhance profitability of the company. Five attributes have been identified for CRM including *personalization*, *responsiveness*, *self-service*, and *customer knowledge*, and *effectiveness*. These attributes are briefly explained below.

The aim of *personalization* of CRM is to create a more effective relationship with the customer. Such customer-oriented philosophy is still a recent concept in CRM and its popularity comes from the fact that consumers behave differently in their dealing with the business and therefore a personalized system will be most effective to respond to the customers' varying needs and behaviors (Kim and Lee, 2009). Previous study shows that personalization is critically dependent on a) firms' ability to acquire and process customer information and b) customers' willingness to share information and use personalization service (Lee-Kelley et al., 2003). Due to the strategic significance of personalization in delivering high quality customer service online, successful firms invest in personalization and information acquisition tools such as CRM systems (Kim and Lee, 2009). However, the concept of *responsiveness* is related to the e-service quality dimension of the CRM that was introduced by Parasuraman et al. (1988). It refers to the ability to deal effectively with complaints and promptness of service. Regardless of the size of an e-commerce company, e-mail responsiveness is often a company's first and most efficient way to create online service quality by entering into personal relationships with the web-based customers and eventually building online customer loyalty (Lee-Kelley et al., 2003). Examples of timeliness of service include: a) mailing a transaction slip immediately; b) calling the customer back quickly; and c) giving prompt service (Parasuraman et al., 1988).

The web and other network technologies are inspiring new approaches to customer service and support (Laudon and Laudon, 2010). These changes have occurred mainly through the development of *technology-based self-service* formats, as a fundamental shift in the nature of service, which enable consumers to perform services themselves quickly and conveniently. Some common applications of automated customer self-service systems include conducting bank transactions through ATM, shipping through the Internet, making reservations and purchasing tickets through kiosks, and using self-scanning systems at supermarkets. However, the customer self-service systems through the Internet can simultaneously cut the transaction cost while increasing their quality (Hwan and Kim, 2007). According to Tseng (2009), *customer knowledge* of CRM is an essential intangible asset for any enterprise to enables them to regroup and create values to gain competitive advantages and success. Dave (2000) pointed out that customer knowledge comprised of familiarity and experience, which both plays important roles in determining customers' expectations towards service quality. Therefore, increased customer interaction is helpful to better absorb customer knowledge and this knowledge must be analyzed and integrated into a knowledge-enabled CRM strategy (Tseng, 2009). In addition, the concept of *effectiveness* refers to the impact of CRM on business processes and activities including analyzing customer needs efficiently, defining new sales opportunities, collectively reducing costs, enhancing the performance of employees, and gaining and maintaining its competitive edge. Effectiveness focuses on how well an organization in achieving its goals and objectives (Keramati, Mehrabi, and Mojir, 2010).

Another major factor identified for the present study is the *government support* which refers to provision of basic infrastructures, training facilities, tax incentives, promotion programs, and protections to nurture the

entrepreneurial activities. Supportive government can nurture entrepreneurship by giving the free market and opportunity to operate under the laws of supply and demand (Scupola, 2003). Restrictive regulations, crippling tariffs, and taxes can disable any entrepreneurial effort (Jeon et al., 2006). Additionally, the concept *success of e-commerce* is another factor that is considered in the current study as the expected outcome of the relationship between the CRM and government support, and micro e-commerce enterprises. Success can be measured by hard (quantitative) and by soft (qualitative) criteria such as sales growth, income, employment trends, return on investment, and satisfaction of customers or business owners (Kim and Kim, 2009). While some research has used financial performance such as key indicators, the non-financial goals or indicators of the owners such as relative growth rate, business stability, customer satisfaction, returning rate of customer, and customer acceptance are utilized in this study because Thai entrepreneurs in general tend to keep low profile and refrain from disclosing information about their earnings.

### **3. METHODOLOGY**

Theoretical literature from various sources was reviewed to design the research framework. In order to develop the questionnaire, initially, a survey questionnaire assessing the constructs in the current study was developed from published scales of previous research. Then, the in-depth interviews were conducted with five e-commerce entrepreneurs from various fields of business including computers, retailing, manufacturing, service, and travel agencies to locate and correct weaknesses in the questionnaire instrument. The feedback and information obtained from the in-depth interviews were used to further refine the questionnaires; some variables were eliminated and some were added. Subsequently, the pilot work was conducted through the use of self-administrative questionnaires in order to verify the meanings of the concept as well as to validate whether or not potential respondents would be able to understand and complete the questionnaires.

The survey design employed in this study is a cross-sectional survey in which data was collected at one point in time from the designated sample. The target population for the research was the founders or the owners of micro e-commerce enterprises in Thailand. The sample selection was based on the criterion that the micro e-commerce enterprises in this study were defined as companies with less than 5 workers. In addition, the firms had to be established for at least two years because it was not possible to gather enough data to consider the success of firms operation in a shorter period of time. According to Jeffcoate et al. (2002), small and new firms were notoriously fragile as they fail easily during the periods of startups.

### **4. RESULTS**

The total of 400 survey questionnaires were distributed to micro e-commerce entrepreneurs in Thailand and 312 of usable questionnaires were returned giving an overall response rate of 78 per cent. The response rate was high due to the fact that the questionnaires were collected right after the respondents completed the form. The demographic profiles of the respondents indicate that women constitute a majority of respondent 54.5% as compared to men 45.5%. Based on age, it appears that most of the respondents are in the early stages of their careers, with the largest group of 36.5% in the 26 to 35 years of age category and another 21% in the 36 to 45 category. They are well educated; 69.6% of them hold a bachelor's degree and 11.5% complete high school levels. Almost sixty percent are single and another 38.8% are married. Nearly 80% of them own trading firms and 16.7% run service businesses. Most of the micro enterprises 31.4% operate by sole entrepreneurs with no workers and another 21.2% hire three workers.

#### **3.1 Reliability and Validity Analysis**

According to Table 1, the overall results of scale reliability analysis achieving alpha coefficient ranged from .727 to .849. For high reliability, a minimum alpha of 0.70 suffices for the study (Nunnally, 1978) and indicates that the summed scales have internal consistency and are reliable. Additionally, factor analyses assessing the eight constructs in the study including personalization, responsiveness, customer knowledge, self-service, effectiveness, government support, and success were conducted. Principal component analysis with Varimax rotation was used in all cases. Table 1 also reports the results of

factor analyses and a factor loading value of 0.50 and higher is regarded as good and significant and the eigenvalues greater than one is considered practically significant for the study (Hair et al. 1998). This indicated that the sets of measures in each construct represented the concepts well and, therefore, confirmed that the measures in the study achieved construct validity.

**TABLE 1: SUMMARY RESULTS OF RELIABILITY AND VALIDITY OF CONSTRUCT**

Construct	n	Mean	SD	N. of Items	Reliability	Validity	
					Alpha's Coefficient	Eigen value	Factor Loading
1. Personalization	312	3.59	.62	4	.835	2.69	.781-.866
2. Responsiveness	308	3.10	.61	5	.817	2.89	.716-.808
3. Customer knowledge	310	3.38	.93	3	.761	2.03	.761-.866
4. Self-service	311	3.21	.70	4	.727	2.21	.608-.808
5. Effectiveness	312	3.68	.63	8	.800	3.35	.600-.757
6. Government support	311	3.65	.55	5	.759	2.56	.631-.752
7. Success	310	3.69	.65	6	.849	3.42	.703-.806

### 3.2 Hypothesis Testing

The correlations between the variables in the study were studied statistically using Pearson's correlation coefficient as depicted in Table 2. The overall results of CRM and government support factors relating to the success of micro e-commerce enterprises are statistically significant with a *p*-value less than 0.01 and a correlation coefficient of .541 to .646. Therefore, the hypotheses posit that the CRM factors of 1) personalization, 2) responsiveness, 3) customer knowledge, 4) self-service, and 5) effectiveness and the external factors of government support are positively associated with the success of micro e-commerce enterprises are supported and these factors reveal positive relationships with the success of micro e-commerce enterprises in Thailand.

**TABLE 2: CORRELATION MATRIX OF VARIABLES**

Variable	1	2	3	4	5	6	7
1. Personalization	1						
2. Responsiveness	.737**	1					
3. Customer knowledge	.523**	.626**	1				
4. Self-service	.458**	.461**	.510**	1			
5. Effectiveness	.576**	.653**	.573**	.558**	1		
6. Government support	.461**	.487**	.505**	.664**	.621**	1	
7. Success	.563**	.646**	.589**	.541**	.611**	.558**	1

\*\* Correlation is significant at the 0.01 level (2-tailed)

## 5. CONCLUSIONS

The study reveals that CRM factors including personalization, responsiveness, customer knowledge, self-service, and effectiveness, and the external factor of government support are positively associated to the success of micro e-commerce enterprises in Thailand. The responsiveness factor constitutes the strongest relationship with the success of micro e-commerce enterprises followed in order by effectiveness, customer knowledge, personalization, government support, and self-service. The findings also illustrate that Thai micro e-commerce enterprises are implementing fundamental CRM practices and realizing the benefits of government support. In addition, they strongly agree that the responsiveness of CRM has the most significant relationship with the success of online store operation. The findings

support all hypotheses and confirm previous studies that establishing a successful micro e-commerce enterprise, the factors of CRM practices and the governmental encouragement must be considered (Scupola, 2003; Kim and Kim, 2009). The results in this study confirm the literature of CRM and it contributes to the scholarly research on CRM and e-commerce entrepreneurship. Future comparative studies of the CRM factors affecting the success of micro e-commerce entrepreneurs on a regional basis such as Thailand and others in Southeast Asia could be conducted to enhance the understanding of their impacts and also to increase the applicability of the findings to a wider geographical distributions of e-commerce entrepreneurs.

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## EDUCATION IN ROMANIA: A SUSTAINABLE DEVELOPMENT PERSPECTIVE

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### ABSTRACT

*During time scholars, politicians, economists and others have recognized that no country could achieve economic growth and development without an efficient educational system. Functional education plays a central role in preparing individuals to enter the labour force and in the same time to respect the environment in order to use efficiently the resources. Generally, education institutions produce not only intellectual, moral and scientific values, but also wider social and cultural values through their mission of teaching and research.*

*There are, however, numerous dimensions of education – sustainable development linkages. Rapid expansion of education has not necessarily been accompanied by rapid economic growth in many developing countries. There are a series of variables to be taken into account when speaking about the connection between education and sustainable development. First, it is very important to see that the educational system influences the way a country develops. Second, the development of a country also influences the educational system. That is way there is necessary to analyze a bidirectional connection, where it is very important to identify the difference between a simple educational system and a functional one. This paper aims to emphasize the role of a functional educational system in achieving a sustainable development.*

*Keywords: sustainable development, education, functional education, economy*

### 1. INTRODUCTION

Higher education is facing unprecedented challenges at the beginning of the 21st century, arising from the convergent impacts of globalization, the increasing importance of knowledge as a main driver of growth, and the information and communication revolution. In this context, the role of education in general – and higher education in particular – in the construction of knowledge economies and democratic societies is now more influential than ever. That is why James D. Wolfensohn said in 2000: *"It is impossible to have a complete education system without an appropriate and strong higher education system... I am not for a moment suggesting that primary education and secondary education are not at the very essence of development... [but that is] not enough. You have to have centers of excellence and learning and training if you are going to advance the issue of poverty and development in developing countries... the key... is higher education, not just on the technological side, but to create people with enough wisdom to be able to use it"*.

Nowadays many of the specialists talk about the need of providing a higher educational system fit for the education for sustainable development (ESD). In what concerns the concept of „education for sustainable development” there are lot controversies. Some are for using the concept of environmental education or of other expressions. Some are analysing the concept from an ethical perspective, such as Jickling, who argues: *“Education is concerned with enabling people to think for themselves. Education “for” sustainable development...or education “for” anything else is inconsistent with this criterion”* (Jickling, 1992: p. 8). The goal of education is the optimal development of people, with an emphasis on autonomy and critical thinking. The analytical framework provided by Yves Bertrand and Paul Valois is useful to critically examine the discourse about *education for sustainable development*. They emphasize the fact that the ESD is related to: *“competitive needs,” “education for productivity,” “human capital,” etc* (Bertrand and Valois, 1992). Moreover, education is foremost perceived as a *“central economic investment for the development of creativity, productivity, and competitiveness,”* and as a transfer process where scientific and technical knowledge is favoured (UNESCO, 1992, p. 14).

On the other hand, education tends to be a prerequisite for any public policies and research studies regarding social sustainability and quality of life (2009, p. 165). From this perspective, education is considered as one of the most important dimensions of well-being. According to recent studies education exercises an indirect influence on sustainability and other quality of life dimensions because it gives individuals the opportunity to enhance specific positive experiences of other dimensions (2011, pp.80). In

the same time, “the positive correlation between low levels of literacy and numeracy and the risk of being unemployed, separated or divorced, physically ill and less engaged in public activities appears to be robust and rather high.” (2011, p.81). Education has a great impact on social sustainability allowing a significant growth in returns for the individual and society as well as an improvement in health status, employment, social connections, and engagement in civic and political life (2009, pp. 46-47). The economic indicators measuring investment in education are usually treated as early warning signals concerning economic and social sustainability. Unlike traditional studies, recent analyses are focused on the results of the educational process consisting in competencies of the students who are educated in schools and universities and not on expenditures and investment in education (2011, p.80). Nevertheless, the intriguing issue of studies on education is not necessary the lack of data but rather the missing relation between education and dimension of sustainability on individual level (2009, p. 47).

## 2. HIGHER EDUCATION IN ROMANIA

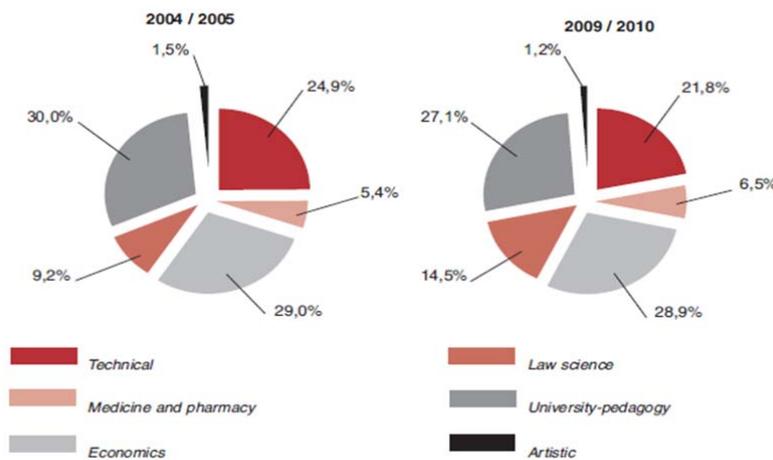
### 2.1 The transition and its shortcomings

A definite proof of social and economic sustainability is provided by the ability of a social system to ensure availability, quality and accessibility to an advanced higher education system. After the fall of the totalitarian regime, Romania has gone through a complex process of transition towards a functioning market economy and at the same time, towards a real democracy. These processes covered all the spheres of economic, social and political life, and in this framework have attempted to register the reforms in the education system. Romania has inherited from the communist regime a system with high standards (stringent entrance examinations to the most coveted high schools and universities), a massive participation (albeit decreasing) and a considerable stress on science and technology, but also characterized by a lack of flexibility (SAR, 2007: p.5).

During the communist era the interest zone in higher education was mainly focused on the technical area, this being the probably a reason for which after 1989 we assisted in the rapid spread of education-oriented towards social sciences and humanities. It still remained a question on how the graduates of higher education are "trained": why the educational system in general, the economical one, in particular, mainly trains specialists with clerk mentality?

Today, we see that the order to align the Romanian education system to those existing in the EU, Romania started to implement the Bologna process; in this regard the tertiary education system of Romania is enjoying positive reviews and a good image (ARACIS, 2009). It is not to be neglected the fact that in Romania, starting with 1990 the higher education as experienced an intense process of massification. Thus, overtime the number of students and graduates of higher education as seen a significant increase compared with the characteristic level of the years before 1990. The chart below shows that the trend of higher education graduates was preserved.

Graphic no. 1: Students in higher education institutes, by specialization groups



Source: National Statistical Institute of Romania (2010), Statistical YearBook of Romania 2010, p. 244, [www.insse.ro](http://www.insse.ro)

According to data presented above, the interest has slightly shifted from technical specializations toward social sciences and humanities. This result is consistent with the structural changes occurring in Romanian

economics where in 2009 share of services in GDP exceeded, for the first time, the threshold of fifty percent. In the same time, we can observe a significant increase in total number of students weighted to population due, on one hand to the increasing number of students and, on the other hand, to a significant decrease in population.

Among the problems of the Romanian higher education system one may include: (1) delays in implementing the national framework of qualifications in higher education; this issue is not only one of Romania, it is somewhat general in Europe; (2) a low rate of participation in training programs and professional development of employees, Romania being next to Bulgaria in the European rankings (1.3% versus 29.2% - Denmark, the highest recorded in Europe). This is hardly encouraging, given that for Romania, the degree of professional employability of the population between 15-64 years was 59% in 2008 compared to the EU27 average of 65.9% (ARACIS, 2009: pp. 6-10); (3) a gap between the external national system of quality assurance, positively evaluated at the European level and the ability of universities to implement the mechanisms of providing and improving the quality in education. According ARACIS many of the Romanian universities do not have active committees for internal quality assurance and face difficulties in providing data and information for the quality certification; (4) reduced funding, compared with the EU Member States. Drastic reductions in public funding are further jeopardizing the quality and sustainability of existing programs and even the survival of entire institutions; (5) a low standard of living, which can be an obstacle to the access to a higher education; (6) poor, inaccurate, incomplete and changing law in the field of education; (7) widening the imbalance between the public and the private higher education system, manifested even by differences in the quality; (8) plagiarism in academia; (9) inability to meet the criteria considered by the international bodies to highlight the quality and quantity of scientific research; (10) transparency and fairness of academia administration.

Unfortunately, many universities operate with overcrowded and deteriorating physical facilities, limited and obsolete library resources, insufficient equipment and instructional materials, outdated curricula, unqualified teaching staff and poorly prepared secondary students. Similar conditions can be found in many of the new private universities.

Starting from just a few of the problems that national education system is facing, one can easily understand why the Romanian universities do not occupy the leading places in international rankings.

According to some estimates, a little over 20% of the universities, in a generic version, and only 5%, in a more stringent version, succeed to reveal outstanding results in research and to produce graduates, which are competitive on the national and especially on the European market (ARACIS, 2009: p.42).

## **2.2 The sustainable development perspective on Romanian education**

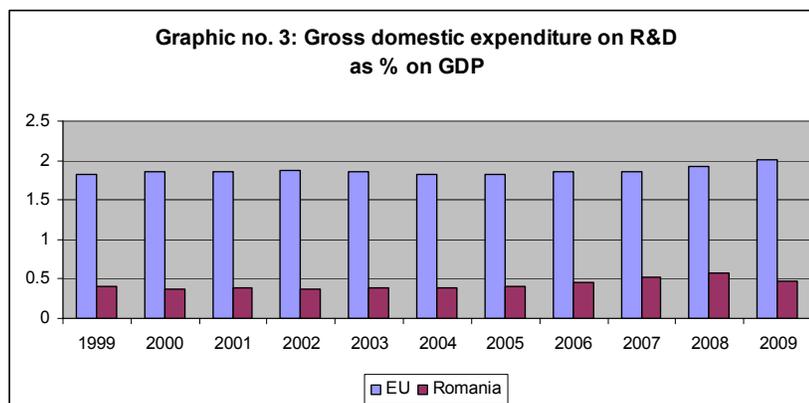
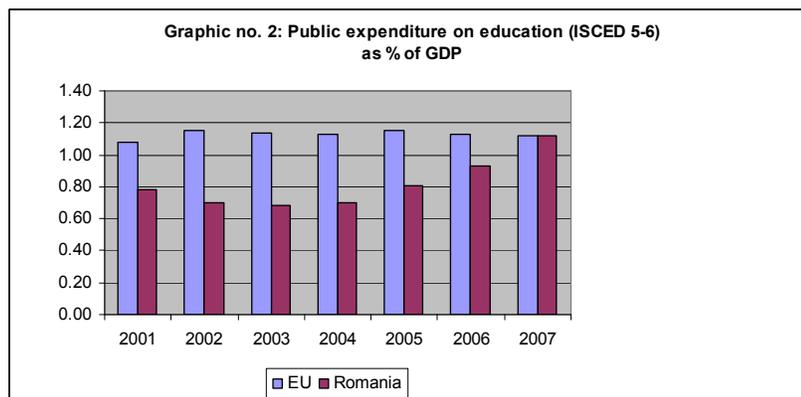
According to human capital theory, investment in human capital is influenced by a number of reasons: the main determinant is the profit or return on what is expected from the amounts invested in human capital. In other words, each person looks for optimal investment in human capital, and this is the point of intersection of the demand curve (which is decreasing and shows marginal benefits) and supply curve (which is increasing and shows marginal cost of financing an additional monetary unit to human capital). From this point of view, in deciding how much is willing to invest in education, every individual will try to estimate the future revenues as a direct result of his skills and competencies. The individual choice between present and future will determine the continuation of studies or, conversely, the choice to obtain immediate income. Nevertheless, estimating future earnings is not an easy task. Thus, in addition, the individual will also try to forecast the non-material benefits of education such as his social sustainability.

In the context of the necessity of adopting an ESD oriented system, study programs launched in most higher education institutions in Romania after the year 2000 aimed training "able to address the way the act updated interdisciplinary education, to subscribing to the global trends of implementing the concepts of sustainable development through the promotion of educational research, ensuring the quality of the education and promotion of sustainable practices in terms of human and natural capital (<http://fondromania.wordpress.com/educatie-pentrudezvoltare/>). Thus is why, in the higher education system, students learn specialized disciplines that can be structured in 3 main packages (<http://fondromania.wordpress.com/educatie-pentrudezvoltare/>): (1) shaping the issues of sustainable development, integrating environmental perspectives, social and economic; (2) deepening the problems of living systems, in conjunction with the challenges of today's environmental climate, economy and society (with emphasis on evolution, adaptation, conservation, sustainable use); (3) didactic and psycho disciplines that shape many complex hypostasis of the teacher, in conjunction with the issue of education for sustainable development.

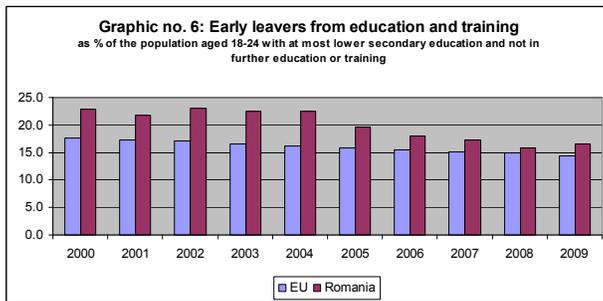
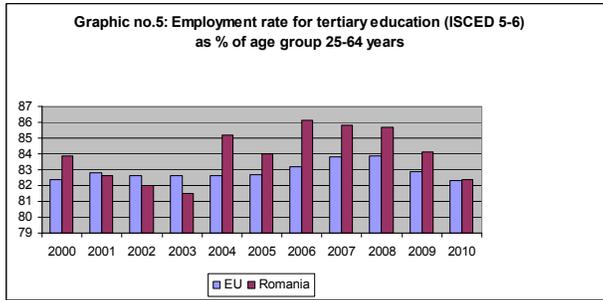
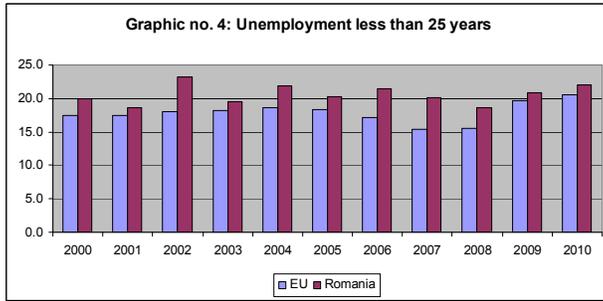
In Romania, like in other countries there exists a serious interest in studying and applying the appropriate measures in order to obtain an educational system fit for achieving a sustainable development, as it is well known that the education has a high intrinsic economic value since the investments in education led to the formation of human capital, which is one of the cause of economic growth (Barro, 1991). According to Stevens and Weale (2003), life quality has substantially increased in the last millennium in most countries of the world, and particularly in European countries, the development of educational field has been contributing to it. This implication of higher education may be seen in Romania, too, although one must take into account the fact that the economic growth was slowed down by a series of factors, such as the economic crisis.

One may observe that for Romania the evolution of the number of students is the same with the evolution of the indices of GDP/inhabitant. There is a connection between the two trends, but one must take into account the fact that the economic growth has different factors which influence it. Also, the connection may be seen in the other way, starting from the fact that there is a bivalent relation between the two trends. When GDP/inhabitant grows, there may be seen an ascendant trend of the number of students as they have more money to pay for their studies. Also, it is well known the fact that the education sector is financed from the GDP.

Thus, it is very important for the political class to realize that the investment in education is one of the solutions for achieving a sustainable economic growth.

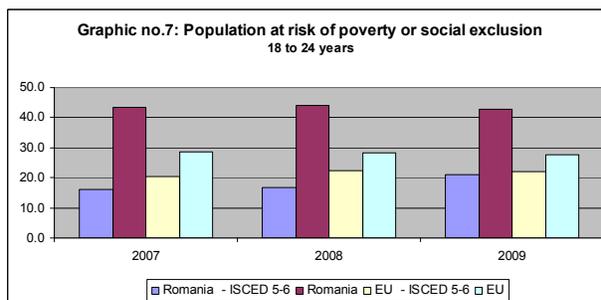


From this perspective, according to EUROSTAT data, although the expenditure slightly increased between 2001 and 2007, overall Romania is investing less than 1% of GDP on tertiary education positioning itself below EU average. To complete the picture one should also take into account the gross domestic expenditure on research and development which shows that in the first decade, Romania invested on average less than 0,5% of GDP while the average EU investment stood at nearly 2% of GDP. These circumstances raise questions regarding the ability of Romania to ensure the proper background for tertiary education, research and development, which are paramount for sustainable development



On the other hand, Romanians have rapidly understood that their own expenditures and time spent on education might be the proper solution for quality of life improvement. As data show, the employment rate for tertiary education graduates is above 80%, more than the same indicator for EU. However, Romanians are less willing to enrol in tertiary education than the average European, as the percentage of Romanian early leavers from education is 3 points higher than European average. The situation is rendered worse by the fact that the unemployment of those less than 25 years old is over 20% in Romania while the average EU is 18%.

Nevertheless, a benchmark for sustainable development was set up through Europe 2020 strategy which approaches social sustainable development by analyzing the population social exclusion and risk of poverty. According to this indicator, it becomes clear that tertiary education especially is a suitable means to avoid risk of poverty and social exclusion. As showcased by observation between 2007 and 2009, in the case of Romania less than 20% of population aged between 18 and 24 years who graduated or attends tertiary education is exposed to risk of poverty, while more than 40% of the opposite category is prone to the risk of poverty.



### 3. CONCLUSIONS

Although, one can notice significant progress in Romanian higher education sector, from the sustainable development perspective there are still some important issues which need future attention. First of all, a more appropriate financing system is required both in terms of amounts spent on education and allocation. Although at one point before the economic crisis Romania succeeded to get close to European average in terms expenditures on tertiary education as percents of GDP this trend did not last enough to ensure a significant impact on social sustainable development.

Second, the consistent correlation between tertiary education and sustainable development requires that the educational system should be improved if a real compatibility is reached between the two markets, the educational and the labor market.

Last, but not least, the importance of the teacher/instructor able to transmit onward the core of various sciences through the use of 21<sup>st</sup> century methods and technologies is not to be disregarded. The human factor is not the only most important variable in the teaching-learning process, but also the ensuring of proper funding for teaching resources as props in the educational process and for the suitable training of future teachers. Observing the EU standards and recommendations, it becomes of considerable importance for Romania to overcome several pitfalls on its way to becoming an asset to overall European education: competitive from the point of view of international comparison, improved educational management and quality assurance, increased financial support from a variety of funding sources. These essential criteria presuppose important changes in the Romanian educational system as a whole, from a bottom-up approach, if the country is to align itself to EU and global standards in education.

#### ACKNOWLEDGEMENTS:

This work was cofinanced from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/89/1.5/S/59184 „Performance and excellence in postdoctoral research in Romanian economics science domain”.

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## **MARKETING STRATEGIC PLANNING: CONTRIBUTING FACTOR TO PUBLIC SECTOR PERFORMANCE**

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### **ABSTRACT**

*This paper highlights, on one hand, the need for Romanian public institutions to align to the European unique market requirements and to increase their competitiveness, and on the other hand, the special role of strategic marketing planning in achieving these goals. The study aims to reflect also the strategic marketing planning process and its particularities within Romanian public sector.*

**Keywords:** *marketing, strategic planning, public sector, competitiveness, Romania*

### **1. INTRODUCTION**

The emergence of public services and increasing their role in the national economy were the real challenges for the science of marketing and management and also for professionals in the field. Romania's social and economic reality show many problems in public services, which leads to a low degree of customer satisfaction.

Public institutions, especially those in local government, face a high flow of customers, a high rate of visiting and a continuous pressure of the applicants. A direct consequence of this overstressing lies in the allocation of most resources for current activities rather than institutional development. Therefore, customers are not satisfied with the performance of civil servants, but in a relatively small extent. Also, the atmosphere in public institutions, the work organization and the inefficiency of public officials are among the main complaints of the Romanians. In addition, staff in the sector acknowledges weaknesses in public administration in Romania: inadequate remuneration and motivation of employees, bureaucracy, corruption and inadequate legislation. Thus, by implementing strategic marketing planning process in its structures, public companies will adapt to the realities of the Romanian economy and society, while addressing similar structures in European Union countries and other developed countries.

They will respond promptly and appropriately to external changes and diverse interests, their image will improve, the public employees' satisfaction concerning their employment will increase and public services will become much better both in terms qualitatively and in terms of adaptability to customer needs. All these favorable results will lead to increased public sector competition.

### **2. LITERATURE REVIEW**

In marketing-management literature, strategic planning process was given a special importance, as emphasized by all the theories on this subject and issued rules on its implementation in different fields and not finally, by the numerous models that have been developed since the 1960s by specialists such as Ansoff, Steiner, Mintzberg. Strategic planning was the subject of numerous studies showing that companies, which wanted to implement this activity, recorded a bigger success on the market and exhibit superior performance. (Thune, House, 1970). However, such scientific approaches have some limitations related to methodology, which has led experts to pay attention to both theoretical and practical ones.

Thus, strategic planning is approached as a competitive advantage in the subsequent works much better documented. (Herold, 1972; Powell, 1992; Oliver, 2007)

Moreover, in some cases, strategic planning is not optional but mandatory for the business to withstand market (Fiddler, 2007). Also in the international literature, quality is considered the value that defines an organization and establishes the expected performance, creating this way the link between strategic planning and proactive quality programs (Regel, 1998).

On this connection is basing the author Dew (1997) when he says that quality managers should coordinate strategic planning process. Companies that want to succeed must assess the strategic planning process and focus on strategic thinking, a dynamic process that requires constant review of the mission, strategies and operations related to customer needs and market forces (Struebing, 1996). Moreover, according to Bryson (2004), strategic planning has taken off within the public sector, bringing numerous benefits, including: (1) promotion of strategic thinking, acting, and learning; (2) improved decision making; (3) enhanced organizational effectiveness; (4) enhanced effectiveness of broader societal systems; (5) benefit the people involved. The new concept of "market-oriented strategic planning" that was proposed by Kotler (2003), points out also the favorable results of this process, ultimately leading to increased competitiveness. Thus, this concept is the management process of designing and maintaining a viable relationship of correspondence between the objectives, skills and resources of the organization and its changing market opportunities. Strategic planning goal is to shape the economical activities and the company's products so as to achieve the established profits and growth rates.

In support of this idea comes McDonald (2002), who states that it is not possible to plan marketing activities separately from other functions of the company, as marketing planning is the instrument with which the company monitors and controls internal and external influences on its abilities to gain considerable sales, and to communicate what it proposed to carry out.

In other words, according to Sutherland and Canwell (2004), the strategic marketing planning involves the coordination of marketing activities necessary for successful selling of all products from one company. In addition, the arguments in favor of strategic marketing planning are also present in recent works, because the barriers between private and public sector have been eroded. Thus, the performance of public institutions affects the smooth running of private companies and national economies. (Chapman, Cowdell, 1998; Allison, Kaye, 2005; Kotler, Lee, 2007).

Although the concept of strategic planning has been strongly debated in the literature abroad and has been applied both in private and public sectors in highly developed economies, in Romania there have not been conducted marketing research on using this marketing tool in public sector. This fact underlines the originality of the present paper. Its added value consists in presenting the particularities of marketing planning in public sector, referring to the community of policy makers.

### **3. RESEARCH METHODOLOGY AND FINDINGS**

Emphasizing the special contribution of strategic marketing planning to increase the competitiveness of the company, this paper aims to identify the particularities of this process in the public sector. The study reveals the result of a qualitative research, which was conducted among 32 public institutions from Romania, which provide administrative, industrial and commercial public services. The group was formed by using the snowball sampling. The employed method of collecting data is the semi-conducting in-depth interview and the instrument is the interview guide.

The study's objectives are to identify the modalities of adopting strategic decisions, the decision makers' knowledge on marketing plan, how public institutions design, implement and control the strategic marketing plan. First topic revealed that most enterprises providing public services have a marketing budget, and the factors that are taken into account during its preparation are: the costs of buying advertising space; the plan of activities for every department or expected project; the institutional priorities; the marketing and communication objectives; the commercial objectives; the potential customers' revenue; the consumer needs; the community charges; the services in company's portfolio and their share in revenue; the budget of the institution. Each of the factors listed above was noted at least by one public service organization, but the most complex response on the marketing budget belongs to a public transport company. In this response there are reflected many factors, such as: "the traditional rules, that means such as that company can afford", "the actions of previous years, which gave positive results", "the frequency of advertising activities". However, the statement "in general, the previous year budget is indicative and may be modified according to the proposed activities", belonging to the respondent in a public enterprise in economic development field, can be generalized to the whole group examined.

Institutions which do not provide in their budget some money for the marketing activities explain this decision by a rigidity that characterizes the public sector and which requires proof of any expenditure by a favorable and easily quantifiable outcome. As such, in the institution providing environmental protection services, "the communication campaigns are organized by using the budgets of specialized departments". Discussions with decision makers within the public service enterprises have shown that, in statements - at least - most of them attach great importance to strategic thinking, but because of the difficulties and limitations, choices and decisions of this type are not always considered or implemented, and then they focus on tactics. Regarding the typology of plans developed within the analyzed organizations, I have identified some particularities specific to public services.

There are few public companies that have strategic business units and conduct the strategic planning process only at the corporate level. Due to the complexity of the activities they carry and their importance in social and economic life of the nation, establishing a strategic plan is more than a necessity, it is an imposed measure. This step has become mandatory, as all such institutions have approached in time a "strategic vision" and that political factor - whose influence is evident in this situation - can be observed in a favorable way. In about half of public service organizations there is developing a marketing plan, in line with the strategic decisions taken at corporate level. Within these organizations I have identified a few providers whose options, strategies and actions depend to some extent on the strategic plans of ministries and/or other institutions of central or local government. Most public services enterprises implement marketing programs, but without having to scroll all the steps of marketing planning, at the functional level. If public companies are considering developing a marketing plan, it is often designed at the beginning of the current calendar year, or even earlier.

Regarding the second topic, in the interviews conducted, I noticed that about a third of respondents did not have knowledge - at least in theory - on the main stages of the marketing plan and their contents, whether in these public companies there is or is not running a marketing planning process. Also, in some cases I have identified the existence of confusion between marketing objectives and marketing plan steps, on the one hand and between marketing objectives and tactical programs, on the other hand. But few respondents were able to initiate and develop discussion on this knowledge. Other people have shown they know or intuit what is the marketing plan, but only in practice. This shows that those employees were involved in those stages, sometimes the activities even becoming a habit. More so, it is not known with precision the difference between strategic and marketing plan.

According to the third topic, in analyzing the marketing environment, it can be said that most public enterprises did not carry out such activities. Of all the companies analyzed, the state services, utilities, transportation and economic and public development ones have recognized the strong impact of political-legislative environment, but considered this influence as rather unfavorable.

In the cultural institutions there is admitted the importance of social and cultural environment, but respondents in this area did not develop this topic, or they made neutral assessment of the nature of its influence. The majority of respondents do not consider competitors, because they do not exist (example of state service providers), or because the professional relationships between companies with the same type of activity are more collaborative, so to increase customer satisfaction (for transportation companies).

Competition analysis is rather specific for public services providers coming from the private sector. They acquire the necessary data from secondary sources. Sometimes, however, the information about competitors is obtained by "market surveys regionally and nationally conducted". In most analyzed cases, the customers are a vaguely defined entity. Although they claim that they have effective customer database, respondents could not specify their characteristics or criteria used for segmentation. I

Information is rather statistical than qualitative. Other components of the microenvironment - the suppliers of material resources or labor - have been brought in discussions in a very limited extent. Almost all respondents stated that within public enterprises where they are employed, there are known the resources' strengths and weaknesses, but without official actions being conducted in advance for analyzing the internal marketing environment. Public institutions admit acute problem of limited financial

resources, but this deficiency is in most cases compensated by the qualities of staff, or its level of professional training.

In several public service companies there is conducted an internal audit repeatedly, resulting in a permanent and formal assessment of their resources. Although I identified public enterprises that involved in the process of external marketing environment analysis and the assessment of internal marketing environment, the concept "SWOT analysis" has rarely been used. The activity of setting marketing objectives is often neglected because of confusion between these objectives and the corporate ones. In addition, several respondents said that sometimes the marketing goals are not achieved, because the financial resources are reallocated to other units of public service from related fields. An adverse consequence of this has led to the organization's inability to adopt appropriate marketing strategies. As a result, few answers on the typology of the implemented strategies have focused on a description of tactics.

Approximately one third of the interviewed group elaborate marketing plans formally, and one respondent said that the organization is working out a promotional plan. The establishment of the responsible employees for carrying out various activities related to the marketing plan is carried out mostly by the formation of specialist teams, depending on their skills. Work teams can be maintained from one year to another or from one project to another, because in time there have been consolidated favorable working relationships between members and their business partners. Some respondents said that, in general, office managers and marketing organizational structure staff are responsible for the smooth running of these activities. There are also considered the interdepartmental teams, although they are more common in developing the strategic plan.

Two companies have made reference to managing staff in the company ("branch managers, general managers and deputy general manager"), which is responsible for the successful implementation of the marketing plan. Even if within the public enterprises there is not developing a marketing plan, there are employees responsible for marketing activities that take place sporadically. "The synthesis works" - as marketing activities were called by the respondent of one public development enterprise - are in the responsibility of both employees of the institution and members of national and international academia, public institutions and ministries within the same field or related fields. In the institution of higher education, the activities, responsibilities and staff are established in the Senate hearing, and they will be noted in the annual evaluation form of the teachers' work.

Approximately one fifth of the respondents have mentioned in interviews details regarding the indicators used in the control of the marketing plan. Among them there are: (1) "number of passengers", "number of km per passenger" and "number of km per means of transport" (in a public transport company); (2) "market share", "advertising revenue", "number of minutes sold", "rental income" (in the company providing recreational services); (3) "reputation of the brand or service portfolio" (in communications enterprise); (4) "sales volume", or "income per market segments".

Although Romania has exceeded the period of central planning of all activities of production or service, it appears that some public institutions are still dependent on the decisions taken at central government level. Moreover, although some respondents recognize the great importance of the marketing plan - at least at the declarative level - they can not implement certain marketing measures, due to inflexibility of the context in which they operate.

#### **4. CONCLUSIONS AND IMPLICATIONS**

Following the performance of this study, I noticed that public service organizations are implementing some marketing concepts, but not continuously and effectively. The lack of carefully planned marketing activities is primarily resulting from an outdated and erroneous thinking, that public services do not need marketing because they serve social needs and are delivered to the whole society. Also, the facts that public institutions receive funds from the state budget and they are not obtaining profit contribute to the misunderstanding of marketing application in the public sector. Secondly, poor planning and poor coordination of marketing activities carried out within specific marketing structures have limited financial

resources and non-specialist staff. Although there are public service organizations, which develops marketing plan, they really do not see the usefulness of this tool. Moreover, there is a gap and disparities between what was planned and what is running. Also strategic marketing planning, if it is implemented within some public organizations, is not yet a realized process.

Socio-economic development level of a country could not achieve high values without an effective system of public services. Thus, the major role of this sector in the economy also requires attention and professionalism in the business of providing services for the community. One factor contributing to performance in the public domain is strategic marketing planning. This is why the present paper is important for both policy makers and other audiences: practitioners and services beneficiaries.

However, the following research must underline the extent to which public institutions, which succeeded in implementing a strategic marketing plan, can increase their competitiveness. Thus, the limits of the current study can be exceeded.

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***This work was co-financed from the European Social Fund through Sectorial Operational Program Human Resources Development 2007-2013, project number POSDRU/1.5/S/59184 „Performance and excellence in postdoctoral research in Romanian economics science domain”***

# TECHNOLOGY ACCEPTANCE MODEL AND MOTIVATIONAL MODEL CONTRIBUTING TO STUDENT SATISFACTION IN ERP-SIMULATED WEB-ENHANCED COURSE

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## ABSTRACT

*Student satisfaction is a crucial part of the effort to successfully market higher education. This is true given the dynamic increase in ERP course offerings. This study is one of the few attempts to explore students' satisfaction in web-based ERP-simulated learning medium. The model integrates the technology acceptance model and motivational model with an attitudinal variable contributing to student satisfaction in ERP-simulated web-enhanced course. Although the structural model has not yet confirmed relationships among all variables, perceived usefulness may have the highest impact on commitment. There may be negative relationships between perceived enjoyment and commitment, perceived ease of use and perceived enjoyment, as well as perceived enjoyment and attitude toward this ERP learning medium. Further research is recommended.*

**Keywords:** *ERP and Education, Educational Technology, Technology Acceptance Model, Motivational Model, Student Commitment, Student Satisfaction*

## 1. INTRODUCTION

Enterprise Resource Planning (ERP) refers to software solutions or a business concept that automates, integrate, and streamline operations and intra-company processes (Tandon et al., 2010; Magal and Word, 2009). The growth rate of global market for ERP packages has been estimated to be 4.8% annually and will be reach USD 21 billion in 2010 (Hermans and Haytko, 2008). The era of enterprise integration systems development gives light to the needs for graduates who can visualize and align business goals with a technology strategy supporting present and future demands. To remain competitive in educational offerings, higher education institutions would have to provide their business and IT related curriculum to accommodate these demands. Then, gaining knowledge in ERP is important for graduates of business schools today. Furthermore, the 21<sup>st</sup> century information systems programs should focus on business process modeling instead of configuring an ERP software (Andriole and Robert, 2008). Nevertheless, ERP skill shortage is still high especially when many universities have strived in incorporating ERP software and concepts into their curriculums (Hawking et al., 2007). Furthermore, ERP professional instructors with the right skills have been hard to come by and retain (Li et al., 2007; Bologna, et al., 2009). Many universities have not successfully implemented Open Source software or ERP University Alliances (UA) programs into their curriculums. Rooij (2007) showed that institutions had made little progress in the development of policies and procedures for Open Source regulatory compliance and security. Lindoo and Wilson (2010) explained that the implementation of an ERP University Alliances (UA) program failed miserably due to a lack of participation and satisfaction from management teams, technical teams, and students. As a result, the school removed the software. Several researchers suggest that a web-based ERP simulator may be a correct tool to include in business school's curricula, especially if the overall goal is to teach ERP processes as opposed to learning how to use ERP software (Lindoo and Wilson, 2010). Additionally, Kanthawongs et al. found that (2010) business process courses should implement web-based ERP-simulated environment along with teams' class activities in their teaching to replicate its effectiveness. Teachers are reluctant to invest their time and effort if they are not confident that students will find the learning tool acceptable. What causes some students to lose interest or motivation in a class? Therefore, this paper investigates the student satisfaction of a web-based ERP-simulated learning medium in order to understand different drivers impacting satisfaction.

## 2. LITERATURE REVIEW

The Technology Acceptance Model (TAM), developed from Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB), is one theoretical model that attempts to investigate use of computer based technologies, with the primary explanatory variables being *perceived ease of use* and *perceived*

*usefulness* (Davis, 1989; Venkatesh and Davis, 2000). Davis defined *perceived usefulness* as “the degree to which a person believes that using a particular system would enhance his/her job performance” and *perceived ease of use* as “the degree to which a person believes that using a particular system would be free of physical and mental effort” (Davis, 1989). *Perceived usefulness* is a key driver of student satisfaction in online MBA courses (Arbaugh, 2005). Moreover, many researchers has applied TAM to ERP training/ learning (Scott and Walczak, 2009; Choi et al., 2007). Indeed, the web-based ERP-simulated learning environment offers student substantial benefits. Students can access and download lecture materials anytime, anywhere, in or out of the classroom. They can access a wide range of resources and obtain immediate feedback to correct misunderstood materials. If a student conceives the web-based ERP-simulated learning medium to be useful, the student is more likely to have *satisfaction* in using it. *Satisfaction* is a good surrogate for *perceived usefulness* and often used to measure learners’ attitude in computer-mediated learning studies (Chou and Liu, 2005). Thus, the author conceptualizes the student’s attitude toward a web-based ERP-simulated learning environment as the learning satisfaction with the environment – defined as the sum of student’s behavioral beliefs and attitudes that result from aggregating all the advantages that a student receives from using the learning environment. Thus,

H1: *Perceived usefulness* is positively related to *satisfaction with the class*.

Consistent with past studies, the author believes the relationships among other constructs should also exhibit significant strengths. Therefore,

H2: *perceived ease of use* is positively related to *perceived usefulness*.

Moreover, the simulator is a Java-based program running in a browser and is extremely easy to use. Students can click the start button and work through a few simple simulated ERP screens for inputting and/retrieving data. “The simulator instructs the student on what to do, and even prompts with a read highlight on what fields or instruction set they need to click to work their way through the process flow” (Lindoo and Wilson, 2010). Sager and Johnson (1989) pointed out that socialization and satisfaction with superiors are the primary correlates of *commitment*. In web-based ERP-simulated learning environment, students should have more responsibilities placed upon them than traditional face-to-face learning environment. For example, students are required to download course materials, register to use the simulator through the WileyPlus Web site where the simulator is housed, complete pre-defined exercises assigned on a week-by-week basis, complete process simulators, finish web-based and system-graded quizzes, read/study/practice the chapters’ simulator exercises (Lindoo and Wilson, 2010). Students must become active rather than passive learners. Past literature suggests that students with strong *commitment* would be more successful and learn the most in web-enhance courses than those with less motivation (LaRose et al., 1998; Hermans and Haytko, 2008). Thus,

H3: *Perceived ease of use* is positively related to *commitment*.

H4: *Perceived usefulness* is positively related to *commitment*.

H5: *Perceived ease of use* is positively related to *attitude* towards web-based ERP simulator.

H6: *Perceived usefulness* is positively related to *attitude* towards web-based ERP simulator.

The self-regulated learning is necessary for the web-based ERP-simulated learning environment to be successful. Many researchers revealed that student motivation was positively related to perceived student *satisfaction* with the web-enhanced courses (Hermans and Haytko, 2008; Eom et al., 2006). Students who are committed to their learning should be more satisfied with their web-based ERP-simulated learning experiences. Therefore, the following hypothesis is offered:

H7: *Commitment* is positively related to *satisfaction with the course*.

Davis et al. (1992) further adapted the motivational perspectives and added *perceived enjoyment* to explain IT acceptance in workplace. From a motivational perspective, *perceived enjoyment* is defined as “the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated” (Lee et al., 2005). In the web-based ERP-simulated learning environment, most students complete the simulator exercises and end up completing

100% progression on each of the five exercises. Nevertheless, the quizzes can be a little bit challenging. The instructor expects students to run a simulator exercise several times and take notes until they are familiar and comfortable with the process flow. Then, the instructor anticipates that students may enjoy using using/interacting with the system (Lindoo and Wilson, 2010; Kanthawongs et al., 2010). Thus,

H8: *Perceived enjoyment* is positively related to *commitment*.

H9: *Perceived enjoyment* is positively related to *satisfaction with the course*.

H10: *Perceived enjoyment* is positively related to *attitude* towards web-based ERP simulator.

H11: *Perceived ease of use* is positively related to *perceived enjoyment*.

H12: *Attitude* towards web-based ERP simulator is positively related to *satisfaction with the course*.

### 3. METHODOLOGY AND RESULTS

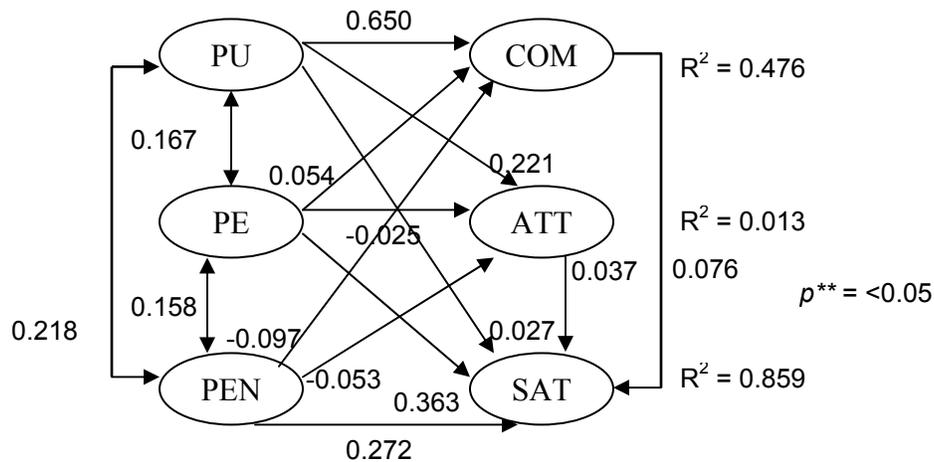
Our study aimed at investigating students' satisfaction of the web-based ERP simulator created by Simha R. Magal and Jeffrey Word in partnership with SAP (Magal and Word, 2009). The WileyPLUS Website houses the simulator. An instructor at a university in Thailand sat up a business process course and assignments. The teacher administered the course materials through the site. Ninety-two senior business computer students in the course were required to purchase access codes in order to access the simulator through Wiley Publisher's representative and a book store in Thailand. Throughout the accessing period, students completed pre-defined exercises assigned on a week-by-week basis. There were five simulators and five quizzes and the simulations were automatically graded as a percentage of completion. A total of 82 usable questionnaires were collected. Among the respondents, 50.6% were female and 49.4% were male. Based on age, 39% of respondents were 22 years old and another 34% were 21 years old. The measures of this research were adapted from past studies (Lee et al., 2007; Hermans and Haytko, 2008). Measurements for perceived usefulness (PU), perceived ease of use (PE), perceived enjoyment (PEN), commitment (COM), attitude (ATT) toward web-based ERP simulator, satisfaction (SAT) with the course were phrased on a five-point Likert scale, from 1 = strongly agree to 5 = strong disagree. All psychometric properties and model testing were examined through the LISREL 8.72 framework, one of the most widely used structural equation modeling (SEM) techniques in IS (Lee et al., 2007; Joreskog and Sorbaum, 1993). The model was estimated using maximum likelihood method. Correlation matrix and standard deviations of the constructs with reliability are illustrated in Table 1.

**TABLE 1: CORRELATION MATRIX OF THE CONSTRUCTS WITH RELIABILITY**

	PU	PE	PEN	COM	ATT	SAT
PU	<b>.658</b>					
PE	.376	<b>.665</b>				
PEN	.393	.264	<b>.836</b>			
COM	.416	.263	.182	<b>.639</b>		
ATT	.091	.043	.020	-.030	<b>.846</b>	
SAT	.395	.427	.480	.264	.081	<b>.766</b>
SD.	.528	.551	.700	.477	.737	.479

Figure 1 depicts fit statistics, overall explanatory power, estimated path coefficients. However, all of associated *t*-value of the paths was less than 1.96 at  $p < 0.05$ ; therefore, there seemed to be no significant path at this stage. Nevertheless, the fit statistics illustrate that the research model provides a good fit to the data ( $X^2 = 0.89$ ,  $p = 0.35$ ; AGFI 0.81; RMSEA = 0.10; CFI = 0.96). This  $X^2$  is significant and all other statistics are within acceptable ranges of a good model fit. An acceptable fit exists where AGFI is more than 0.80 and RMSEA is less than 0.10 (Browne and Cudeck, 1993; Joreskog and Sorbom, 1989).

FIGURE 1: RESULTS OF PROPOSED RESEARCH MODEL



Although this study is unable to summarize for hypothesis tests, the findings indicate that all relationships seem to be positive except those between *perceived enjoyment* and *commitment* ( $\beta = -0.097$ ), *perceived ease of use* and *attitude* toward web-based ERP learning environment ( $\beta = -0.025$ ), and *perceived enjoyment* and *attitude* ( $\beta = -0.053$ ). *Perceived usefulness* seemed to posit the most significant direct effect on *commitment* ( $\beta = 0.650$ ). More adjustments of the model may be necessary.

#### 4. CONCLUSIONS, DISCUSSION, RECOMMENDATIONS, AND FUTURE WORK

Motivated by a demand to understand the underlying drivers of student satisfaction of web-based ERP-simulated learning environment, this research is the first step to further research project incorporated a motivational perspective into TAM and user satisfaction. Although the structural model provided a good fit to the data, all path coefficients in the research model were not found statically significant. The results may reveal that *perceived usefulness* may play important role in affecting student commitment to use web-based ERP simulator. Moreover, *perceived enjoyment* may have negative effect toward *commitment*. It was possible that although the students enjoyed using simulator, they may not commit to the course. *Perceived ease of use* may have adverse effect toward *attitude* of this ERP learning environment. Even though the students can use the system easily, they might not have positive attitude toward such an environment. Lastly, *perceived enjoyment* may negatively relate to *attitude*. The students may enjoy using the system and still have negative *attitude* toward the learning medium. Further review of questionnaire constructs and modifications of the model are needed. A successful web-based ERP learning simulator should include the components of utility and commitment. It is possible that other relationships or factors abound in affecting students' satisfaction toward this ERP learning medium. For instance, the model has not incorporated social factors such as subjective norm and word-of-mouth. In Thai communities, social factors do exert some significance on the outcome of such adoption studies. A major limitation of this study is a small number of sample sizes; therefore, more data collection may be needed.

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## **E-LEARNING APPLICATIONS IN HUMAN RESOURCE DEVELOPMENT COURSES: CREATING ORGANIZATIONAL TRAINING PROGRAMS**

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### **ABSTRACT**

*Many employees are either required or voluntary sign up for training courses, workshops or seminar in today's workplace. However, not all training courses are well structured or adequately designed for a learner's needs. In fact, many people are doubtful of the utility of some training courses or programs and may harbor some resentment for being forced to attend such events. This paper will examine why training programs in general are being reexamined in terms of design and development, as well as overall intent and final outcomes. As many students are starting to reevaluate their career plans, some students are focusing on degrees and courses that will help them with potential job endeavors. As a result, there is an increase in MBA programs, specifically those with Human Resources Development (HRD) concentrations. This paper will focus on how one school uses its HRD course to enable its students to learn more about entrepreneurship and becoming innovative in the field of consulting. This paper will discuss how the teacher-centered approach has been replaced with a more user-friendly, student-centered approach to help to personalize or customize this final consulting project work in the context of an e-Portfolio, as well as focusing on the use of such a strategic tool for future career endeavors. The paper will cover potential applications of e-Portfolios to help student set up a potential electronic consulting practice and learn more about the area of entrepreneurship. Further, this paper will discuss how the e-Portfolio was created and developed in this university program in terms of assessing the student's content knowledge and application towards a potential training program creation and implementation. Rather than just assigning a series of unrelated projects, this particular course helps students work weekly on practical projects to apply their content knowledge towards creating a training program, which can be added to their personal e-Portfolio. Finally, this paper will use an appreciative inquiry perspective lens to view the positive benefits of incorporating an e-Portfolio into HRD and business courses, as well as helping students apply their knowledge in terms of being innovative and creative with a potential consulting business. Also, it will help to illustrate how the students learn from their peers as to how they are achieving similar or comparable results with their approaches to e-Portfolio work.*

**Keywords** - *E-portfolios, online learning, Human Resource Development, training*

### **1. OVERVIEW OF E-PORTFOLIOS**

As of the end of 2006, 38 U.S. states have established state-led online learning programs, policies regulating online learning, or both. Out of these states, 25 states have state-led online learning programs, and 18 states are home to a total of 147 virtual charter schools serving over 65,000 students (<http://www.nacol.org>). In 2001, 56% of traditional learning institutions offered distance learning programs. An additional 12% of schools stated they planned on adding [distance learning programs](#) to their curriculum within the next three years (National Center for Education Statistics, 2003). Therefore, as more and more students enroll and take courses online, how can the student, as well as the university, demonstrate evidence of the successful obtainment of online course content?

Many educational institutions are turning towards the creation and implementation of e-Portfolios. These e-Portfolios serve several purposes, but the final outcome is whether the e-Portfolio itself can be seen as a true measure of what the student has been able to achieve – as well as serve as an indicator of their potential skills and abilities. Further, the key goal of the e-Portfolio is to demonstrate the student's ability to create a collection of online works that best demonstrates their skills, knowledge, and abilities for review by instructors, administrators, and potential employers. Thus, there are a few educational institutions are using Appreciate Inquiry (AI) as a lens to view how they, along with their students, should

approach the creation of these e-Portfolios. Appreciative Inquiry (AI) is based on a “set of beliefs about human nature and human organizing:

- People individually and collectively have unique gifts, skills and contributions to bring to life.
- Organizations are human social systems, sources of unlimited relational capacity, created and lived in language.
- The images we hold of the future are socially created and, once articulated, serve to guide individual and collective actions” (PostiveChange, 2009, para. 2-5).

This type of inquiry can help a student to focus on their key works or skills and create a portfolio that will clearly focus on their current skills sets. Also, this approach has been seen to be more motivational and encouraging for many students, rather than focus solely on a checklist or rubric of specific documents created previously (and perhaps graded prior to this type of course).

This paper will be organized into several sections covering distance education/online learning, e-Portfolios, and how e-Portfolios are used in an Introduction to HRD course. The intent of this paper is to show how e-Portfolios can be used an application process to help students apply content knowledge and learn more about creating a training program as part of their course.

## **2. DISTANCE EDUCATION AND ONLINE LEARNING**

The terms distance education and online learning have been used interchangeably by some educators and distinguished by certain “adopted” definitions by others. However, for the purposes of this paper, the terms distance education and online learning will be used interchangeably. Neal and Miller (2006) defined distance education as “education that takes place independent of location, in contrast to education delivered solely in the classroom, and that may be independent of time as well (para. 4). ASTD, an education/training & development professional organization, noted that “distance education can be characterized as an educational situation in which the instructor and students are separated by time, location, or both. Education or training courses can be delivered to remote locations via synchronous or asynchronous means of instruction (Neal & Miller, 2006, para. 5).

Online learning has become available in many parts of the world, and a new type of student population has emerged. The traditional student image of higher learning has been somewhat limited in many countries, but given the impact of the Internet, this traditional “student body” has changed to online communities. In the field of business and management, educators have recognized the demographical changes of the student population. In a virtual environment, the student is not the same traditional student seen in classrooms in previous years, but rather one that reflects a vast array of cultural differences and needs that require educators to help build “new learning paths” towards the creation of virtual learning communities.

The number of students taking at least one online course continues to expand at a rate far in excess of the growth of overall higher education enrollments. The most recent estimate, for fall 2007, places this number at 3.94 million online students, an increase of 12.9 percent over fall 2006. The number of online students has more than doubled in the five years since the first Sloan survey on online learning. The growth from 1.6 million students taking at least one online course in fall 2002 to the 3.94 million for fall 2007 represents a compound annual growth rate of 19.7 percent. The overall higher education student body has grown at an annual rate of around 1.6 percent during this same period (from 16.6 million in Fall 2002 to 18.0 million for Fall 2007 - Projections of Education Statistics to 2017, National Center for Education Statistics).

Since technology has provided a powerful infrastructure for educators, these emerging technologies have enabled educational institutions, instructors, and students to provide education on a higher level in a virtual learning environment. As a result, the business world has also worked with technology in this venture to help assist educational institutions in becoming more modern and adaptive for change. Thus, these changes only signify to the educational and learning communities that technology recognizes a need for change – but do we, as educators, recognize the need for change completely? Many

educational institutions, as well as the corporate world, are focusing on the learning process and its impact on their organizational structure and employees. Thus, this leads us to the next part of this paper's focus, an overview of what e-Portfolios are and how they are used.

### **3. ONLINE LEARNING AND TECHNOLOGY**

As a result of different technological advancements in the virtual learning environment, online students need to have different type of skills sets in order to compete in today's online learning environment and workplace. As a result, universities must create and implement different practices and procedures in order to prepare all students, especially students with disabilities, to compete for quality and meaningful employment. Thus, this paper helps to provide an open forum for the reader and others to determine if there is a need for change. If so, it also provides a chance for further research to be conducted to help examine how various schools of business, both traditional and online, can approach the career development segment of their course offerings and programs.

Today, educators and administrators have started to see instructional methods moving from a sheet of paper to the computer. We can see that the role and function of these technologies in the classroom have made a major impact in the field of education. As more technological advancements have started to appear, educational institutions have stated to find that computers may have a larger storage capacity; were cheaper to purchase; easier software was being developed to navigate; students were starting to learn computers at an earlier age; and adaptation of course materials to the computer environment was being made easier for students. As a result of this changing technology, many classes are moving away from paper portfolios. Instead, they are introducing the use of electronic portfolios. In the next section, we will examine what are electronic portfolios and their uses.

### **4. ELECTRONIC PORTFOLIOS (E-PORTFOLIOS)?**

Let us examine what are electronic portfolios and their function in today's learning environment. Electronic Portfolios (e-Portfolios) have been defined in many different ways in terms of how they are designed and developed, as well as implemented and evaluated. The University of Berkeley (2004) noted that "An e-Portfolio functions like a file cabinet with file drawers and file folders. Students store personal, educational, career, skill assessment, non-academic/work experience, certification, and rewards information in their portfolios. The information placed in an ePortfolio is referred to as an artifact." (<http://bearlink.berkeley.edu/ePortfolio/page5.html>)

Educational institutions are starting to employ very extensive and developed e-Portfolio software systems, others educational organizations may want to consider their own creation and implementation of an e-Portfolio system (evaluative project). Goldsby and Fazal (2001) noted that student-created portfolios are commonly "used in teacher preparation programs to demonstrate teaching skills and expertise. This practice was introduced as test scores alone lack the comprehensive scope needed for effective assessment and evaluation, portfolios can be implemented to interpret/make decisions regarding learning of teaching competences" (pp. 607-608). On another note, [eportconsortium.org](http://eportconsortium.org) noted that the role and function of an E-Portfolio was:

" . . . [to] facilitate[e] and captur[e] the evolution of concepts and ideas through revisions of work and interactions with instructors, mentors, classmates and friends, electronic portfolios can be much more than a Web site that simply organizes and presents final projects. They can foster learning spaces where the author can gain insights and a better understanding of him/herself as a learner." (Electronic Portfolio White Paper, [eportconsortium.org](http://eportconsortium.org))

As a result, we can ascertain that there are many different needs to be considered here in terms of determine how an e-Portfolio system/project can be used and eventually evaluated. In any event, it is ultimate role of the educational institution to determine if there is a need and how it can be met in terms of an e-Portfolio approach.

## **5. ROLE AND PURPOSE OF E-PORTFOLIOS IN EVALUATING STUDENT'S WORK PRODUCT**

Now, we will examine the role and purpose of e-Portfolios and their application in today's courses. In order to understand why e-Portfolios are used, one needs to look at its role and purpose in today's learning environment. Can educational institutions evaluate a student's skills and ability, as well as help them prepare for potential career development opportunities? Many universities are turning towards the creation and implementation of e-Portfolios. These e-Portfolios serve several purposes, but the final outcome is whether the e-Portfolio itself can be seen as a true measure of what the student has been able to achieve – as well as serve as an indicator of their potential skills and abilities. Thus, the key goal of the e-Portfolio is to help highlight the student's ability to create a collection, selection, and reflection of their online works that best demonstrates their skills and abilities. One needs to look at the evaluative purpose of e-Portfolios. In the next section, the author will look at the general approach to e-Portfolio applications to help provide a contextual framework for this particular evaluative process.

E-portfolios can serve as a showcase of a collection of selected "created" academic achievements, they can also demonstrate a student's writing and researching skills. Educators today have seen the movement of transforming today's classrooms from a teacher-centered approach to one of a learner-centered approach – the instructor helps to facilitate and guide the student through the e-portfolio process; however, it is the student that ultimately selects their best work and begins his or her journal to develop his or her own e-portfolio. As a result, e-portfolios serve not only in the academic achievement process, but they are also used as interview portfolios for students to share with potential employers. The application of e-portfolios in the academic environment has been increasing over the decades. Finally, with the onset of the technological evolution, the use of computers in the academic setting has enabled many instructors, administrators, and staff members to create and implement a variety of educational applications. Rather than focusing on only one single final course project, the e-portfolio serves as a replacement for the final course project, as well as enhancement of the learning experience.

## **6. INCORPORATING TRAINING PROGRAMS INTO PERSONAL ELECTRONIC CONSULTING PORTFOLIOS**

As students start to learn the basic concepts of designing and developing a training program, they will begin their research on a potential training program idea for a particular organization. As the course covers various topics, each student has a series of tasks and assignments to research and create as part of their training program project. Their final training program is then incorporated into the student's personal consulting portfolio (or E-Portfolio). The E-Portfolio Training Program consists of the following components:

- Letter of Transmittal
- Needs Assessment Chapter
- Design and Development Chapter
- Implementation Chapter
- Evaluation Chapter
- Appendices

During this course, the student will discuss the various elements of their training program with their classmates in weekly discussion boards, as well as formal chat sessions with their instructor. This interaction helps to strengthen the learning community, as well as encourages each student to share information about their training program interests and challenges. Overall, this helps the instructor to cover key points in the course content, as well as motivate and guide students as they prepare their individual training programs. Thus, the training program serves a two-fold purpose. First, the Electronic Consulting Portfolio (ECP) serves as a final evaluative assignment for the instructor to evaluate the student's ability to create such a portfolio and supplement it with course content material. Second, the ECP serves as a portfolio of the student's work in the course. While the role and function of higher education is to focus on academic endeavors, the business world has been and will continue to require the field of academia to do more. As a result, this approach to this particular HRD course is now

reinforced with an application project that requires students to focus on their course content, research related material, and create a training program. Thus, when the student completes the course requirements, they will also be walking away with another part of their person electronic portfolio to show prospective employers (or perhaps open up their own potential consulting practice).

## 7. CONCLUSION

As we have seen technology has increased the possibility of more adult learners to participate in taking online courses, in light of various family, business, and personal constraints, changes still need to be done to help student not only to learn new technology, but to apply it to their course work. One way of combining, or blending, technology and content knowledge is the use of certain online applications. As examined and discussed in this paper, the creation and implementation of a training program in a HRD course has been useful in evaluating student's content knowledge. Further, the incorporation of the student's training program into their academic/career electronic portfolio is yet another way educators are meeting academic, business, and career objectives. The use of e-portfolios can serve in a two-fold manner. First, it serves as a vehicle for assessment and demonstrates to the academic community the educational talents, skills, and abilities of the student. Second, it helps to add value to educational institutions in demonstrating the value of education, displaying the student's various works, as well as serving as an academic artifact (or record) for future assessment purposes. Thus, the use of e-portfolios is appearing increasingly in the online learning environment. Finally, as these changes appear in both the online and face-to-face learning environments, educators need to be proactive in making appropriate changes in the curriculum to help strengthen course offerings, as well as incorporating teaching strategies and technique that meet the needs of the course objectives, as well as motivating and encouraging the adult learners to want to learn even more.

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# CORPORATE STRATEGIES AND TECHNOLOGY DEVELOPMENTS OF THAI FIRMS IN GLOBALIZATION EDGE: EXPERT INTERVIEWS

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## ABSTRACT

*The purpose of this paper is to use exploratory research to develop an understanding of globalization and technological development concepts, and also, to further explore and identify the influence of corporate strategies on the level of globalization and technology development in Thai firms. This study is based on expert interviewed of nine experts, who are international business faculty from both private and public universities and practitioners in international business field in Thailand, are interviewed to gain greater understanding about the research contexts and objectives. From the results of this qualitative research, a strong indication is found that strategic components could impact the level of globalization. A few places, where strategy seems to have some impact on the level of technology development, are pointed out. In addition, the findings from this research are beneficial to firms and provide useful information for Thai executives in prioritizing and allocating their resources in terms of international business activities and investments, and corporate strategy efforts to improve the strategy in globalization. Thus, ultimately enhance the firms' level of globalization and technology development.*

**Keywords:** Corporate Strategy, Globalization, Level of Globalization, Technology Development, Level of Technology Development, Thai firms

## 1. INTRODUCTION

To develop an understanding of the concept better regarding the strategy components in the globalization context, qualitative research by discussing with a few experts and respondents who have experience in international business fields was conducted. The interviews included nine people from six institutions. Thus, these were mainly for the purpose of assessing the strategy concepts, level of globalization, and technology development, to make sure that people across the various firms have a basically similar understanding of them.

## 2. JUSTIFICATION FOR USING IN-DEPTH INTERVIEWS WITH EXPERTS

In the initial thinking about the impacts of strategy components on the level of globalization and technology development in Thai firms, in-depth interviews were conducted to gain better understanding on the current state of the effects of strategies on the level of globalization and technology development in Thai firms, as well as to find out potential strategy that may influence Thai business success in global markets. In-depth interviews are frequently required to search for deeper understanding, as qualitative techniques focus on people's experiences and the meanings they place on events (Milliken, 2001; Skinner et al., 2000). Qualitative research through the use of in-depth interviews was chosen as the main method to collect data in this study. In-depth interviews were also conducted among international business faculties, lecturers and experts, to ensure construct validity.

## 3. IN-DEPTH INTERVIEW OBJECTIVES

The purposes of this exploratory research are to develop an understanding of the strategy concepts in the globalization context and to identify variables influencing the level of globalization and technology development of Thai firms. It is vital to set clear research objectives for this in-depth interview section at the beginning to ensure that sufficient and appropriate information will be obtained for each of the research objectives, which are summarized as follows.

**Objective 1:** Identify factors influencing the level of globalization and technology development in Thai firms

**Objective 2:** Explore the relative importance of factors that impact firms' globalization level

#### **4. SAMPLING FRAME**

The sampling frame of this study includes persons who are teaching international business or in charge of taking responsibility for international activities at a national level. The background and experience in the faculty profile from each selected institution were target respondents. The respondents' e-mail addresses are listed in the personal profile, and they were asked to participate in this study by e-mail and telephone. If they agreed to join an interview panel, then, interviewed them in person. If they did not want to participate, a replacement by e-mail was invited.

#### **5. PROPOSED EXPERTS FOR THE INTERVIEWS**

The interviews included persons from six institutions including public universities, a private university, and other organizations that related to international business activities. In-depth interviews with 9 respondents were conducted. Seven respondents were international business instructors, including three faculties from three public universities and four faculties from a private university, to get a detailed understanding of how they viewed the global business strategy. Two respondents were experts such as the Honorary Chairman from Board of Trade of Thailand who is the vice chairman of Charoen Pokphand Group and True Corporation Public Limited Company and another who is a Ex-Chairman of the Federation of Thai Industries and who is the President of Saha Pathana Inter-Holding Public Limited Company.

#### **6. CONDUCT OF IN-DEPTH INTERVIEWS**

Data was collected through face-to-face, open-ended, semi-structured interviews. The interviews were conducted in Thai, and lasted approximately 45 minutes to an hour per person. Each key informant was interviewed once. The interviews took place at several places that were convenient for key informants such as their offices, conference rooms, and restaurants. To guide and assure the consistency across the interviews, the researcher developed and employed a list of broad questions. Note-taking was the primary tool for the researcher to capture the actual words of interviewees and tape-recording was allowed during the interview process. After completing the interviews, data from note-taking and tape-recordings were immediately transcribed by the researcher verbatim and translated into English language.

#### **7. IN-DEPTH INTERVIEW GUIDES**

The general guide for the interviews was to explore respondents' understanding of the concept of strategy components, level of globalization and technology development, and respondents' opinion on the influence of strategies on level of globalization and technology development, and to make sure that people across the various institutions have basically similar understanding of them are listed in Table 2, but there were also a number of probing questions to get at the key concepts of this study. Exact probing questions depended on specific responses in the interview.

**TABLE 2: GUIDE FOR IN-DEPTH INTERVIEWS**

- 
1. What are key corporate strategies of firm in globalization era?
    - a. Which one is the most importance? Why?
    - b. Could you please rank them in order of importance?
  2. What is the meaning of level of globalization in your opinion?
  3. What is the meaning of level of technology development in your opinion?
  4. What is the meaning of level of corporate strategy in your opinion?
  5. What is the meaning of strategic directions in your opinion?
  6. What are key strategic directions for firm in globalization era?
    - a. Which strategic direction is the most importance? Why?
  7. What is the meaning of strategic competencies in your opinion?
  8. What are key strategic competencies for firm in globalization era?

- a. Which strategic competencies is the most importance? Why?
9. What is the meaning of going global or global emphasizing in your opinion?
  10. What are key activities of going global or global emphasizing for firm in globalization era?
    - a. Which activity is the most importance? Why?
  11. Could corporate strategy of firm affect level of globalization?
    - a. If Yes, Why?
    - b. If No, Why?
  12. Could corporate strategy of firm affect level of technology development?
    - a. If Yes, Why?
    - b. If No, Why?
- 

## **8. RESULTS**

### **8.1 Key Corporate Strategies in Globalization Era**

The in-depth interviews indicate that the experts think of key corporate strategy in globalization as the way to build the value of the firm and to take competitive advantage on an international scale. The classifications of corporate strategies are: Growth, Retrenchment, Stability, and Combination. The most important corporate strategy that a firm should employ in the era of globalization is the one that has an embedded ability in setting global vision and looking forward toward the environmental changes (i.e., socio-cultural, competitive, technological, and regulatory environments), in creating or adapting a path with innovative, advanced technology, quality, partnership and speed that can exceed others in the global market. It will be the way that contributes to the acceptability, satisfaction and loyalty to its target customer in order to build the firm's success in globalization.

### **8.2 Strategy Definition**

Experts think that strategy has many kinds of definition, as the synergy of dynamic processes that link all business/functional levels with international viewpoints of the company that depend on timing and business opportunities. Moreover, other experts talk about corporate strategy as following details.

- 1) The way of responding and surviving in the high competitive situation in which the customers are more important than ever before.
- 2) Competitive/corporate capability or skill in managing the firm in each business environment applied to the operational and expansion process, and
- 3) Company's tools or tactics as offensive and defensive operations that will lead company to be successful and to take more competitive advantage in globalization.

### **8.3 Level of Globalization**

Many experts stated that in general terms, level of globalization is the increasing degree of interconnectedness among the markets (or various countries), their economies and others. This type of business views the world as a single market, develops an overall strategy for its various operations around the world, and applies the lessons of each country to ensure its global success. At the firm level, it means the degree that a firm incorporates global context in its strategy and has international business transactions or international business activities with global market and global production concepts. As long as they integrate global context in their strategies, i.e., considering global competitors, investing abroad, exporting, connecting with supply chain network outside country, expanding the operation to foreign markets, it would say that firm is globalized.

### **8.4 Level of Technology Development**

Some experts perceive level of technology development by looking at the level of technology learning, using, training, spreading and distributing of technology - both hard and soft technology - in the workplace. Other experts would say level of technology development can be defined as the degree to which a firm employs technology, ICT, technology infrastructure in product and/or process development both in the primary and supporting activities. Technology development should able to be

monitored by usage rate of technology, numbers of innovation and patents, and amount of investing in basic frontiers such as R&D.

### **8.5 Strategic Directions**

Experts consider strategic directions mainly in terms of the ideal strategic/corporate position of firms, strategic maps, and business scope in short-term and long-term, or strategic criteria that companies have set for moving forward to reach that goal/objective with efficiency by following the corporate strategy. That is, a firm may or may not achieve that direction depending on both internal and external factors. The organizations have to move and adapt to changing environments and business changes. Being first mover in the market, focusing on company value and competitive advantage, balancing the dynamic process of firms, looking at the customer base by serving customer needs, setting global vision and implementing it at all levels of firms, leading innovation and differentiation for firm's uniqueness, and being a proactive company by looking around and analyzing itself, competitors and external business environments might be the most important in the era of globalization. Again, it depends on the nature of the industry and other factors.

### **8.6 Strategic Management Competencies**

All respondents have considerable strategic management competencies that we can determine by assessing firm's resources, strategic capabilities, organizational uniqueness or strengths of company. A strategic competency is a combination of organizational skills, processes, systems, functional knowledge and brand that provides significant value for customers in creating the credibility and corporate/brand image which is difficult for the competitor to copy. The strategic management competencies are strategically important to a firm. That is, without it a firm cannot succeed especially when the company has to face a high competition situation or dramatically changing environment. Strategic competency is the way that a firm can gain competitive advantage in a particular situation and be sustainable also. On the other hand, if competitors can develop (or have) the same competence, that competence is no longer strategic to a firm. Many experts generally agreed that intellectual ability (skills, management style, processes, systems, creativity, innovation, and knowledge management) is the most important of strategic competencies. Intellectual abilities must also provide value to the customer, differentiate the firm from the competitors, and be faster than the competitors because it will create the great power of value added in business from many perspectives. Some experts pointed out that human capital, technology, networking, and organizational infrastructure are the most important as humans create technology and social capital/networks in integrating and utilizing resources around the globe.

### **8.7 Going Global**

The experts in our interviews strongly believe that going global refers to the actual business activities occurring outside a firm's national borders in which the firm can build its brand worldwide and reach mass consumers across cultures in various countries as one market. They defined the main aspects of the full degree of international business activities and their international business operations for serving global customer needs in terms of investing abroad; expanding international sales, market share and assets in the form of exporting, subcontracting, franchising, licensing; integrating and focusing on the value chain with autonomous operations; scanning and selecting global partners; creating and maintaining global partner relationships; setting global vision; sharing, integrating, and updating knowledge from worldwide data bases; and benchmarking with the global companies which they have already had international standard are the most importance activities of global emphasizing for firm in globalization era.

### **8.8 Strategy Components impact on Level of Globalization and Technology Development**

All experts indicated that strategy is very important in globalization edge, and they were mainly agreeing about the impact of strategy components on the level of globalization when offering products and services that match with market demand; having clear global vision at the beginning of their strategic direction; having an embedded ability in creating a path to access the global arena and affect technology development by creating more connectivity both inside and outside the firm; and setting technology development as one important part of their strategic tools or competencies to win market share and business competition. Only three of them said that they were not sure about the impact of corporate strategy on technology development which depends on the corporate strategy, vision and mission of firms. However, the impacts of strategy components seem to be the stronger, more common path to influence level of globalization.

## 9. SUMMARY

This paper reports the exploratory with qualitative research, begins with an introduction, the justification for using in-depth interviews with experts, the objectives of the research, sampling frame and results for this exploratory stage. Nine experts, who are international business faculty from both private and public universities and practitioners in international business field in Thailand, are interviewed to gain greater understanding about the corporate strategy in globalization and technology development in Thailand contexts. From the results of this qualitative research, a strong indication is found that strategic components could impact the level of globalization but not much in influencing on the level of technology development, are pointed out. Some strategy components' impact are evident, but not the details of how specific strategy variables work.

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## BRAND LOYALTY AND INTERNET IMPERATIVES: A MODEL PROPOSAL

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### ABSTRACT

*The Internet challenge nowadays is keeping researches and authors attention around the world, with means trying to understand its new borders and limits. The study aims to show how can the costumer loyalty be developed against a different field covered by Internet that proposes a variety of new options for the customers. The study concludes with the fact that the costumer satisfaction is not enough to assure the loyalty, but if the customer is unhappy with the site, the loyalty will never occur.*

**KEY WORDS:** *Internet, e-commerce, e-marketing, brand loyalty.*

### 1. INTRODUCTION

The initial ravishment provoked in the field of the business by the extraordinary growth of the Internet became lukewarm a little in the last times, but it continues to centralize the attentions of the most several areas. Passed the euphoria, the Internet tries to define its field of performance and the e-Business he/she begins to concentrate infinity of possibilities in the business. Second Franco JR. (2001) the e-Business it has been including several fields of the economy, with applications in areas as: e-Auction (electronic auctions), e-Banking, e-Commerce, e-Directories (lists electronics), e-Gambling (electronic casinos), e-Learning, e-Trade (investments in stocks exchange), e-Drugs, e-health and an infinity of new fields that appear to every day, as: e-dentists, e-lawyers, e-Finance, and so on.

The times, however, they are other and the Internet has been firm as a new purchase option, because, in essence, it removes the barrier of the distance turning the offer of the product much more comfortable than any other sale modality. Further more, the Internet simplifies the consumer's research excessively, allowing the east to find with easiness and safety the best offer of the sought product and the best purchase conditions (financing, interest rate, gives, facilities, among other).

On the other hand, the progress in the field of the information technology is not stopped. The evolution marks for the appearance of the m-business, or the mobile Internet that, according to Kalakota and Robinson (2002b), it represents the evolution of the e-business, because it will provide the accomplishment of business anywhere.

According to the authors: "The mobile economy (m-economy) it is so inevitable as imminent. The business is in the threshold of a tendency of innovation of great impact that offers technical capacities and of unexpected process. That mobile economy is facilitated by the convergence of the internet, of the and-business and of the world of the communication without thread, where the customers can go online to any hour, anywhere and using any apparel... the next generation of the internet of multiple nets and multiple content will be accessed for millions of people using mobile apparels" (Kalakota and Robinson, 2002b, p.19).

Without shade of doubts the evolution in the field of the Internet doesn't have limits and new and constant challenges should be part of the concerns of the companies in the present and future moment. To find means for interact with that sets, it has been the challenges that it dominates the scene of the business. "Time of net" has been the denomination, in the words of Neuhauser and other (2001), to describe the speed with that the e-business moves, being considered a proportion of 10 for 1, that is to say, while the world of the business took ten years to consolidate a change, today that period is of just one year. That change rhythm requests a wide knowledge of the consumer's profile more than everything does.

The increase in the web, therefore, has been giving not just in the ambit of the offer (more and more companies and new business are created in the Internet), as well as in the one of the search (with the

people's growth that passes the access the service). According to Karsaklian (2001), the Internet stops being a cheaper communication instrument and it starts to dominate the stage of the negotiations, although waking up several feelings between fanatic and reluctant, doing with that the electronic trade is almost a passage that obligatory for all the companies.

The competition, on the other hand, continues to challenge the organizations and new competencies are necessary for the maintenance and survival of the organizations. The marketing professionals' days arrest the consumers' attention for 30 seconds before a screen of television they are finishing. The web is a qualifying individual and organizations present it products, information and everything that can be virtualized in time and wanted place. Those professionals need to study the consumers and the needs of the business in the ambient online and to find solutions in as to assist those needs better than its competitors (Strauss and Frost, 2001, p.36).

To know the consumer, to find differentiates competitive, finally to do with that the swelling goes back to the sites visited in an atmosphere that is populated more and more of new offers, that it presents options more and more in products and information, that it hinders the process of the consumer's choice.

In that way, the allied multiplicity of options the little selectivity of the systems had been contributing to move away (or to confuse) more and more the swelling. Under the point of view of the marketing, the subject that it places it is as overcoming those difficulties? What roads to travel to turn the customer loyal swelling to the site, to the products?

The central objective of this work is investigating the main elements of the relationships of the companies with its publics in the internet, under the perspective of the electronic trade and the main means and procedures that can allows to the companies to obtain the customer's loyalty to discuss.

## **2. METHODOLOGY**

The methodology adopted for the conduction of the research was based in an exploratory study, with the application of the technique of interviews in depth with the subjects. The sample was selected by approaches nonprobability sampling, being opted by the intentional sample by convenience, tends for perspective the universe defined by the approach of "Critério Brasil do Levantamento Socioeconomico Metropolitano 2010" (Brazil Rising Metropolitan Economic and Social 2010) by "Ibope/Mídia".

Starting from the distribution of the Brazilian homes for economic class the choice of the subjects was made, starting from the base 10, they were selected four subject of the class C (36%), two of the class B (23%) and one of the class A (6%), amount a total of 7 interviews, according to a route that tried to identify the behavior of purchase of those swellings. The subjects, for effects of the analysis of the results, they were coded by A, B1 and B2, C1, C2, C3 and C4.

The previous approach for the accomplishment of the interview was, therefore, the subject to have accessed the Internet in the last month and to be classified in one category defined by the approach Brazil "Aba/Abipeme" ([www.ibope.com.br](http://www.ibope.com.br)).

## **3. THE LOYALTY PRINCIPLE**

The consumption process implies in doing choices, that can be among options that link directly (product of the brand A versus brand B), or insinuations (product type X versus product type Y). That dynamics determines, therefore, the search of indicators to beacon the necessary procedures to do the best option. Before a picture more and more complex, the brand is strong indicative that allows to identify, to differentiate and to qualify products. The brand is, therefore, every form of particularizing products, using, for so much, symbols, names, colors, images, etc. The construction of the brand is one of the marketing professional's most important and complex activities. The brand is a powerful. It is the form of communicating to the consumers that the product is and the one that the product does (Hanson, 2000, p. 127).

The group of associations that a brand develops is that it allows the obtaining of a strong brand, marked by well-happened experiences, that attribute value to the product and they take the consumers to prefer it in detriment of others.

Statements done by the interviewees: does “have brands that really differentiate the use of the product” (B2), “the others people notice the difference...” (C3), “some brands justify the high price, because they denote good-taste, style, exclusiveness, things like this...” (A), “good, not always its gives to buy the best, does its want to say, the brand that we would like to have, but when does its give I am very happy” (C1), do they evidence the importance that the brand assumes in the repertoire of the people's purchase in practically whole the levels.

To depend of the satisfaction level generated by a mark it is possible to arrive at the level of the loyalty the brand. The brand loyalty is a form of repeating purchase behavior that reflects a conscious decision of continuing to buy the same brand. So that the loyalty to the brand exists, a pattern of purchase repetition should be accompanied with positive underlying attitude relative to the brand. The brand loyalty can be begun by the consumer's preference sustained in objective reasons, but after the brand all ready to exist for a long time and to be announced strongly, she can also provoke an emotional attachment, be for the incorporation in the consumer's solemnity-image, be for associations with previous experiences (Solomon, 2002, p. 224-225).

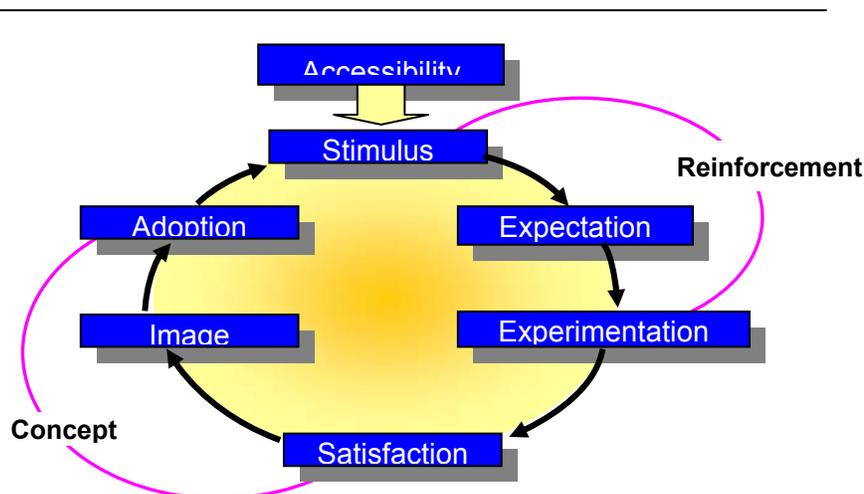
The repetitive behavior of purchases is possible to be identified in the interviewees' speech: “when I have doubts on that product to buy, I choose one with a well-known brand” (B1), “there is product that is good same, its gives trust, it doesn't move and we can trust” (C3), “well, I always try to repeat the purchases of the products that satisfy me fully, sometimes dumb, but it is difficult” (A), “I always buy when it is worthwhile” (C2).

#### 4. THE LOYALTY CYCLE

To differentiate the offer in a plan that allows obtaining the consumer's loyalty in the Internet is factor that will allows to the companies to reach good results and the choice of the best road for the formation of the mark, it is the challenge that it intends to answer. The players of the Internet that stood out of the others those that surrendered with larger disposition to the construction of the conscience of the mark were. That means the effective use of a wide group of tools (Carpenter 2001, p. 7).

Taking for base the beginning of the loyalty to the mark and the results of the research, it was structured the cycle of the loyalty, model that tries to determine as it happens the loyalty.

##### The Loyalty Cycle



Source: Serralvo (2001, p. 42)

The model of the Loyalty Cycle tries to evidence the form as the loyalty, which leaves happens, in a first moment, of the accessibility, that is the knowledge level that the person has on the product (site) and where can find it. That will generate the incentive (will or desire to access the site), with it can derive, for example, of an announcement transmitted in the medium (TV, magazine or in the own internet). That group of incentives will also generate an expectation initial in the swelling with relationship to the disclosed site (leaving of the presupposition that is a new product in the market or ignored by the consumer).

So that, if the expectation is sufficiently strong to take the individual to visit the site, it is necessary to work with the maximum of possible variables linked to the manifestation of the importance value (I want) to depend of the intensity of the expectation he will make the visit, which is the same to try the product. The sensation powder-purchase will consolidate or not the initial expectation, determining the satisfaction (or dissatisfaction, not having, in that case, the formation of the loyalty) with the product. If the sensation is positive the consumer it will create a favorable image to the product and, in a first moment, it will happen the temporary adoption. If to that sensation new incentives reinforce were promoted he/she will stay the expectation state and new purchases will be produced (you repurchase). Confirmed the previous sensations, that is, the satisfaction with the product, there will be the formation of the concept and, finally, the loyalty to the brand.

## 5. FINAL CONSIDERATIONS

The levels of competitive scope have been worsening it with the coming of the Internet and, therefore, it is more and more difficult to settle down the most appropriate road, it wants it is for lack of information; it wants for the incipient apprenticeship that the theme still meets in the ambit of the business. To compete in the world of the electronic trade, a precise company to transform its foundations. That structural change requests the development of an innovative strategy of business, concentrating on the commercialization and in the execution. It also demands process changes in great scale, concentrating on the decrease of the variation and of the abandonment. At the same time, the companies need to develop a potent infrastructure of and-business guided for the continuous improvement of the service and for the constant innovation (Kalakota and Robinson, 2002a, p. 21).

Thus, starting from the observations with the subject of the research, and considering the Internet, the loyalty cycle would be the same; moreover, companies must view and understand the cycle concepts as suggested below.

**Accessibility** – to generate information, the company conveys messages well widespread all over the search sites that the people use to get access to the information. The messages must be not only about the product or service and/or its advertisement, but also will include key words. Outside the Internet other media are recommended. Generating word-of-mouth advertising in Brazilian market is a very important issue.

**Stimulus** – in virtual space the attention is captured in much less time than in the real market. While in traditional medium the customer can “take their time” and are reinforced by the repetition of the message that helps him to analyze the information content, in virtual space there are only few second to get the attention and present the main information about the product and/or service in terms of what they really are, and how to benefit from them.

In this sense there are several variables to be considered: Speed – the first attention must be captured by the customer in a few seconds; Image – where the image, colors, designs and fonts must make clear to whom it is direct to (these includes age, corporate or consumer market, level of knowledge among others); Interactivity – the more use of technology, the bigger is the distance between customer and supplier. To reduce the stress caused by the distance a friendly and common language must be used, plus any resources that produce high interactivity capacity and communication access (addresses, e-mails and telephone numbers); Information – number and depth of information during plenty of time to fast, faster, fastest consumers.

**Expectation** – at this moment we must consider the limitations of not touching the product. The expectation in Internet should consider key attributes related to trust, delivery and the product or service itself. These will require attention related to: Trust – brand and company position in the market – not only the name but also the image and the architecture of the site must transmit this concept; Delivery time – the lower the time, the lower the stress of uncertainty about when and how the customer will receive the product; Safety and guarantees – the information and the company must assure for the customer that beside being all over the world, it has the same rights.

**Experimentation** – the Internet does not give a previous idea on how would be the experimentation; there is no “test drive” or possibility of touching the product. The digital market should include: Delivery value added – deliver the product with all the information needed by the customer and its order; Speed – try to make the same velocity used in stimulus generation; Customization – personalization is an important aspect to reduce the distance and create a relation between the company and the consumer; Relationship – communication, offer, order status, post sales and continuous messages reduces the distance and creates a constant relation with the user.

**Satisfaction** – the satisfaction will be raised by the comparison between the image that captured the attention (level of interaction, expectation, delivery time and value added) and experimentation.

**Image** – the initial image will be created by the appearance of the site, number of hits, competition for the same service or product and the word-of-mouth comment.

**Adoption** – the more the interaction, personalization and the communication and post sales service provided (offers, communications etc), the stronger the confidence on the relation between the customer and the supplier, generating adoption.

A loyalty cycle is proposed as a model with six steps in order to generate customers' loyalty, because there is no guarantee for customers' loyalty generated only by satisfaction. On the other hand, negative satisfaction will break the loyalty cycle. The more expectation and images generated by the visit and the result of the comparison with experience generated by the product or service delivery, the safer and more trust the customer will create with a company. The level of innovation, interactivity, personalized and customized communication will bring the user back to the site, thus enlarging the possibility of bring the customer to the loyalty cycle and to generate adoption with high level of pleasure and satisfaction.

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# THE USE OF FLOWGRAPHIC MODELING IN ACCOUNTING EDUCATION

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## ABSTRACT

*Flowgraphic representation provides a logical link between conventional accounting methodologies and mathematical analysis, operation research, and database systems analysis and design. This paper presents the instructional development and subsequent application of four types of flowgraphic models in my college accounting classes, in connection with the students' mathematical and Markov process analyses, their analysis and recording financial transactions, and their use of the REA database modeling to analyze and design an integrated relational database system.*

**Keywords:** Flowgraphs, Markov Process, Financial Transaction Recording, The REA Database Modeling

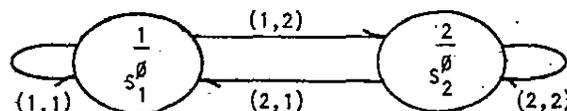
## 1. INTRODUCTION

In essence, a flowgraph consists of two or more nodes, symbolized by circles or other suitable closed figures, and the pertinent flowpaths, symbolized by arrows. It is applied in a wide variety of disciplines: in electrical circuit problems (Abrahams and Coverley, 1965); in operations research with emphasis on economic modeling (Wilson and Beineke, 1979, p.247-251); in social sciences as an aid in analyzing and organizing data (Roberts, pp. 286-7); and in linguistics (Nebesky, p.357), and so on.

## 2. FLOWGRAPH CONCEPTS AND PRINCIPLES RELEVANT TO ACCOUNTING

A flow system underlies every accounting system. (Mattessich, 1964) A basic flowgraph in accounting developed by Dawson and Kang (1978, p. 336) is shown as Figure 1. The nodes 1 and 2 represent two different states, conditions, entities or objects. The amounts in these states are represented by  $S_1$  and  $S_2$  respectively. A time element, if any, is shown by superscript. Flowpaths are designated by couplets ((1,2), etc) indicative of the direction of flow, link or relationship, both in a physical or conceptual system.

**FIGURE 1**  
A Basic Flowgraph



The flowgraphs that I use in accounting courses are of four (4) types as follows:

Type 1: The General Mathematical Form, representing mathematical equations generally.

Type 2: The Markov Process Form, representing Markov and other probabilistic processes.

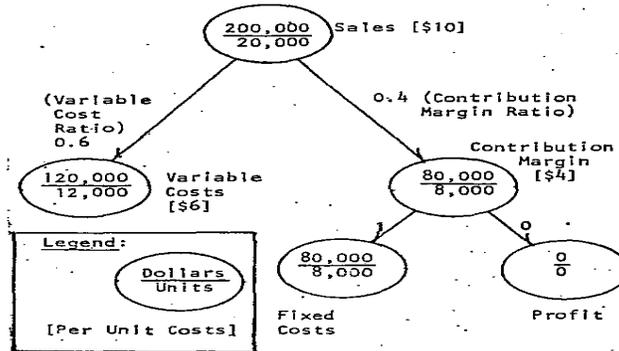
Type 3: The Double-entry Recording Form, representing the conventional system of accounting.

Type 4: The REA Database Design Form, representing the logical architecture of a database.

## 3. THE GENERAL MATHEMATICAL FORM

This form can be used extensively in business quantitative analyses, planning, budgeting, and performance analysis, as long as they involve quantitative flows and mathematical equations. For example, the popular cost-volume-profit (CVP) analysis is performed using contribution-format income statement model. This model involves a number of variables, such as the total revenue (TR) earned, total variable cost (TVC), total contribution margin (TCM), total fixed cost (TFC) and Profit (P), and a number of directed flowpaths with defined flow rates that link these objects. Two equations,  $TR - TVC = TCM$  and  $TCM - TFC = P$ , are represented in the flowgraph model. Dawson and Kang (1978, p.336) incorporated all the variables and relationships existing in a CVP analysis in a single directed flowgraph, as depicted in Figure 2.

**FIGURE 2**  
Cost-Volume-Profit (CVP) Analysis (Breakeven Solution)

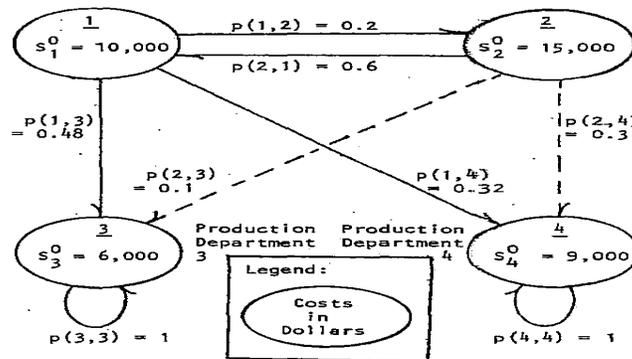


I have used this network diagram and its variations in management accounting classes to expedite students' visualization of the CVP case situation and to perform breakeven and sensitivity analysis with both accuracy and efficiency. The CVP flowgraphs were integrated with budget flowgraph models, and were presented to students as spreadsheet templates. (Kang and Dawson, 1992)

**4. THE MARKOV PROCESS FORM**

This form can be used to represent Markov processes and other probabilistic processes. Howard (1971), for example, uses flowgraphs to represent the Markov processes.

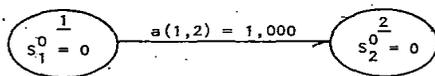
**FIGURE 3**  
Allocating Service Departments 1 & 2 Costs to Production Departments



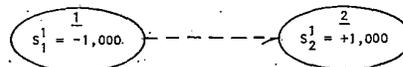
**5. THE DOUBLE-ENTRY RECORDING FORM**

The basic structure of the double-entry model is shown in Figure 4. Rules for operation of this model are:  
 (1) Quantities  $S_1$  and  $S_2$  in the accounts depicted by nodes are determined by flows,  $a(1,2)$ , etc., and  
 (2) Account quantities can take on positive or negative values (debit or credit values).

**FIGURE 4(A)**  
Double-entry Recording (Initial Conditions)



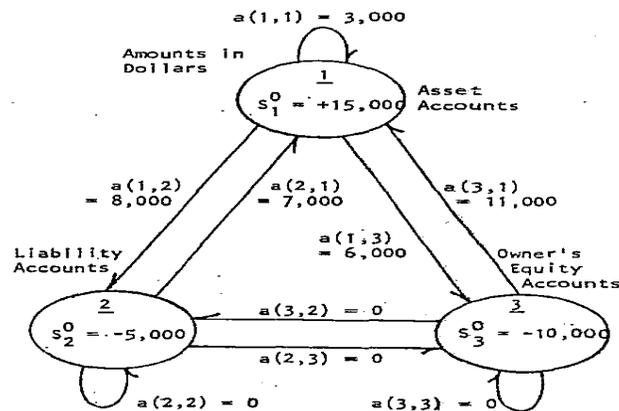
**FIGURE 4(B)**  
Double-entry Recording (Transaction Complete)



In Figure 4(A),  $a(1,2)$  is the amount flowing from account 1 to account 2 as the result of a financial transaction. Conditions after the flow are depicted in Figure 4(B).

The flowgraph in Figure 5 depicts a number of financial transactions to be entered in an enterprise-wide system of financial transaction processing, which is named as the organization's "financial transaction processing model". The system in this figure begins the current period with balances of debit \$15,000 in assets, credit \$5,000 in liabilities, and credit \$10,000 in owner's equity. The transactions occurring during this period include:  $a(2,1)$ , a purchase of supplies on account in the amount of \$7,000. Using the flowgraph as the model of all financial entities (i.e. the accounts) and all possible relationships between paired entities (i.e. events and transactions), students can obtain a comprehensive view of the conventional accounting system, and also readily prepare a journal entry for each directed flowpath. For example, the journal entry for the flowpath (2,1) is: debit Assets (supplies) \$7,000 and credit Liabilities (accounts payable) \$7,000. The student also can determine readily the resulting ending balances. For example, Asset accounts are expected to have \$19,000 at the end of this period.

**FIGURE 5**  
Conventional Financial Transaction Processing Model



The congruence of the flowgraphic recording model with other accounting representations has been demonstrated. (Mattessich, 1964) The conversion to a matrix form parallels that applicable in the case of a Markov process form. (Doney, 1969)

I have experimented with extended applications of the recording form of flowgraphs to complex accounting problems. The recording flowgraphs help students visualize the logical operation of the principles and procedures in an accounting system, and also facilitate students' analysis of financial transactions. As a result, flowgraphs work as a vehicle to student learning effectiveness. It is also evident that significant improvement of communications among accountants and other management scientists will stem from the systematic use of flowgraphs in accounting. Thus, for example, the accountant who presents an appropriate flowgraph to a mathematician or computer specialist makes her problem explicit and understandable. This improvement in communications should have marked synergistic effects.

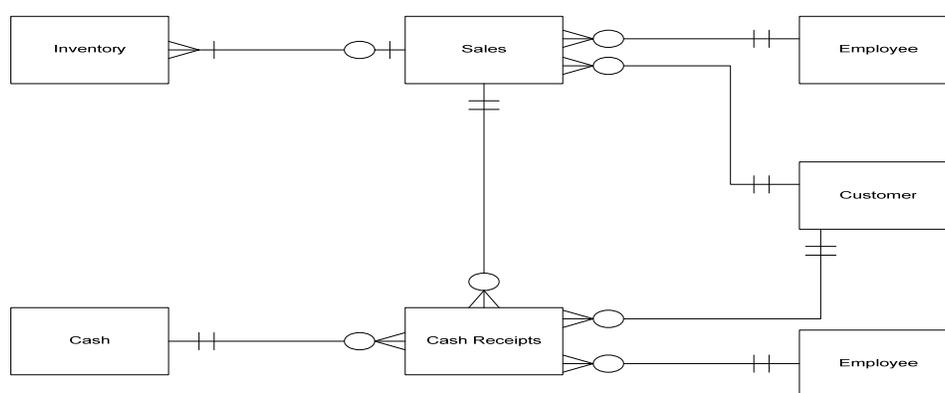
## 6. THE REA DATABASE DESIGN FORM

McCarthy's Resource-Event-Agent (REA) schema of a shared database system (1982) represents an enterprise-wide database view that can be implemented in "events-driven," integrated enterprise systems, such as the ERP systems in popular use. The REA model, being a semantic model, has been represented in the entity-relationship (ER) modeling (Chen, 1977). Recently, the top-down enterprise-wide design capabilities of the REA model has been confirmed by ontological analyses. (Geerts and McCarthy, 2002) McCarthy (2003) offers tutorials on the REA modeling approach to teaching accounting information systems.

Romney and Steinbart (2009) present REA database design models in flowgraphs which describe the contents of a database that is used to support an organization's "transaction processing" requirements. Figure 6 is the flowgraph of the basic REA schema to represent the revenue cycle of an art gallery.

The Problem 15.3 (Romney and Steinbart, p.583) states: "Sue's Gallery sells original paintings by local artists. All sales occur in the store. Sometimes customers purchase more than one painting. Individual customers must pay for purchases in full at the time of sale. Corporate customers, such as hotels, however, may pay in installments if they purchase more than 10 paintings. Although Sue's Gallery has several bank accounts, all sales monies are deposited intact into the main checking account. **Required** Draw an REA diagram for the gallery's revenue cycle. Be sure to include cardinalities." The solution (from their Solution Manual) follows:

**FIGURE 6**  
The REA Schema Diagram of Sue's Gallery (for Revenue Cycle)



An REA diagram depicts, as far as the entity classes or objects, the resources, events, and agents involved in carrying out the organization's business processes, and the logical links between these entities in the form of their relationship cardinalities. In addition, Romney and Steinbart set forth the basic rules for developing an REA diagram to ensure the accurate design implementation.

The flowgraphic REA modeling assists students in their systems analysis and design of enterprise databases in accounting systems courses. Being a semantic data modeling, the extended REA modeling allows the database designer use her knowledge about (1) how business processes typically work and (2) the information needs associated with transaction processing to draw a graphical picture of what should be included in the database. The resulting graphic is used to create a set of relational tables that are in third normal form.

## 7. CONCLUSION

Each of the four types of flowgraphs helps improve efficiency and effectiveness in the education of both accountants and users of accounting information. My research indicates that accountants' use of flowgraphs aids in the solution of the following educational problems:

- (1) The need to improve visualization, classification, and communication of accounting principles, decision analysis, and database design, and
- (2) The need to achieve greater integration of the methodologies of accounting with those used in the other management disciplines.

I have observed these benefits in the course of using flowgraphs as visual aids in accounting classrooms. The emphasis on structure and relationships provides students a frame of reference which clarifies both theoretical and practical problems. Accountants with this perspective are equipped to integrate their

efforts with those of management scientists from the other disciplines. I recommend teachers' careful consideration for introducing a flowgraphing orientation into their accounting courses.

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## A MODEL OF PERCEIVED MOTIVATION EFFECTS ON STUDENT SATISFACTION IN LEARNING WEB-BASED ERP SIMULATOR

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### ABSTRACT

*Several researchers suggest that a web-based ERP simulator may be the right tool to include in business school's curricula, especially if the overall goal is to teach ERP processes instead of teaching how to configure ERP software. Moreover, instructors are reluctant to invest their time and effort if they are not confident that students will find the learning tool acceptable. Then, this study attempts to investigate students' satisfaction of a web-based ERP-simulated learning medium in a Thai university. This study is one of the few attempts to explore students' satisfaction in web-based ERP-simulated learning medium. The model focuses on integrating perceived usefulness, perceived ease of use, and perceived enjoyment into one perceived motivational factor affecting commitment, student attitude, and student satisfaction toward the use of an ERP simulator. Perceived motivation shows significant relationships with commitment and satisfaction. The structural model provides a good fit to the data. A successful web-based ERP learning environment should include the components of perceived motivation, commitment, and satisfaction.*

**Keywords:** ERP and Education, Educational Technology, Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Commitment, Satisfaction, Motivation, Thailand

### 1. INTRODUCTION

The growth rate of global market for Enterprise Resource Planning (ERP) packages has been estimated to be 4.8% annually and will be reach USD 21 billion in 2010 (Hermans and Haytko, 2008). ERP defines as software solutions or business concepts that integrate operations and intra-company processes (Tandon et al., 2010; Magal and Word, 2009). The era of enterprise integration systems development gives light to the needs for graduates who can visualize and align business goals with a technology strategy supporting present and future demands. To remain competitive in educational offerings, higher education institutions would have to provide their business and IT related curriculum to accommodate these demands. Then, gaining knowledge in ERP is important for graduates of business schools today. Furthermore, the 21<sup>st</sup> century information systems programs should focus on business process modeling instead of configuring ERP software (Andriole and Robert, 2008). Nevertheless, ERP skill shortage is still high especially when many universities have strived in incorporating ERP software and concepts into their curriculums (Hawking et al., 2007). Furthermore, ERP professional instructors with the right skills have been hard to come by and retain (Li et al., 2007; Bologna, et al., 2009). Many universities have not successfully implemented Open Source software or ERP University Alliances (UA) programs into their curriculums. Rooji (2007) showed that institutions had made little progress in the development of policies and procedures for Open Source regulatory compliance and security. Lindoo and Wilson (2010) explained that the implementation of an ERP University Alliances (UA) program failed miserably due to a lack of participation and satisfaction from management teams, technical teams, and students. As a result, the school removed the software. Several researchers suggest that a web-based ERP simulator may be a correct tool to include in business school's curricula, especially if the overall goal is to teach ERP processes instead of learning how to use ERP software (Lindoo and Wilson, 2010). Additionally, Kanthawongs et al. found that (2010) business process courses should implement web-based ERP-simulated environment along with teams' class activities in their teaching to replicate its effectiveness. Teachers are reluctant to invest their time and effort if they are not confident that students will find the learning tool acceptable. What causes some students to lose interest or motivation in a class? Therefore, this paper investigates the student satisfaction of a web-based ERP-simulated learning medium in order to understand various drivers influencing satisfaction.

## 2. LITERATURE REVIEW

The Technology Acceptance Model (TAM), developed from Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB), is one theoretical model that attempts to investigate use of computer based technologies, with the primary explanatory variables being *perceived ease of use* and *perceived usefulness* (Davis, 1989; Venkatesh and Davis, 2000). Davis defined *perceived usefulness* as “the degree to which a person believes that using a particular system would enhance his/her job performance” and *perceived ease of use* as “the degree to which a person believes that using a particular system would be free of physical and mental effort” (Davis, 1989).

*Perceived usefulness* is a key driver of student satisfaction in online MBA courses (Arbaugh, 2005). Moreover, many researchers has applied TAM to ERP training/ learning (Scott and Walczak, 2009; Choi et al., 2007). Indeed, the web-based ERP-simulated learning environment offers student substantial benefits. Students can access and download lecture materials anytime, anywhere, in or out of the classroom. They can access a wide range of resources and obtain immediate feedback to correct misunderstood materials.

Moreover, the simulator is a Java-based program running in a browser and is extremely easy to use. Students can click the start button and work through a few simple simulated ERP screens for inputting and/retrieving data. “The simulator instructs the student on what to do, and even prompts with a read highlight on what fields or instruction set they need to click to work their way through the process flow” (Lindoo and Wilson, 2010).

Davis et al. (1992) further adapted the motivational perspectives and added *perceived enjoyment* to explain IT acceptance in workplace. From a motivational perspective, *perceived enjoyment* is defined as “the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated” (Lee et al., 2005). In the web-based ERP-simulated learning environment, most students complete the simulator exercises and end up completing 100% progression on each of the five exercises. Nevertheless, the quizzes can be a little bit challenging. The instructor expects students to run a simulator exercise several times and take notes until they are familiar and comfortable with the process flow. Then, the instructor anticipates that students may enjoy using/interacting with the system (Lindoo and Wilson, 2010; Kanthawongs et al., 2010).

According to motivational theories such as self-determination theory and Maslow’s hierarchy of human needs (Ford, 1992; Deci and Ryan, 1985), *extrinsic* motivation refers to behaviors that are engaged in response to something apart from its own sake such as reward or recognition. *Perceived usefulness* and *perceived ease of use* are examples of *extrinsic* motivation. Nevertheless, *intrinsic* motivation defines as the fact of doing an activity for its own sake. The activity by itself is interesting, engaging, or perhaps satisfying (Lee et al., 2005). Then, the satisfaction in using IT may also be partly related to *intrinsic* motivation. Then, *perceived enjoyment* is a form of *intrinsic* motivation (Lee et al., 2005). In this study, *perceived usefulness*, *perceived ease of use*, and *perceived enjoyment* are combined into one motivational factor called *perceived motivation* in order to explore integrating effect of this construct toward *commitment* and student *attitude*.

Sager and Johnson (1989) pointed out that socialization and satisfaction with superiors are the primary correlates of *commitment*. In web-based ERP-simulated learning environment, students should have more responsibilities placed upon them than traditional face-to-face learning environment. For example, students are required to download course materials, register to use the simulator through the WileyPlus Web site where the simulator is housed, complete pre-defined exercises assigned on a week-by-week basis, complete process simulators, finish web-based and system-graded quizzes, read/study/practice the chapters’ simulator exercises (Lindoo and Wilson, 2010). Students must become active rather than passive learners. Past literature suggests that students with strong *commitment* would be more successful and learn the most in web-enhance courses than those with less motivation (LaRose et al., 1998; Hermans and Haytko, 2008). Thus,

H1: *Perceived motivation* is positively related to *commitment*.

Furthermore, if a student conceives the web-based ERP-simulated learning medium to be useful, the student is more likely to have *satisfaction* in using it. *Satisfaction* is a good surrogate for *perceived usefulness* and often used to measure learners' attitude in computer-mediated learning studies (Chou and Liu, 2005). Thus, the authors conceptualize the student's attitude toward a web-based ERP-simulated learning environment as the learning satisfaction with the environment – defined as the sum of student's behavioral beliefs and attitudes that result from aggregating all the advantages that a student receives from using the learning environment. Thus,

H2: *Perceived motivation* is positively related to student *satisfaction* with the course.

Consistent with past studies, the authors believe the relationships among other constructs should also exhibit significant strengths. Therefore:

H3: *Perceived motivation* is positively related to student *attitude in using the simulator*.

The self-regulated learning is necessary for the web-based ERP-simulated learning environment to be successful. Many researchers revealed that student motivation was positively related to perceived student *satisfaction* with the web-enhanced courses (Hermans and Haytko, 2008; Eom et al., 2006). Students who are committed to their learning should be more satisfied with their web-based ERP-simulated learning experiences. Therefore, the following hypothesis is offered:

H4: *Commitment* is positively related to *satisfaction with the course*.

H5: *Attitude* towards web-based ERP simulator is positively related to *satisfaction with the course*.

H6: *Perceived motivation* is positively related to *perceived usefulness*.

H7: *Perceived motivation* is positively related to *perceived ease of use*.

H8: *Perceived motivation* is positively related to *perceived enjoyment*.

### 3. METHODOLOGY AND RESULTS

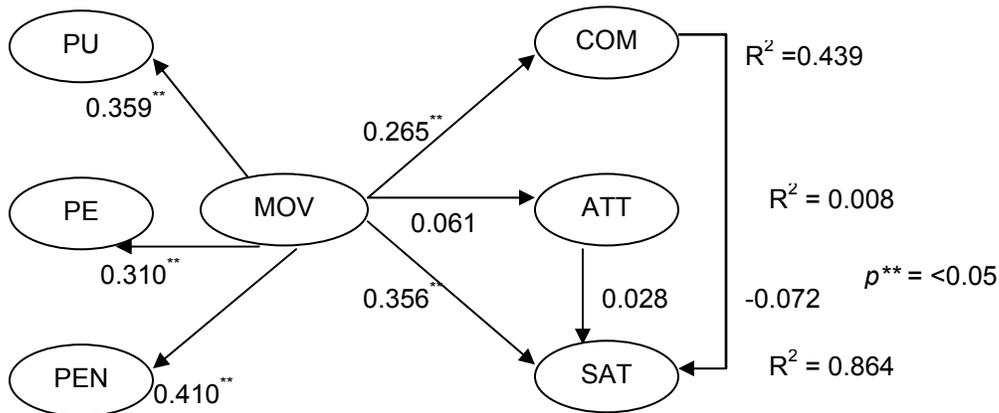
Our study aimed at investigating students' satisfaction of the web-based ERP simulator created by Simha R. Magal and Jeffrey Word in partnership with SAP (Magal and Word, 2009). The WileyPLUS Website houses the simulator. An instructor at a university in Thailand sat up a business process course and assignments. The teacher administered the course materials through the site. Ninety-two senior business computer students in the course were required to purchase access codes in order to access the simulator through Wiley Publisher's representative and a book store in Thailand. Throughout the accessing period, students completed pre-defined exercises assigned on a week-by-week basis. There were five simulators and five quizzes and the simulations were automatically graded as a percentage of completion. A total of 82 usable questionnaires were collected. Among the respondents, 50.6% were female and 49.4% were male. Based on age, 39% of respondents were 22 years old and another 34% were 21 years old. The measures of this research were adapted from past studies (Lee et al., 2007; Hermans and Haytko, 2008).

Measurements for *perceived motivation* (MOV), *commitment* (COM), *attitude* (ATT) toward web-based ERP simulator, *satisfaction* (SAT) with the course were phrased on a five-point Likert scale, from 1 = strongly agree to 5 = strong disagree. All psychometric properties and model testing were examined through the LISREL 8.72 framework, one of the most widely used structural equation modeling (SEM) techniques in IS (Lee et al., 2007; Joreskog and Sorbaum, 1993). The model was estimated using maximum likelihood method. Correlation matrix and standard deviations of the constructs with reliability are illustrated in Table 1.

	PU	PE	PEN	COM	ATT	SAT
PU	<b>.658</b>					
PE	.376	<b>.665</b>				
PEN	.393	.264	<b>.836</b>			
COM	.416	.263	.182	<b>.639</b>		
ATT	.091	.043	.020	-.030	<b>.846</b>	
SAT	.395	.427	.480	.264	.081	<b>.766</b>
SD.	.528	.551	.700	.477	.737	.479

Figure 1 depicts fit statistics, overall explanatory power, estimated path coefficients. All significant paths are illustrated with two asterisks. The fit statistics point out that the research model provides a good fit to the data ( $X^2 = 8.94$ ,  $p = 0.44$ ; AGFI 0.91; RMSEA = 0.00; CFI = 0.99). This  $X^2$  is significant and all other statistics are within acceptable ranges of a good model fit. An acceptable fit exists where AGFI is more than 0.80 and RMSEA is less than 0.10 (Browne and Cudeck, 1993; Joreskog and Sorbom, 1989).

FIGURE 1: RESULTS OF PROPOSED RESEARCH MODEL



In addition, the model accounts for 87% of the variance in satisfaction, 44% of the variance in commitment (COM), and 1% of the variance in attitude. The findings indicated that the integrating *extrinsic* and *intrinsic* motivators exhibited strong impacts on students' *attitude* and *satisfaction* to use the simulator. *Perceived motivation* posited a significant direct effect on *satisfaction* ( $\beta = 0.356$ ,  $t = 5.597$ ), *commitment* ( $\beta = 0.265$ ,  $t = 3.258$ ), *perceived enjoyment* ( $\beta = 0.410$ ,  $t = 4.859$ ), *perceived usefulness* ( $\beta = 0.359$ ,  $t = 5.717$ ), and *perceived ease of use* ( $\beta = 0.310$ ,  $t = 4.651$ ). The result supported hypothesis 1, 2, 6, 7, and 8. On the other hand, *perceived motivation* did not have any substantial impact on students' *attitude* ( $\beta = 0.061$ ,  $t = 0.561$ ) toward the medium. *Commitment* had no significant relationship with *satisfaction* ( $\beta = -0.072$ ,  $t = -0.195$ ). *Attitude* also had no significant relationship with *satisfaction* ( $\beta = 0.028$ ,  $t = 0.561$ ). Summarized results for the hypothesis tests are shown in Table 2.

TABLE 2: SUMMARY OF HYPOTHESIS TESTS

Hypothesis	Support
H1: MOV → COM	<b>Yes</b>
H2: MOV → SAT	<b>Yes</b>
H3: MOV → ATT	No
H4: COM → SAT	No
H5: ATT → SAT	No
H6: MOV → PU	<b>Yes</b>
H7: MOV → PE	<b>Yes</b>
H8: MOV → PEN	<b>Yes</b>

#### 4. CONCLUSIONS, DISCUSSION, RECOMMENDATIONS, AND FUTURE WORK

Our researches incorporated intrinsic (perceived enjoyment) and extrinsic motivational factors (perceived usefulness and perceived ease of use) into one perceived motivation factor affecting commitment and satisfaction of students using a web-based ERP simulator course. Perceived motivation is the key factor affecting students' commitment and students' satisfaction. The structural model provided a good fit to the data, and almost all path coefficients in the research model were found statically significant except the path from perceived motivation to attitude, commitment to satisfaction, and attitude to satisfaction. A primary goal of applying a web-based ERP-simulated learning medium is to use the technology to support and improve learning. This goal cannot be reached without the satisfaction of students. Although intrinsic and extrinsic motivators are different types of behavioral evoking drivers, they may be treated with the same kind of treatment. These findings provide practitioners (software vendors, educators, university executives) substantial guidelines on the design and implementation of the web-based ERP simulating learning environment. A successful web-based ERP learning simulator should include the components of perceived motivation, commitment, and satisfaction. It is possible that other relationships or factors abound in affecting students' satisfaction toward this ERP learning medium. However, this study includes limitations. According to the statistical analysis, only about 1% of the variances in attitude were shown. Moreover, the model has not incorporated social factors such as subjective norm and word-of-mouth. In Thai communities, social factors do exert some significance on the outcome of such adoption studies. A major limitation of this study is a small number of sample sizes; therefore, more data collection may be needed.

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# THE STUDY OF PROBLEMS AND DEVELOPMENT OF RUBBER PRODUCTION IN EASTERN REGION OF THAILAND

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## ABSTRACT:

*This research is to study problems of control standards in product selection prior to processing, method to select quality latex and rubber scrap and problems and obstacles in the production of processed rubber. This is to use as a guideline in the development of rubber processing in Eastern region of Thailand in order to compete in the global market.*

**Keywords:** para-rubber , production process, product quality

## 1. INTRODUCTION

Thailand is a largest exporter of rubber in the world and about 40% of the world's total rubber exports are mostly to China, Japan, Malaysia and America. The most export rubber is the export of rubber smoked sheet. Block rubber export is likely to expand. Thailand's rubber export is worth almost 200 million in 2010. Thus Thailand's rubber processing can generate great revenue for the country. Therefore the government fully supports the rubber production in order to develop and increase the efficiency of rubber production to gain the acceptance from other countries. Furthermore, natural rubber is a product that has a derived demand. If Thailand can increase production ability, it can expand as well.

As a result of 90% of para-rubber exports are to foreign markets, therefore, entrepreneurs must focus on quality, production standard and products which are important in order to stay competitive with other countries. The acceptance in quality product will help Thai continue to stay in the market. Production of Thai entrepreneurs always finds the problems and in order to directly correct these issues, this research seeks to find the problems and make them useful to entrepreneurs and should lead to the development of rubber production.

## 2. LITERATURE REVIEW

Thai entrepreneurs are considered to have competitors with similar capabilities, such as entrepreneurs from Malaysia and Indonesia Therefore, Thai entrepreneurs should focus on producing the high quality and standards by starting with the selection of quality raw materials and control of production processes to meet the standard for the quality production in order to stay competitive in the market.

## 3. SYSTEM AND PRODUCTION PROCESSES

Systems and production processes generally include the production objectives, finding production factors, production process and product. However, quality control will help to finding the production factors in order to obtain the final quality product with the standards as per customer's demand.

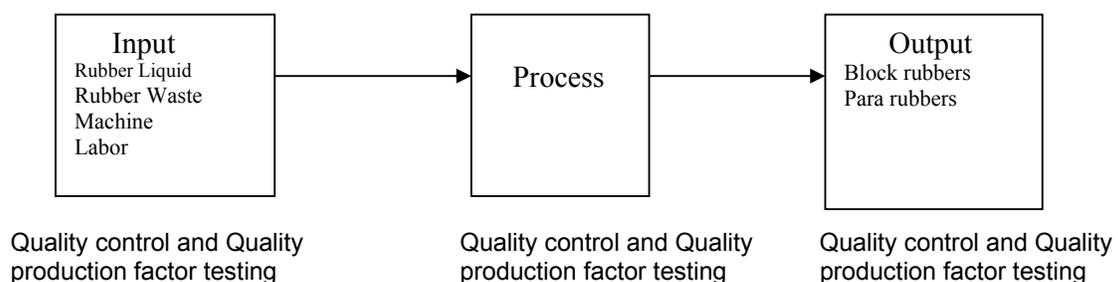


Figure 1: The internal quality control of production process (Gaither, 1996).

In addition to quality control of raw material standards and quality production, entrepreneurs must be aware of one point is that the amount of produce should match the demand.

**Problem and obstacle in producing para-rubber**

According to study the situation of production process and rubber market by Supaporn Buakaew (2005) found that entrepreneurs had problems and obstacles as below:

1. The materials were shortages of raw rubbers
2. The raw materials were found to be contaminated, lack of consistency and dirty
3. Labor found that there is a shortage of labor and lack of experience.
4. The capacity of the production is not fully utilized. However, there are some entrepreneurs who is willing to expand their production by renovating their manufactures, purchase new machines and build a new factory.

**Para- Rubber development strategy of the Thai government, year 2009 -2013 by National Natural Rubber Planning Board**

Rubber year development strategy 2009 - 2013 has a significant enhancement for Thai operation in order to compete by increasing productivity, improving productivity and encouraging producing quality raw rubber and rubber products as well as cooperating with three countries Thailand, Malaysia and Indonesia. The expected result is to increase rubber production effective in the country and help Thai rubber industry to have the capacity to compete with foreigners and increase value-added to export.

**4. METHODOLOGY**

The research is a Survey Research with a method of data collection by questionnaires and an interview. The questionnaires will ask about the level of quality control standards for the selection of rubber sheet before processing, manufacturing quality control and capacity management in order to control the levels of product quantity to suit the needs of the market to prevent a problem with the rubber processed price reduction. Respondents in this case are the rubber entrepreneurs in Chonburi province, Rayong province, Chanthaburi province and Trad province. Data sources are primary data source. Tools used in this study was a questionnaire with the statistical methods used and summary of the data are percentage, mean, standard deviation in summarizing the opinions of the manufacturer in the system and production process.

**5. KEY RESULT & FINDING**

The sample which has the most personnel is 850 people and the least personnel is 4 people and the most operating personnel is at 782 people and the least is at 2 people, the highest year of services is 35 years and the least is 5 years (Table 1). Encountered Problems are mostly from the manufactures that produce latex and rubber scrap can't keep their consistency in obtaining the latex from their purchasing (81. 3%) and followed by the amount of latex is less than demand (71. 9%), latex quantity is not as prescribed (31. 3 %), latex quality does not meet the desire (25. %) and the transportation delay (21.9%) (Table 2). Methods for selecting quality latex/rubber scrap, the entrepreneurs use the method to check the concentration of latex determine the color of the latex, use the tools to analyze and use the method to analyze respectively (Table 3). Problems and obstacles in the production of rubber process occur most often is a matter of labor 34. 4% followed by searching for the quality raw rubber 9. 4% and quality control the manufacturing and production does not align with the current capacity 6.3 % respectively. The problems that occur but not as often but the entrepreneurs think is important is the machine (Table 4).

**General information**

	N	Minimum	Maximum	Mean	Std. Deviation
Number of Personnel	32	4	850	135.03	181.62
Managerial level	32	0	90	22.12	28.35
Staff level	32	2	782	19.78	159.93
Year of services	32	5	35	12.37	6.60

**Table 2: Problem from manufacturing of latex/rubber scrap**

Problems	Yes ( %)	No (%)
Transportation delay	21.9	78.1
Quality of Latex is not as prescribed	31.3	68.8
Quality of Latex is not as desired	25.0	75.0
Lack of consistency from purchased latex	81.3	18.8
Amount of latex is less than demand	71.9	28.1

**Table 3: The selection method to find quality liquid latex/rubber scrap**

Selection Method	Yes ( %)	No (%)
Check the concentration of latex	81.3	18.7
Determined the color of latex	78.1	21.9
Use tool to analyze	56.3	43.8
Use method to analyze	40.6	59.4

**Table 4: Problems and Obstacles in rubber production**

Problems and Obstacles	Often ( %)	Occasionally ( %)	Never happen ( %)
Searching for the quality manufacturers	9.4	71.9	18.8
Labor	34.4	62.5	3.1
Machine	0	84.4	15.6
Quality maintaining	0	78.1	21.9
Method to control the production quality	6.3	59.4	34.4
Production Forecasting	0	75.0	25.0
Productions does not align with the current capacity	6.3	59.4	34.4

## 6. DISCUSSION & RECOMMENDATION

The study found that the most problem that entrepreneurs found in the external materials (latex/ rubber scrap) is the consistency obtained from the purchased latex. Therefore, it caused the entrepreneurs not have enough latex/rubber scrap for the demand and made the prices of rubber changed as the situation changes. Selection of quality latex and rubber scrap is determined by the concentration of the latex and its colors. A major internal problem that often happens is the labor shortage caused by poor wages and insufficient benefits. Therefore labors are moved and changed their jobs regularly. In addition, the entrepreneurs also face the issues with the broken machine caused by old machine and lack of maintenance.

### Recommendations for Entrepreneurs are as follows

1. The small business should join cooperatives group which runs in every province and support by the government to grow rubber in order to receive information and attend the training for new production techniques.
2. The government should provide new production knowledge, new techniques and advance technology to the small business.
3. When the production quality is acceptable, then should let the marketing policy led the production.

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## THE INFLUENCES ON THE ACCEPTANCE TO NEW FASHION PRODUCTS (NEW ARRIVAL)

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### ABSTRACT

*Successful or failure entrepreneurs and importers of fashion products in business are shifting. The fashion products were changed by popular culture, the acceptance of the new arrival fashion items and also the recognition on the acceptance factors of new arrival fashion item as the critical consideration. Results shown that female has higher acceptance level of new arrival item than male. With age increased, the acceptance level of new arrival item is decreased respectively. Married persons have the lowest acceptance level when compared to the single and the widowed/divorce persons. In addition it was revealed that the degree of interest in various columns affect with the acceptance level of new arrival fashion.*

**Keywords:** *Fashion adoption, Fashion products, and Consumer behavior*

### 1. INTRODUCTION

Currently import value of fashion product in 2010 is worth 10,808.11 Million Baht that is over in 2009 to 1,295 Million Baht and growth from the year 2009 representing 2.96 percent. (Editorial, 2008) The most popular products are accessories, watches and its assemblies, home appliances and decorations, garments, other textile products, lens glasses and their components, and shoes respectively. Each year the product importers success and failure in business are shifting. Since fashion products were changed by popular culture that people who has affect with fashion including designer, celebs, the artists both inside and outside the country. In addition there are also the economics matters, Baht fluctuation, Internet trading as well as the copy cat of other competitors. Moreover there are importers from foreign country and domestic entrepreneurs that offer the new arrival items though the market as well.

Hence the understanding to acceptant of new arrival item and aware the influenced factors with the acceptance of new arrival item will be the most advantage for entrepreneurs and other interest person for applying in the appropriate future planning.

### 2. LITERATURE REVIEW

#### 2.1 Acceptant of new arrival fashion.

Fashion is the joy of basic needs in term of dressing for adding up the better looking image, modern style and more appropriate with social status. And it also combine with cultural, social and psychology factors which affects the shopping behavior separated into rational and emotional behavior. Rational behavior means reasonably thinking and decision making and emotion behavior mean thinking and decision making based on sensation mainly.

This research, the acceptance of new arrival fashion products, has introduced the concept and measurement in term of innovation adoption of Ailawadi, Kusum, Scott, & Karen (2001) Darden, William, & William D Perreault (1976) Gatignon & Robertson (1985) and Wells, William, & Douglas (1971) applied into this study.

Rothwell & Gardiner (1985) demonstrated that innovation does not only need to reflect the advanced technologies to market but also the worth benefits even though improving simply some little things. The implementation on the measurement of innovation acceptance was used to measure the acceptance of new arrival fashions as the interesting concept.

#### 2.2 Magazine columns and fashion products

From the general information, it found that people pay attention to the magazine about fashion differently. Columns that have received attention from both youth and working age groups were not quite different are all about fashion, such as dress coaching, makeup and hair style guidance, new

items suggestion, update the new working girls, cosmetics column, female disaster column including the activities of the magazine giveaways etc.

The data revealed that the most popular columns in Thailand's top magazines were beauty, health, traveling, food, horoscope, shopping, love, celebrity interview, adolescent story, novel, handcraft, foreign news, fashion news, entertainment news, political news and economic news etc.

### 3. METHODOLOGY

The population in this research was adolescent group and working age, both male and female, who live in Bangkok and suburb area. The sample characteristic were male-female with age more than 15 year olds. The overall samples were 645. The reliability of summated scales is best represented by Cronbach's alpha; the reliability values should exceed the recommended level of .70, although slightly lower may sometimes be acceptable for initial work on a concept (Hair et al. 1998). Thus, Cronbach's alpha was used for assessing the scale measurement. We found that a construct had a reliability value higher than .70.

### 4. KEY RESULTS & FINDINGS

The most samples were female (60.9 percent) and age between 18-25 years (72.6%). 85.3% of them is single. They also interested in reading column about travel most (mean = 3.81) and about the handcraft lowest (mean = 2.44) (Table 1). The scale reliability of the acceptance level of new arrival fashion by Cronbachs' alpha value was 0.9061. (Table 2)

The result in Table 3 shown that female has the acceptance level of new arrival fashion higher than male and when age increase, the acceptance level of new arrival fashion is decreased respectively. Married persons has the lowest acceptance level when compared with single and widowed/divorce persons. Multiple regression analysis was performed for acceptance level of new arrival fashion with degree of interest in various columns as independent variables. In Table 4 shows the model is significantly (sig. = .000) and the independent variables account for over half of variance ( $R^2 = .440$ ). Degree of interest in news column about fashion issue, shopping, beauty, love, celebrity interviews and traveling that all of them have significantly positive effects on acceptance level of new arrival fashion through degree of interest in fashion ( $\beta = .271$ ) is more important than shopping column ( $\beta = .238$ ) or beauty column ( $\beta = .185$ ) or love column ( $\beta = .103$ ) or celebrity interview column ( $\beta = .094$ ) or travelling column ( $\beta = .092$ ), as indicated in term of the standardized coefficients. (Table 4)

**TABLE 1 DEGREE OF INTEREST IN THE VARIOUS COLUMNS**

Column	N	Min	Max	Mean	Std. Deviation
Beauty	642	1	5	3.72	1.18
Health	639	1	5	3.70	.98
Food	638	1	5	3.60	.97
Traveling	641	1	5	3.81	1.04
Horoscope	642	1	5	3.25	1.31
Shopping	641	1	5	3.65	1.17
Love	642	1	5	3.53	1.17
Celebrity interview	642	1	5	3.04	1.14
Adolescent story	642	1	5	3.41	1.07
Novel	640	1	5	2.45	1.19
Handcraft	641	1	5	2.44	1.16
Foreign news	641	1	5	3.35	1.15
Fashion news	641	1	5	3.69	1.11
Entertainment news	640	1	5	3.58	1.13
Political news	643	1	5	2.77	1.19
Economic news	643	1	5	2.86	1.21

**TABLE 2: THE ACCEPTANCE LEVEL OF NEW ARRIVAL FASHION**

<i>Scale Item</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Alpha if item deleted</i>
Normally you like to buy the new arrival fashion.	638	3.69	1.09	.8969
You like to own the new arrival fashion	637	3.40	1.08	.8904
When comparing with your friends, you always tend to be the first one for new arrival fashion.	637	3.01	1.03	.8891
If you know that there is a new arrival fashion.	639	3.26	1.04	.8943
You usually are the first in the friend group to know the new arrival fashion.	637	3.04	1.04	.8933
You change the new arrival fashion comparing with friends.	638	3.04	1.05	.8891
You can decide to buy the new arrival product.	639	2.89	1.15	.9053
You like to use the new arrival product.	638	3.66	1.12	.8944
<b>Mean</b>	<b>639</b>	<b>3.25</b>	<b>.84</b>	

Cronbach's alpha = .9061

**TABLE 3: DEMOGRAPHICS AND THE ACCEPTANCE LEVEL OF NEW ARRIVAL FASHION**

<b>Demographics</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>t test (Sex) F test (Others)</b>	<b>p-value</b>
<b><u>Gender</u></b>					
Male	248	3.09	.88	-3.86	.000*
Female	391	3.35	.80		
<b><u>Age</u></b>					
< 18 years	37	3.35	.82	8.756	.000*
18-25 years	463	3.34	.81		
26-35 years	79	3.09	.89		
36-45 years	30	2.86	.89		
> 45 years	30	2.59	.71		
<b><u>Marital Status</u></b>					
Single	545	3.31	.82	13.227	.000*
Married	83	2.81	.82		
Widowed/Divorce	9	3.24	.97		

\*p-value < .05

**TABLE 4: MULTIPLE REGRESSION ANALYSIS OF THE ACCEPTANCE LEVEL OF NEW ARRIVAL FASHION ON DEGREE OF INTEREST IN THE VARIOUS COLUMNS.**

Independent Variable	B	Beta	t	Sig.
Beauty	.132	.185	4.275	.000*
Health	-.050	-.059	-1.446	.149
Food	-.030	-.035	-.840	.401
Traveling	.074	.092	2.518	.012*
Horoscope	-.067	-.105	-2.774	.006*
Shopping	.170	.238	5.434	.000*
Love	.074	.103	2.537	.011*
Celebrity interview	.069	.094	2.570	.010*
Adolescent story	-.020	-.026	-.701	.484
Novel	-.020	-.029	-.815	.416
Handcraft	-.011	-.014	-.399	.690
Foreign news	.016	.022	.617	.538
Fashion news	.202	.271	5.923	.000*
Entertainment news	.050	.067	1.568	.117
Political news	-.038	-.055	-1.018	.309
Economic news	.067	.098	1.803	.072

**Note:**  $R^2 = .440$ ,  $F(16, 617) = 29.556$ ,  $sig. = .000$

\*p-value < .05

## 5. DISCUSSIONS & RECOMMENDATIONS

The research result found that the variation on demographic including gender, age and status which are deferent in acceptance level of new arrival fashion. Moreover degree of interest in various column affect with the acceptance level of new arrival fashion.

Fashion entrepreneurs and importers who would like to succeed the potential market should target at the younger female and single consumers. Advertising should focus on the magazine column about fashion, shopping column and beauty column respectively.

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# THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY ON CUSTOMER LOYALTY

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## ABSTRACT

*The purpose of this paper is to deep understanding of the nature of corporate social responsibility (CSR) in Thailand. This paper will investigate the effect of CSR on customer loyalty. Respondents had evaluated a level of perceived CSR and loyalty on each category. Three categories were used for this study. Corporate social responsibility (CSR) has significant positive effects on customer loyalty. The effect of Bank's CSR on customer loyalty is more important than CSR of automobile and mobile on customer loyalty respectively*

**Keywords:** corporate social responsibility, customer loyalty, automobile, bank, mobile

## 1. INTRODUCTION

The corporate social responsibility (CSR) movement has gathered great momentum over the past number of years and is now regards as being at its most prevalent. However, there has been a lack of attention to, and discussion of, CSR in Thailand and in relation to corporate image. The purpose of this paper is to deep understanding of the nature of CSR in Thailand. Specially, this research aims to uncover the difference business sectors operating in Thailand with regard to their understanding of CSR, the types of CSR activities undertaken and the management of CSR. In addition, this research analyses the barriers and opportunities experienced when undertaking CSR.

## 2. LITERATURE REVIEW

**2.1 Corporate social responsibility (CSR)** is a concept whereby organizations consider the interests of society by taking responsibility for the impact of their activities on customers, suppliers, employees, shareholders, communities and other stakeholders, as well as the environment. This obligation is seen to extend beyond the statutory obligation to comply with legislation and sees organizations voluntarily taking further steps to improve the quality of life for employees and their families as well as for the local community and society at large. (Sarbutts 2003; Sweeney 2007)

The practice of CSR is subject to much debate and criticism. Proponents argue that there is a strong business case for CSR, in that corporations benefit in multiple ways by operating with a perspective broader and longer than their own immediate, short-term profits. Critics argue that CSR distracts from the fundamental economic role of businesses; others argue that it is nothing more than superficial window-dressing; still others argue that it is an attempt to pre-empt the role of governments as a watchdog over powerful multinational corporations.

Types of CSR or CSR activities was classified by Ratanajongkol et al. (2006). Themes are categorized according to: environment, energy, consumer, community, employees, and general. This research used 13 scale items for measuring CS i.e. X's products are environmentally-friendly, X provides products that are environmentally-friendly, X's brand of products are produced in settings of positive working conditions and under good terms of employment for all workers, and etc.

**2.2 Customer loyalty** seems to be one of the most reliable measures for predicting sales and financial growth, and it is certainly an important goal of most services companies. Oliver (1999, p. 34) defines brand loyalty as "a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior."

The concept of customer loyalty is frequently considered to contain two perspective points, attitudinal and behavioral loyalty. The various operational measures for loyalty have been placed into one of these two

categories, behavioral, attitudinal, or sometimes into composite measures including both attitudinal and behavioral elements (Ha 1998; Rundle-Thiele and Bennett 2001). Six scale items were used for this dimension i.e. When you would like to purchase products or services, you would think of this company, I will say positive things about X's products to other people, I will encourage friends and relatives to purchase products or services with this company, and etc. The scale for measures of each construct used a five-point Likert scale with strongly disagree - strongly agree as the end points.

### 2.3 Antecedent of customer loyalty

This part will describe the effects of the independent variable corporate social responsibility (CSR) on customer loyalty. Previous research has investigated these issues. Therefore; this paper will investigate the effect of CSR on customer loyalty. (Figure 1)

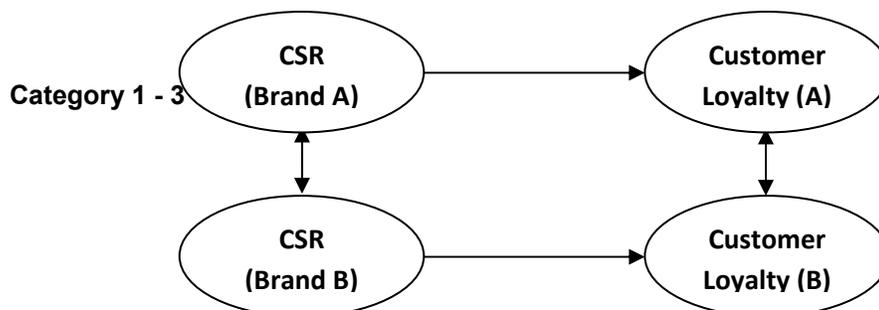


FIGURE 1: CONCEPTUAL FRAMEWORK

### 3. METHODOLOGY

This study used a self-administered questionnaire, a common data collection technique in which the respondent reads the survey questions and records their own responses without the presence of a trained interviewer (Hair, Bush, and Ortinau 2003). The sample selection was non-probability sampling, convenience sampling.

Respondents had evaluated a level of perceived CSR and loyalty on each category. Three categories were used for this study consisting of a mobile service provider, an automobile, and a bank. Brands of product and services were selected by sales value, top two. The scale for measures of each construct used a five-point Likert scale with strongly disagree - strongly agree as the end points.

The reliability of summated scales is best represented by Cronbach's alpha; the reliability values should exceed the recommended level of .70, although slightly lower may sometimes be acceptable for initial work on a concept (Hair et al. 1998). Thus, Cronbach's alpha was used for assessing the scale measurement. We found that all constructs had a reliability value higher than .70

### 4. KEY RESULTS & FINDINGS

Approximately 58 percent of the respondents were females, and 42 percent were males in this study. Respondents perceived CSR differently on automobile brands. The highest sales value brand had more CSR score than another brand. (Table 1 and 2)

**TABLE 1: MEAN AND STANDARD DEVIATION OF CSR**

Category	N	Minimum	Maximum	Mean	Std. Deviation	Cronbach's alpha	p- value
<b>1) Mobile</b>							
Mobile A	398	1.17	5.00	3.48	.76	.9063	.145
Mobile B	398	1.00	5.00	3.45	.84	.9252	
<b>2) Automobile</b>							
Automobile A	400	1.00	5.00	3.49	.79	.9162	.000*
Automobile B	400	1.00	5.00	3.45	.80	.9186	
<b>3) Bank</b>							
Bank A	400	1.00	5.00	3.61	.83	.9210	.158
Bank B	400	1.50	5.00	3.58	.81	.9181	

\*p-value < .05 (paired sample t-test)

**TABLE 2: MEAN AND STANDARD DEVIATION OF CUSTOMER LOYALTY**

Category	N	Minimum	Maximum	Mean	Std. Deviation	Cronbach's alpha	p- value
<b>1) Mobile</b>							
Mobile A	398	1.31	5.00	3.42	.67	.8737	.493
Mobile B	398	1.00	5.00	3.38	.73	.8933	
<b>2) Automobile</b>							
Automobile A	400	1.38	5.00	3.60	.68	.8849	.194
Automobile B	400	1.23	5.00	3.49	.68	.8786	
<b>3) Bank</b>							
Bank A	400	1.00	5.00	3.59	.68	.9013	.434
Bank B	400	1.62	5.00	3.55	.67	.9035	

\*p-value < .05 (paired sample t-test)

Simple regression analysis was performed for customer loyalty with corporate social responsibility (CSR) as independent variables. Table 3 shows the models are significant (sig. = .000) and the independent variables account for over half of variance ( $R^2 = .447 - .573$ ). Corporate social responsibility (CSR) has significant positive effects on customer loyalty. The effect of Bank's CSR on customer loyalty is more important than CSR of automobile and mobile on customer loyalty respectively, as indicated by the standardized coefficients. (Table 3)

**TABLE 3: SIMPLE REGRESSION OF CUSTOMER LOYALTY ON CORPORATE SOCIAL RESPONSIBILITY BY CATEGORIES**

Independent Variable	Coefficients				Model summary		
	B	Beta	t	p-value	R <sup>2</sup>	F-test	p-value
Corporate Social Responsibility (CSR)							
Model 1: Mobile A	.757	.669	17.904	.000*	.447	320.548	.000*
Model 2: Mobile B	.819	.706	19.854	.000*	.449	394.166	.000*
Model 3: Automobile A	.857	.731	21.347	.000*	.534	455.696	.000*
Model 4: Automobile B	.846	.722	20.819	.000*	.521	433.430	.000*
Model 5: Bank A	.893	.735	21.611	.000*	.540	467.050	.000*
Model 6: Bank B	.919	.757	23.108	.000*	.573	533.972	.000*

\*p-value < .05

## 5. DISCUSSIONS & RECOMMENDATIONS

In conclusion, customer loyalty leads to certain marketing advantages, such as reduced marketing costs, more new customers, and greater leverage in the trade for dealing with channel members. Corporate social responsibility (CSR) contributes to customer loyalty, but the exact impact is likely to differ in various industry. To get these little details right as marketers try to build international brands across a wide range of countries and cultures, it will be increasingly important to understand how CSR influences consumer response.

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## HOW THE DEPRECIATION METHOD CONTRIBUTES TO ESTIMATING FUTURE TREASURY FLOWS OUT OF THE ASSETS USE

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### ABSTRACT

*In the last years, traditional management – based on the analysis and interpretation of accounting data – has turned out to be incapable to assess and express, in a clear and correct manner, real performance of the entities involved. Traditional financial indexes, such as economic profitability or other performance indexes, which do not integrate comparison with the market, with the profitability of alternative investments, can no longer meet the needs for making decisions at the moment. Under these circumstances, it has been necessary a change in the managers' attitude. Currently, they tend to bend more focused not on the income maximization but rather on the maximization of the value provided to shareholders, and not on resorting mainly to accounting data, but rather to the dynamics of cash flows. This is also a result of the fact that the traditional instruments for measuring managers' performance, by being based on accounting data, do not take into account neither risk or inflation influence, nor the opportunity cost. Thus, in the last period, in what assets are concerned, it has been agreed to assess certain payments (particularly those regarding immobilizations) at the estimated value of future flows of incomes provided to entities – recoverable or covering value – rather than at past expenses expressed at their historical cost, a fact which is synonymous to a considerable radical change in accounting. According to such a perspective, the objective of accounting is that of going deeper into and analyzing future, precisely for transposing it into financial circumstances. The research methodology has started from the option of reexamining the accounting model and its usability when it comes to reflecting value. Thus, taking into account the reality of Romanian accounting, harmonized with European Directives, but still strongly oppressed by fiscal regulations, we have attempted to establish a mathematical model, by means of which, by starting from a known value of a physical asset depreciation, to be able to estimate cash flows from the future use of the asset in question. Our approach starts from the difficulties emerged in adjusting and the high subjectivity degree in assessing future treasury flows – a result of previsions and detailed financial prognoses made by each entity. And since Romanian accounting is not yet capable to do it – partly because of the lack of accounting pros to take upon themselves the application of the professional mechanism and partly because of the absence of an active market to provide enough information necessary for adjusting future cash flows – we have considered that we can identify a connection between the depreciation method chosen by the entity and the future evolution of treasury flows from the use of immobilized assets, by starting from a certain set of rules regarding depreciation and by observing the considerations of the American model implicit interest depreciation model. After identifying the working instruments - by considering valid a certain set of rules regarding depreciation (the fact that its value is constant each year, decreasing for instance) and observing the parameters of the American model, our research involves adjusting mathematical relations, so that the result takes the form of a quantification of future treasury flows from the use of immobilized assets. A future research should test the model under scrutiny within Romanian and foreign realities – on a representative sample – involving road wares transport and the interpretation of results.*

**Key words:** *Future treasury flows from use, depreciation method, residual value, discount rate, present value of future treasury flows from use.*

### 1. INTRODUCTION

With the application of International Accounting Standards, the recognition of assets is done according to their *utility* to the entity; two similar assets operate in different entities, have different managements and can opt for various durations, for personal depreciation schemes, for different residual values, they benefit from specific accounting treatments according to their belonging entity. Moreover, at the balance time the recognition of intangible assets their recoverability perspective is being used, based on future cash flows generated from operations, this is a frequent treatment to recover investments in finance. The practice

has expanded in the accounting domain and requires a new approach to both the recognition and the nature of the recoverability of tangible assets.

## 2. RESEARCH METHODOLOGY

Between depreciation methods that address current cash flow in terms of operations, understanding the asset as an investment where its use is expected to recover capital, the American method deserves a closer scrutiny especially the *implicit interest depreciation method*. According to this method, the damping is considered spread between two present values (use) consecutive surveyed ( $t-1$  time, and  $t$  time) is regarded as the present value sum of future cash flows from operations to date.

The investor expects a certain return on invested capital on fixed assets that the rate of return. To express the depreciation as the difference between two consecutive values present rate of return method considers the asset as being similar to the discount rate to future cash flows. Just as the present value of future cash flows from operating at the acquisition date may be equal to the cost of that asset. Depreciation, the difference of two consecutive use values, is obtained by deducting the estimated cash flow due to investor compensation. Measure cash flow method is considered each year is given by the formula:

$$CF = \frac{Cxr}{1 - (1 + r)^{-n}} \quad \text{where,}$$

CF - cash flow annually

C - the original cost of the asset

r - discount rate,

n - the life of the asset

We illustrate the model considering the following example: Entity X has a fixed asset purchased at beginning of the year at a cost of 1,000,000 m.u., the estimated residual value at the acquisition date 100 000 m.u. The life of the asset is 5 years, the investor required rate of return equals the discount rate to future cash flows from use is 5%. It also considers the value of the asset at the time of purchase equal to its cost. Using the above formula at a discount rate of 5% and a useful life of five years, cash flows used amounts to 230,979 m.u. annually, as follows:

$$CF = \frac{1.000.000 \cdot 5\%}{1 - (1 + 0,05)^{-5}} = \frac{50.000}{0,21647} = 230.978,88 \text{ m. u.}$$

Size of annual amortization, that present developments in the asset value and investor compensation payable are set out in the table below:

TABLE 1: SIZE OF AMORTIZATION

Years (1)	Given value at the beginning of the year (2)	Future cash flows (3)	Investor compensation (4) = (2) x 5%	Annual amortization (5) = (3) – (4)
1	1.000.000	230.979	50.000	180.979
2	819.021	230.979	40.951	190.028
3	628.993	230.979	31.450	199.529
4	429.464	230.979	21.473	209.506
5	219.958	230.979	10.998	219.981

It is noted that the annual depreciation amount is increasing annually by 5%, while cash flows currently used remain constant. In practice cash flows of use can not remain steady, but they usually decrease from one year to another due to the fact that, as they are being used, the company's utility assets decreases, so that at a T moment value of future cash-flows is zero.

We wonder whether, from a certain set of rules regarding depreciation and respecting the considerations of the American model presented above, we could not identify a link between the depreciation method chosen by the entity and the future evolution of the use of cash flow assets.

In other words, our approach would go in the opposite direction of that of the model presented above, ie, considering as valid a set of rules on depreciation - its size is constant each year, respectively decreasing, for example - to quantify the extent of future cash flows of use.

In our approach we sustain the previous considerations, namely:

- the asset is view from the investor's perspective that expects a expect a remuneration of capital invested

- asset is recognized in the financial statements present value less residual value, just as depreciable basis will be equal to the amount of use;

- use value as the sum of present value of future cash flows at the acquisition date asset is equal to its cost;

- rate of remuneration of capital invested is similar to the discount rate to future cash flows;

- annual depreciation is considered as decreasing the amount of use of property between two moments  $t-1$  or  $t$ .

Our attempt to identify, from a certain set of rules on depreciation, changes in future cash flows of the asset may face some limitations, the model obtained could be inoperable in practice, but we believe that the approach deserves to be continued.

In developing the model we will use the following notations:

$V_t$  - present value of future cash flows from use at the end of  $t$  year

$CF_t$  - Net cash flow from the asset in  $t$  year

$r$  - discount rate of future cash flows;

$A_t$  - depreciation for the  $t$  year.

It considers the present value of future cash flows  $V$  amount of use updated as:

$$V_t = \sum_{i=t+1}^T \frac{CF_i}{(1+r)^i} + \frac{Vr_T}{(1+r)^T} \quad (1) \quad \text{for } t = 0, 1, 2, \dots T-1 \quad \text{where,}$$

$V_t$  - present value of future cash flows using,

$CF_i$  - Net cash flow from the asset in  $i$  year

$Vr_T$  - recoverable amount of the asset at the end of life.

When the parameter  $t$  takes values greater than or equal to  $T$ , the asset's present value is zero. It is considered that, after a certain time  $T$  cash flows are immaterial use value. To continue our approach recognizes that the size of annual depreciation to be considered spacing between two consecutive current asset values, respectively at times  $t-1$  (early) and  $t$  (end), mathematically rendered as:

$$A_t = V_{t-1} - V_t \quad (2)$$

We can observe from the American model mentioned previously, at a simple analysis, that the sum of present value of that asset at time  $t$  net cash flow for a year is the present value of the asset at time  $t-1$ .

For example  $(429.464 + 230.979)/(1 + 0,5) = 628.993$

It can be express by the mathematical formula:

$$\frac{V_t + CF_t}{(1+r)^1} = V_{t-1} \quad (3)$$

From (2), and (3) we get:

$$V_{t-1} + r V_{t-1} = V_t + CF_t$$

$$V_{t-1} - V_t + r V_{t-1} = CF_t \quad (4)$$

As the spread between two consecutive current values I set to be the size of depreciation for  $t$  year, equation (4) becomes:

$$CF_t = A_t + r V_{t-1} \quad (5)$$

Furthermore, the present value of the asset at a given time, eg  $t-1$  can be interpreted as the sum of accumulated amortization of assets generated by the formula:

$$V_{t-1} = \sum_{i=t-1}^T A_i \quad (6)$$

Using (6) equation (5) becomes:

$$CF_t = A_t + r \sum_{i=t-1}^T A_i \quad (7)$$

We have obtained such a model in which net operating cash flow of an asset can be expressed depending on the annual depreciation.

We believe that asset depreciation decreases by a constant amount each year after the formula:

$$A_t = \frac{2(C - V_r)}{D_f(n+1)} x (D_f - t + 1) \quad (8) \quad \text{where,}$$

C - cost of the asset

$V_r$  - residual value,

$D_f$  - duration of use (operation) in years

n - number of years of life of the asset.

Applying equation (8) in our example the asset life of five years, cost one million m.u., 100,000 m.u. residual value, the amount of depreciation in the five years of life is

$$At_1 = \frac{2(1.000.000 - 100.000)}{5 \times 6} x 5 = 300.000 \text{ u.m./an,}$$

$$At_2 = \frac{2 \times 900.000}{5 \times 6} x 4 = 240.000 \text{ u.m./an,}$$

$$At_3 = \frac{2 \times 900.000}{5 \times 6} x 3 = 180.000 \text{ u.m./an,}$$

$$At_4 = \frac{2 \times 900.000}{5 \times 6} x 2 = 120.000 \text{ u.m./an,}$$

$$At_5 = \frac{2 \times 900.000}{5 \times 6} x 1 = 60.000 \text{ u.m./an.}$$

Applying relation (7) the extent so accrued amortization, cash flows over the five years of useful life are the following:

$$CF_1 = 300.000 + 5\%(300.000+240.000+180.000+120.000+60.000) = 345.000 \text{ u.m.,}$$

$$CF_2 = 240.000 + 5\%(240.000 + 180.000 + 120.000 + 60.000) = 270.000 \text{ u.m.,}$$

$$CF_3 = 180.000 + 5\%(180.000 + 120.000 + 60.000) = 198.000 \text{ u.m.,}$$

$$CF_4 = 120.000 + 5\%(120.000 + 60.000) = 129.000 \text{ u.m.,}$$

$$CF_5 = 60.000 + 5\%60.000 = 63.000 \text{ u.m.}$$

Size of annual amortization, that present developments in the asset value and investor compensation due are listed below:

TABLE 2: SIZE OF AMORTIZATION

Years	Given value at the beginning of the year	Future cash flows	Investor compensantion	Amortization
1	900.000	345.000	45.000	300.000
2	600.000	270.000	30.000	240.000
3	360.000	198.000	18.000	180.000
4	180.000	129.000	9.000	120.000
5	60.000	63.000	3.000	60.000

### 3. RESEARCH RESULTS:

The purpose of our study was to demonstrate that from a certain set of rules regarding depreciation and following the considerations of the *implicit interest depreciation method* American method, we can obtain a model in which net operating cash flow of an asset can be expressed according to the annual depreciation measure. The model requires testing in practice, where estimates of future cash flows of the entity's policy depends on the assets held by their usefulness and the effect of various external factors which may cause the net cash flows to vary as a development model us.

### 4. CONCLUSIONS:

Although the Romanian accounting regulatory progressed significantly through acquisition, sometimes to the identification, of concepts and definitions presented in the international accounting standards, yet still failed to state a dialogue between accounting rules and accounting policies, between the freedom to choose accounting procedures and the obligation to provide users with relevant and reliable information so that the process used to estimate cash flows remains one tangible fixed assets inaccessible to most accountants. We consider our approach as a useful tool in trying Romanian practitioners implementing the provisions of international accounting standards. In this sense, they can turn in shaping the future cash flows from the use of fixed assets, based on the results of our approach, taking into account both time and political entity on the assets held, that the utility assets. In the future we intend to implement our model on a sample of entities in the transport of goods - it is known that functional impairment depreciation method used, which accurately express my units (their outputs).

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This work was co-financed from the European Social Fund through Sectorial Operational Programme Human Resources Development 2007-2013, project number POSDRU/1.5/S/59184“Performance and excellence in postdoctoral research in Romanian economics science domain.”

# INTELLECTUAL CAPITAL: COGNITION AND RECOGNITION. A CRITICAL APPROACH.<sup>i</sup>

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## ABSTRACT

*Current reporting practices in the companies' Financial Statements fail to provide complete information on their long-term resources, by not disclosing relevant details regarding the human factor. Many scholars gave full consideration to this issue in the past four decades since it was first addressed and important progresses were made as a result, especially in the area of managerial accounting, but with the central problem still standing. In the meantime the gap between the economic environment and its reflection through the financial reports seem to grow bigger as shifting towards a knowledge-based value creation was more and more obvious. Simple or elaborated accounting models solve numerous facets composing a complex reality but none succeeded to answer completely to questions of ethics, identification, control or valuation. In time the accounting theory itself made important progresses by encompassing traditions and practices from all over the world apparently independent to this subject. The new accounting layouts based on principles may have just set the stage for older human resource accounting theories to find ways of expression needed to complete the rest of the puzzle. In this paper we shortly describe a new conceptual tool with a side view design, that could just give the necessary impetus to already existing findings connect to close the circle.*

**Keywords:** *Intellectual Capital, Human Capital, Human Resource Accounting, Financial Reporting, Knowledge, Social, Employees, Intangible Assets, Employment, Disclosure*

## 1. INTRODUCTION

Of the three main classical production factors as viewed by Smith and Ricardo, namely land, labor and capital, accounting gives proper recognition just to the first and last. The catalyst is seen and thus perceived by the current accounting practice merely as a burden on the results, something renewable with each production cycle and following by consequence a similar accounting treatment to electricity or fossil fuel. We slowly dipped into a lethargic state of mind leaded by the guide dog of conservatism often fortified with ethical prejudgments. The economic environment gradually changed course to different means of value creation addressing the upper side of human body and needs, in link with higher education and thus different expectations of/from the subjects as compared to the first 20 centuries. Accounting practice has failed to keep pace with this change by not distinguishing the propulsive force that stood behind it and which is also absorbing the end-product of the post-industrial economic environment.

The academic environment however was fast to notice the change in the economic climate, first in an initial form and pioneer work of Brummet, Pyle and Flamholtz (1969) as Human Resource Accounting (HRA). Their cost approach valuation and management focus were further developed by a number of authors (for synthetic results on this subject see Sveiby, 2010, Bontis, 2001, Bontis *et al.*, 1999) leading to measurement models and tools or techniques designed to offer an insight on the human-related part of the business. A short history of the research progress is to be found in Flamholtz *et al.* (2002) or a more detailed work which will be referred to hereafter of Herman Theeke (2005).

In time a dichotomy has been more and more obvious regarding the use of such information from the broader area of intangible assets. One targeted to internal purposes commonly referred to as "knowledge management" (KM) and the other one to external reporting supplying information on the "intellectual capital" (IC). After a two-decade period in which the two terms were weaved together in the fabric of human capital, KM found a more fertile soil to develop in the competition for higher rates of return whilst a presumably lower competition for investment opportunities didn't exercise enough pressure on companies to report on every facet of self competitive advantage. The "intellectual capital" expression was first introduced in 1969 by John Kenneth Galbraith (Feiwal, 1975) in a period which we suspect by no chance coincides with the first systematic debate on agency theory inside the broader Corporate Governance topic. Although both HRA and IC have the same birth year, it was until the 90's to wait for a built upon

each other's conceptual advantage after an at least ten-year period of absence from the mainstream of academic preoccupation. The low interest can be explained by the high complexity required to continue (Flamholtz, Bullen, & Hua, 2002), poor dissemination among researchers, limited approach of the subject partially due to the lack of data (Baruch, 2001, p. 2), moral or ethic prejudgments regarding the subject.

## 2. THE CONCEPT

A well established body of IC literature circles around the idea that It looks like asset, it feels like asset but when it comes to analyze it, it's not an asset. "It looks like and it feels like" is based on an overview, a synthetic view in line with the holistic, logic based approach of the business that contrasts with an analytical one. The analytical view it's from the standpoint of current accepted accounting practices, standards and rules. The question that arises is "Why the micro level adding up the fundamental bits and pieces lead to an image different than the one expected that "just feels right"?"

When taking our picks on the general layout of a painting we assume that everything surrounded by the frame belongs to the painter. That may be true in terms of brushes and paints in total control of the author but when it comes to the reality depicted, that is different, wider and totally outside author's control. The value of the painting resides not only from what it was chosen to be shown, but by what one chooses to ignore. The frame of what was chosen in current accepted accounting practices to be shown in the Financial Statements is set by what is "financial" in the deeds of a business, on a short and long term perspective. That means, among others, to set a value and a value-time relationship for everything disclosed. And ignore everything else. If not ignored, other non financial aspects of business life can be easily discarded as non-relevant or as merely as an ad-exercise due to the lack in scalability, comparability or reliability. That applies even to the Notes as seen by IASB in the IFRSs (International Accounting Standards Board, 2008, pp. 77, 907) and indispensable even to the voluntary disclosures.

The hardship in considering "the human factor" as being a short-time influence in the businesses' life (and recorded as such just under a form of expenditure) comes from the striking contrast with its undeniable perpetual presence. Although the short-term financial influence of the labor over the company's life is well appropriated by means of expenses, the Balance Sheet's financial story falls short in explaining the next and previous year's presence of the same or slightly different human structures incurring expenses.

We assert that when we come close to the phenomena we zoom in too fast, passing by the real asset and view just a part of it (the expense incurring part) - that, by itself, it's not what we are looking for. We tend to watch closely just the human factor involved and that's due to the sinuous way the observation took place over the years. As we pointed out, it all started with the standalone HR issue and that's because this indeed just didn't fit in properly in the wider frame of a "reported organization". At that/those time(s) it looked like that's the single missing part. Further developments revealed a much complex situation that led from the original HR approach to the IC development in a (still) human-centered vision. This wouldn't be much of a problem if taken objectively. But most times the approach is subjective, connecting the human-subject with human-self leading to strong and otherwise valid criticism regarding ownership and/or control. This is not the case if we stop at the maximum reach of the businesses' (financial) influence.

The depth limit to which an economic entity extends its financial means in the human interactions environment is at the level of jobs, posts or positions opened or created by the company, needed to fulfill its purposes. This is the base level of all businesses' interactions, processes, information and communications often referred to as the Information, Technology and Communication (IT&C) system, more or less explicit or developed but which can be found in any organization. What people bring in the system represented by the organization is not what their full value is, but those abilities required for the survival and development of the whole. Much of these takes shape or are found under a form of information, hence the IT&C approach. The basic element (unit) of this system is a communication Node which is incumbent of human abilities needed to make it fit and work within organization but also of many other factors and means with long-term features also needed in a sustainable venture. The Node may contain procedures internally developed and implemented, codes of rules and conduct, various 3<sup>rd</sup> party certification, implemented standards, training, human resources, software customization, job descriptors,

special needs requirements, performance optimizers, variants of material incentives (e.g. target sales, maintaining clientele or production goals) and other various types of efforts with a long-term impact.

Such an approach is consistent with the results of a research program instituted in 1966 by the University of Michigan meant to develop and implement Human Resource Accounting in industry. Back then the basic objectives declared were “1) the development of a Human Resource Accounting system oriented to basic managerial informational needs, 2) development of managerial applications of Human Resource Accounting information, and 3) the analysis of the behavioral impact of Human Resource Accounting on individual employees and the organization within which they function.” (Likert, Brummet, Pyle, & Flamholtz, 1969). Later on the initial results were developed and published by Flamholtz in a three editions book in 1974, 1985 and 1999 (Flamholtz, 1999). From the initial managerial accounting focus emerged the concepts of human resource cost with a number of descriptors of which the above mentioned are a complement such as recruitment, selection, hiring, placement, orientation, on-the-job training, learning, opportunity costs (like lost productivity or performance during training), formal and informal training (Flamholtz, 1999, pp. 57-60). Included in the current node concept, these identifiers can serve as a comparison base for any other type of formalized intelligence – product of intellectual processes – meant for long time appliance in an economic entity, internally generated or acquired.

The control that has been a central issue in contending the HR accounting and reporting is solved since the managers have the full rights and responsibilities in shaping the structure of the business. The valuation may follow any of the three variants proposed by Annie Brooking in 1996 (Brooking, 1996) namely the cost, the market and the income approach, in line with the provisions of the International Valuation Standards (International Valuation Standards Committee, 2007) first issued in 1985. The marketability of one or more Node asset(s) is somewhat different than the normal buy or sell of regular assets given its particular nature but it can take the shape of any particular spinoff or carve-out operations.

The name for such an asset is yet to be developed to best describe the content, just like any other class of assets. The reference to an IT&C node may not be the most exact appeal to human resource accounting but it doesn't has to be since the afore set objective is the financial statements disclosure and not the managerial accounting treatment of the subject. Other class names in the balance sheet are given based on the same intend of best describing a wider content and not pinpointing on a very specific facet of it. For example “Land” is not a description of the place involved, “Buildings” do not have addresses clearly stated and “Machinery” doesn't specify the make and model.

For a full picture of the subject at hand, the asset part of the concept should be completed with the liability part, a very good variant being the liability–demand deposit approach of Theeke (Theeke A., 2005, p. 52) with a twist. It is incurred to synchronize the meanings and involves the change of his “Borrowed Human Capital” to something that really gives the third dimension of a company, the depth, the other two being nature and capital already well represented in the current accounting practice. As a liability, the value of a node would infer the Need-Of-Work (NOW) or the need-of-human capital dislocated by the current employees. The right part of the fundamental accounting equation would be then complete: Liabilities + NOW + Stockholders' Equity.

### **3. CONCLUDING REMARKS**

By developing the above concept we try to offer a tool which would allow accountants to disclose reliable information on the intellectual capital of a company. When designing the node we don't abandon the idea of a central standpoint of what we called “the human factor” but embed in it the proxies we can use for information and/or intellect. At first sight it may look like a poor representation for such high hopes but in the end it's, like we said, just a tool that doesn't have to look good to do its job. It's an X-ray machine that tries to picture the backbone of any company or a radar machine giving an idea of the plane by its heat signature. That signature can set a steady foundation for all the narratives in the Notes regarding the human assets and give the 3D vision of a company.

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<sup>i</sup> Working paper,

This work was supported from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/89/1.5/S/59184 „Performance and excellence in postdoctoral research in Romanian economics science domain”

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## RANKING MODEL OF ADVERTISING SITES IN IRAN

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### ABSTRACT

*Nowadays with the growing number of websites, including advertising websites in virtual world wide, and their improved quality in content, structure and interaction attributes, the ranking of websites becomes more and more difficult. Choosing a proper advertizing website in order to display the information of stakeholders and also in order to invest for the purpose of increased efficiency and effectiveness has always been of immense importance for senior managers and Information Technology managers to decide. Considering that, lots of attributes have been presented which makes the ranking more complicated.*

*This article presents a model for ranking the advertizing websites based on the known attributes in this field, with the use of AHP (Analytic Hierarchy Process) and also Expert choice software. A few dynamic advertizing sites have been ranked as an example.*

### 1. INTRODUCTION

According to competitors at business and follow to the use of efficiency and effectiveness, Online Advertising is one of the most suitable tools in this matter because of increasing number of users.

In this regard, selection of the best advertising site among the others with the least limitation and the highest speed will attract more users to the presented products and services for people, companies and organizations.

According to effectiveness attributes in this selection, the offered model in this article pays attention to the ranking of several advertising sites in Iran. Hereby we would like to familiarize you with the ranking of few sites as examples.

### 2. CONCEPTUAL MODEL

In variable and uncertain competitive business environment, to advertise in the best and effective way is essential. No one can deny the importance of online advertisement because it has many advantages. If you want to get maximum out of your online advertising campaign you must have all the information about the content and structure categories of online advertising site .Hence three categories of advertising site ranking are considered. Content, Optimize, and Communication. Table 1 presents of three main types of advertising site ranking taxonomy. These three types have been used as the basis of proposed conceptual model. After identifying three main categories of advertising site ranking, the decision committee were asked to distinguish sub-attributes of these attributes. Table 2 provides attributes and sub-attributes of advertising site ranking , that the decision committee proceeded through a series of discussion activities after identifying flexibility assessment attributes and sub-attributes, we construct the influence diagram ,influence diagram shows the relation between attributes and sub-attributes that has been shown in figure 1.

**Analytical Hierarchy Process (AHP)** is an approach to decision making that involves structuring multiple choice criteria into a hierarchy, assessing the relative importance of these criteria, comparing alternatives for each criterion, and determining an overall ranking of the alternatives .By organizing and assessing alternatives against a hierarchy of multifaceted objectives, AHP provides a proven, effective means to deal with complex decision making. Indeed, AHP allows a better, easier, and more efficient identification of selection criteria, their weighting and analysis. Thus, AHP reduces drastically the decision cycle.

**Table 1.** Advertising Site Ranking Taxonomy

Attributes Type	Definition
Content	Every web page has the potential to rank well in search engines and draw traffic from other sources, like social media sites and the blogosphere. Of course, whether a page draws traffic (and links) depends on whether it's optimized and how remarkable (useful, interesting, etc.) it is. But in general, most pages do "ok" and contribute to the cause, so it's both a quality and a quantity game.
Optimize	Optimizing that content is a key step, however, to ensure you give your valuable content the best chance possible of drawing traffic from the web. In essence, this section is about maximizing your ROC - return on content.
Communication	In touch with the benchmark site visitors and trying to attract more visitors and keep previous visitors, for site improvements and the increased popularity is very important

**Table 2.** attributes and sub-attributes of advertising site ranking

Attributes Type	Sub-Attributes
Content	<ul style="list-style-type: none"> <li>• Relevant website</li> <li>• Content update</li> <li>• New Content</li> <li>• Readability Level</li> </ul>
Optimize	<ul style="list-style-type: none"> <li>• site speed</li> <li>• Google Rank</li> <li>• Domain Info</li> <li>• Linking Domains</li> <li>• Metadata</li> <li>• Google Indexed Pages</li> </ul>
Communication	Traffic Rank Conversion Form RSS feed

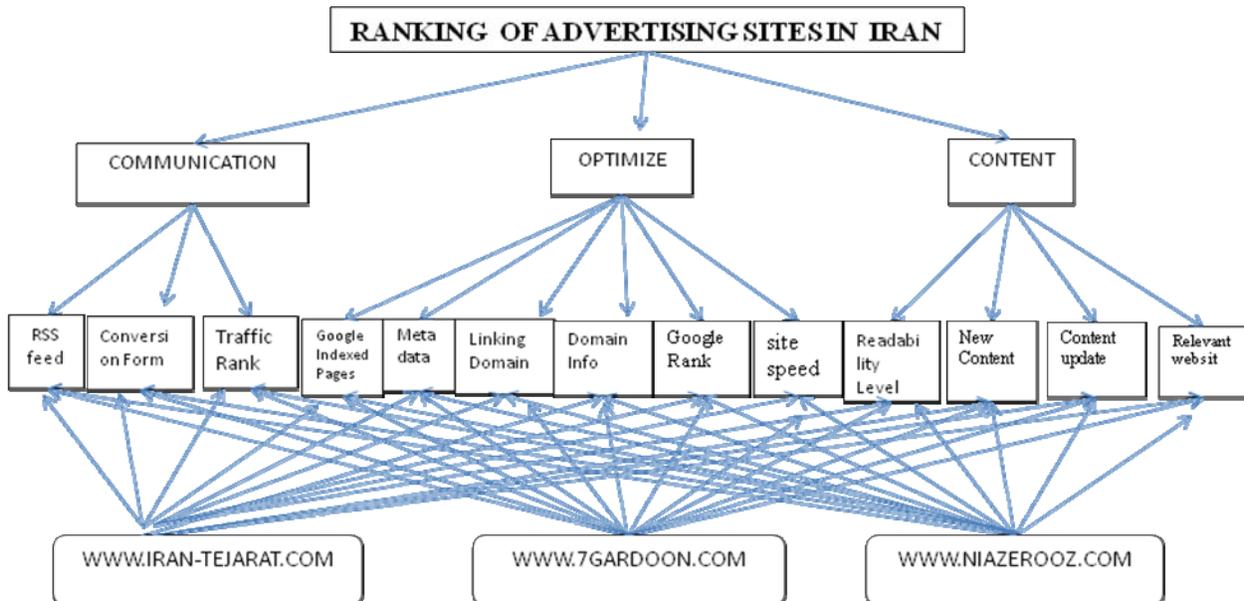


Figure 1. AHP Model For Selection Of Advertising Site

### 3. STRENGTHS:

The advantages of AHP over other multi criteria methods are its flexibility, intuitive appeal to the decision makers and its ability to check inconsistencies . Generally, users find the pairwise comparison form of data input straightforward and convenient.

Additionally, the AHP method has the distinct advantage that it decomposes a decision problem into its constituent parts and builds hierarchies of criteria. Here, the importance of each element (criterion) becomes clear .

The AHP method supports group decision-making through consensus by calculating the geometric mean of the individual pairwise comparisons.

### 4. WEAKNESSES:

Despite the popularity of the AHP, many authors have expressed concern over certain issues in the AHP methodology. Many researchers have long observed some cases in which ranking irregularities can occur when the AHP or some of its variants are used. This rank reversal is likely to occur e.g. when a copy or a near copy of an existing option is added to the set of alternatives that are being evaluated.

The AHP method can be considered as a complete aggregation method of the additive type. The problem with such aggregation is that compensation between good scores on some criteria and bad scores on other criteria can occur. Detailed, and often important, information can be lost by such aggregation.

### 5. RESULTS

According to the increasing of internal users, Online Advertising is one of the most effective tools to promote business. In this regard , choosing the effectiveness and efficiency advertising site meet the quality improvement at electronic business.

After presenting the informed model, with the use of AHP (Analytic Hierarchy Process) and also Expert choice software on three advertising sites [www.niazerooz.com](http://www.niazerooz.com), [www.7gardoons.com](http://www.7gardoons.com) , [www.iran-tejarat.com](http://www.iran-tejarat.com) ,a public good has been chosen to be advertised and with considering three attributes Content, Optimize, and Communication and sub-attributes at table 2,the first rank is [www.niazerooz.com](http://www.niazerooz.com),2<sup>nd</sup> rank is [www.7gardoons.com](http://www.7gardoons.com) and 3<sup>rd</sup> rank is [www.iran-tejarat.com](http://www.iran-tejarat.com) to present online advertisements.

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**TRADING IN ANIMOSITY:  
INSIGHTS INTO BILATERAL TRADE BY COUNTRIES IN BILATERAL CONFLICT**

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**ABSTRACT**

*This study is about Trade between Conflicting Nations. It explores some situations of inter-country conflict in the twentieth to twenty-first century, and analyzes their effect on respective inter-country trade. Four pairs of countries are considered here, that have been involved either in military conflict or in economic embargo. The paper identifies how mutual trade gets affected due to the conflict and what factors can explain the continuance or revival of trade*

**Keywords:** *International Trade, Conflict*

**1. BACKGROUND & METHODOLOGY**

Many studies have researched the relationships of trade and conflict between nations. Some focus on the impact of trade on conflict, while others look the other way round - into how conflict affects trade. In either situation, there are 'liberal' and 'realist' views. 'Liberals' argue that trade generates economic benefits for both parties and the anticipation that conflict would lead to reduction of gains deters countries from engaging in mutual conflict (Doyle, 1997; Oneal & Russett, 1997; Polachek, 1980 quoted in Chan, 2009). Realists argue that trade produces income and efficiency gains; which also has security implications - the potential to improve military capability of an adversary. The gains may also be asymmetric between rivals. So, a security-minded nation may prefer not to trade (Gowa, 1994; Grieco, 1988, 1990; quoted in Chan, 2009). There are thus two related but different views – trading nations may avoid conflict, or trade may be considered unsafe for a nation in conflict.

About the negative impact of conflict on trade, there is less disagreement. Liberals support the direct connection that conflict reduces trade, while realist theories also imply that trade - particularly in strategic goods - will come to a halt due to the concern for relative gains (Grieco, 1990; Huntington, 1993, Waltz, 1979, quoted in Barbieri and Levy, 1999).

Studies in the past have shown that countries with conflicting interests tend to trade less with each other as compared to when they didn't have any conflicts. Territorial disputes (Simmons, 2005), conflictual political interactions (Pollins, 1989a), and anticipated future military conflict (Li and Sacko 2002; Long 2003a) have been found to be associated with reduced trade. On the other hand, states with similar political interests tend to trade more with each other than do other states (Morrow, Siverson, and Taberes 1998).

But these theories fail to explain the flourishing trade between China and Taiwan, North and South Korea, and the steady increase in trade between US-Iran, US-Cuba etc (Barbieri and Levy, 1999). Such anomalies, it is then argued, may be due to the presence of domestic actors who gain through integration into global markets (Kastner, 2007). Chan (2009) refers to this phenomenon as "dense commercial ties" that make it difficult for politicians to support external conflict.

The present paper furthers this line of investigation. It studies the trade (mostly through UNCTAD Handbook of Statistics, various years) between nations in conflict, and explores the presence of above factors in the variation of trade. Four pairs of countries have been looked into: US-Cuba, US-Iran, North Korea–South Korea, and India-Pakistan. These dyads are spread across the world. Some of them have had military conflict; others have politico-eco-ideological problems. Their conflicts have gone on for roughly the same historical 'age' – the last 40-60 years. In the rest of this paper, we analyze each of the four conflicts separately. We note the variations in their trade, identify features that define their conflict/their trade/their conflict-trade interaction, and then arrive at key conclusion.

## 2. US-IRAN CONFLICT

Iran's 'Islamic' revolution and the taking of American hostages in 1979 may constitute the beginning of US-Iran conflict. USA severed ties with Iran, began to pressure Iran through the UN Security Council, and applied trade sanctions.

Year	US Imports from Iran (in \$ mn)	US Exports to Iran (in \$ mn)
1985	725	74
1986	569	34
1987	1668	54
1988	9	81
1989	9	55
1990	7	163
1991	231	528
1992	1	748
1993	0	616
1994	1	329
1995	0	277
1996	0	0
1997	0	1
1998	0	0
1999	2	48
2000	169	17
2001	144	8
2002	156	32
2003	161	99
2004	152	85
2005	174	96
2006	157	86
2007	173	145
2008	104	683
2009	65	280
2010	94	208

It finally issued a total trade embargo on Iran in 1995. It also made a law to provide for penalties against foreign companies that invested in Iran's petroleum sector. The data on US-Iran trade in Table-1 gives the trade effects of above conflict.

It is notable that despite the Iran conflict, and despite US support for Iraq in the 1980-1988 Iran-Iraq war, the import of oil from Iran continued till 1987. That is, **trade continued despite conflict**. From 1988, US imports of oil ceased entirely. As a precursor to this, US imports from Saudi Arabia increased from \$1.9bn in 1985 to \$4.4bn in 1987. Thus we see that though worsening political relations affected trade of US, it **continued to trade till such time that it found alternative partners** (Torbat, 2005). Iran, on the other hand, found alternative export markets (for mainly oil) in China, India, and Japan. Table -2 shows how its exports that were blocked by US embargo found increasing alternative markets.

TABLE - 2			
Exports from Iran (in \$ mn)			
Year	To Japan	To India	To China
1995	3304	538	213
1997	3369	573	522
1999	3598	1020	793
2001	5117	459	2311
2003	8233	309	3412
2005	12527	794	7337
2007	13027	8001	11656
2009	8841	6456	10320

Studying the **composition of trade** during conflict is also interesting. A bulk of US imports from Iran is of rugs and carpets. The value of carpets, rugs etc was over 66% of the total imports from Iran in 2005, and over 80% in 2009. It can be inferred that in the context of conflict, US **prefers to import only luxury items which can be substituted by other sources** (Torbat, 2010).

Exports from US to Iran, on the other hand, are primarily wheat, soya bean, medical equipment, and pharmaceuticals, which is allowed by US as a concession towards **helping people rather than regime**. (<http://www.foxnews.com/story/0,2933,378167,00.html>)

### 3. US-CUBA CONFLICT

Being neighbors, US and Cuban citizens have had a long history of immigrating from one to the other for employment and for business. US was also Cuba's principal trading partner during the early 50's. Cuba's export to US in 1954 amounted to US\$ 368mn while its imports from US were US\$ 367mn. ([http://ctp.iccas.miami.edu/FACTS\\_Web/Cuba%20Facts%20Issue%2015%20July%202005.htm](http://ctp.iccas.miami.edu/FACTS_Web/Cuba%20Facts%20Issue%2015%20July%202005.htm))

In 1959 Fidel Castro came into power in Cuba. A large amount of private property was nationalized, including industry, farms, and urban assets. Much of this belonged to US citizens and firms. This also suggested to that Cuba was moving towards a Communist regime, in the context of the ideological struggle going on between capitalist and communist nations of the world. In the face of all this, US imposed a partial trade embargo on Cuba in 1960 which turned into a full embargo by 1962. (<http://www.countriesquest.com/caribbean/cuba/economy.htm>)

The trade between US & Cuba became close to nothing in 1960. USSR became Cuba's largest trading partner, accounting for 70-90% of its trade over four decades (Thompson, 1999). Here too, like in the previous (US-Iran) conflict situation, trade with an **alternative partner filled the void caused by decline in trade with a previous partner now in conflict**. Also, despite the geographical and cultural closeness of US and Cuba, there was an **ideological and geopolitical force of conflict with US which brought Cuba to trade with USSR**.

Disintegration of the 'soviet bloc' led to changes in the ability of Cuban trade partners to continue trade. With continuance of conflict with US, Cuba's trade suffered a steep decline (Table-3). Its trade with Soviet Union, for example, fell by more than 90% - from \$8.7bn in 1989 to \$4.5bn in 1991.

While Cuba attempted to introduce economic efficiency – allowing FDI in sectors like tourism, legalization of US dollar, semi-privatization of some state farms, and allowing some limited private enterprise - its conflict with US continued. The US government imposed further restrictions on Cuba in 1992 and then in 1996. It endorsed the Cuban Democracy Act restricting access to US ports of third-country vessels servicing Cuba. It also disallowed trade by US subsidiaries with Cuba.

Faced with US conflict as well as with the decline of Soviet Union, Cuba improved trade with Canada, Japan, Mexico, Venezuela, etc. FDI began to arriving from Italy, France, Spain, and UK companies. However, not until 2002 did US-Cuba trade revive, as seen in Table-3.

Year	US Imports from Cuba	US Exports to Cuba
1992	0	1.3
1993	0	2.4
1994	0	4.4
1995	0	5.4
1996	0	5.3
1997	0	9.4
1998	0	3.6
1999	0.6	4.5
2000	0.3	7
2001	0	7.2
2002	0.20	145.2
2003	0.30	259.1
2004	0.04	404.1
2005	0.009	369
2006	0.14	340.4
2007	0.26	447
2008	0.04	711
2009	0.02	532
2010	0.34	370

It can be seen that while US exports to Cuba had picked up by 2002, there was very little import from Cuba. This is because of the stagnation and decline of its industry over the decades. Faced with Cuba's inability to export and its consequent lack of foreign exchange, the other trading partners tended to use barter with Cuba. In the face of conflict, such barter was not possible in trade with US. (<http://www.reuters.com/article/2011/02/11/cuba-usa-food-idUSN1110412620110211>)

Thus, ***conflict makes it difficult to trade when lack of foreign exchange requires trade by barter.*** Regarding the composition of trade, while Cuba, under conditions of trade embargo, imports mainly food products and pharmaceuticals, the exports of Cuba to US are artwork, antiques, stamps, etc. That is, ***conflict situations do very often allow food products.***

#### 4. INDIA-PAKISTAN CONFLICT

The sovereign states of India and Pakistan came simultaneously into existence in August, 1947, after the partition of British India on communal basis. Since then, India and Pakistan have fought 3 major wars and an undeclared war. Apart from these, there had been numerous small skirmishes between the two countries on the border, and terrorist activities in India by Pakistan based actors. Prominent among these are – the 2000 attack on Red Fort in New Delhi, 2001 attack on Indian Parliament building in New Delhi, 2006 Mumbai train bombings, and 2008 attack on civilians in Mumbai.

Trade between India-Pakistan can be viewed in the Table-4 below.

96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
193	187	320	161	250	209	251	345	616	869	1673	2238	1810	1849

There are periodic declines in trading activity which actually coincides well with the terrorist attacks on India and the trading pattern is patently ***prone to the conflict relationships between the countries.***

It is more instructive to look at the trading basket in this conflict relationship, shown in Table-5 below.

TABLE-5			
Indian Exports to Pakistan		Pakistani Exports to India	
MAN-MADE FILAMENTS.	26.681%	EDIBLE FRUIT AND NUTS; PEEL OR CITRUS FRUIT OR MELONS.	16.8%
ORGANIC CHEMICALS	19.595%	SALT; SULPHUR; EARTHS AND STONE; PLASTERING MATERIALS, LIME AND CEMENT.	15.4%
COTTON.	15.430%	COTTON.	14.2%
RESIDUES AND WASTE FROM THE FOOD INDUSTRIES; PREPARED ANIMAL FODER.	5.586%	LEAD AND ARTICLES THEREOF.	5.8%
EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS.	3.804%	INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METALS, OF RARE-EARTH METALS, OR RADI. ELEM. OR OF ISOTOPES.	3.6%
RUBBER AND ARTICLES THEREOF.	2.647%	MINERAL FUELS, MINERAL OILS & PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES.	3.5%
TANNING OR DYEING EXTRACTS; TANNINS, THEIR DERI. DYES, PIGMENTS, OTHER COLOURING MATTER; PAINTS & VER; PUTTY AND OTHER MASTICS; INKS.	2.350%	OIL SEEDS AND OLEA. FRUITS; MISC. GRAINS, SEEDS AND FRUIT; INDUSTRIAL OR MEDICINAL PLANTS; STRAW AND FODDER.	3.0%
COFFEE, TEA, MATE AND SPICES.	2.345%	PLASTIC AND ARTICLES THEREOF.	2.5%
OIL SEEDS AND OLEA. FRUITS; MISC. GRAINS, SEEDS AND FRUIT; INDUSTRIAL OR MEDICINAL PLANTS; STRAW AND FODDER.	2.257%	EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS.	2.0%
IRON AND STEEL	2.043%	WOOL, FINE OR COARSE ANIMAL HAIR, HORSEHAIR YARN AND WOVEN FABRIC.	1.4%
NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF.	1.582%	COFFEE, TEA, MATE AND SPICES.	1.0%

Most of the traded items are agrarian or related to non-technology sectors except a small export of machineries and steel (3.625%) from India to Pakistan. Evidently, the situation of **conflict makes it difficult for the countries to trade in goods that may be strategic or cause advantage to the other.**

##### 5. NORTH KOREA – SOUTH KOREA CONFLICT

After World War II, both the US and the Soviet Union tried to influence the political situation in the Korean peninsula, then a Japanese colony. A communist regime came up in the North, which attacked the rest of Korea. This was opposed by US forces leading to the Korean War. With UN

intervention, the war finally ceased in 1953, and a Demilitarized Zone was created between North and South Korea. Since then, both Koreas have continued a relationship of intermittent conflict.

South Korea's market economy has seen it grow at a very fast pace in the last few decades whereas North Korea's closed and socialist economy has limited the advantages of international trade. North Korea traded predominantly with other socialist regimes like Russia and China, and mostly on barter.

Inter-Korea trade however began to be visible from late 80's – such as clams from N Korea in 1988, paintings and other artwork in 1989, etc. There was also a barter of S Korean refrigerators and TV's, and barter of rice, coal, and cement. The trade in this period was ***largely indirect, conducted through brokers in Hong Kong and Japan.***

More regular trade of manufactured goods from both sides also began in early 90's. A Special Administrative Zone came up near the border inside N Korea, where S Korean companies established their plants. Despite the escalation of conflict on nuclear issue since 2008, both countries have ***honored their commitment to this and other similar trade zones.***

With the development of N Korea, and with relative stability in the conflict situation, the overall foreign trade of N Korea has diversified, as seen in Table-6 below.

<b>TABLE 6 : World Trade of North Korea (Jeong &amp; Hokyung, 2010)</b>				
<b>Rank</b>	<b>Industry</b>	<b>1992</b>	<b>Industry</b>	<b>2006</b>
1	Basic Metals	32.9	Basic Metals	13.2
2	Apparels (including fur)	14.7	Electronic Components, radio, TV & communication equipment	13.2
3	Other Transport Equipment	7.2	Apparels (including fur)	10.1
4	Agriculture	5.3	Chemical Products	8.5
5	Fishing	5.3	Other machinery and equipment	6.2
6	Hard Coal, crude petroleum and uranium	4.1	Food and Beverage Products	5.9
7	Textile and other apparel	3.9	Mined Metals	5.1
8	Chemical Products	3.9	Hard Coal, crude petroleum and uranium	4.5
9	Food and Beverage Prods	3.9	Other Transport Equipment	4.1
10	Non-metallic mineral prods other than fuel products	3.1	Fishing	3.4

Mutual trade between the two Koreas is however a subset of the above. In fact, South Korea has become the second most important trading partner of N Korea after China. What is also notable is that re-emergence of conflict has not affected the special trade zones.

## **6. CONCLUSIONS**

Trade between countries in conflict is thus significantly impacted by the status of their relationship at any point in time. Also as the animosity between such nations goes through cycles, so does the trade patterns between them. This fluctuation of trade with political situation was found in the examples of US-Cuba, and India-Pakistan and in the case of North Korea-South Korea it was seen that major trade enhancements took place when situation was relatively stable. Thus between periods of major incidents trade tends to improve between such nations. This brings us to an important conclusion that even if issues are not completely resolved, even a status quo situation can significantly enhance trade.

Even during animosity, the technologically superior nations tend to continue trade in essential industrial raw material for their own economic development. This is especially so till they are able to obtain these products from other nations. For example, US and South Korea imported raw materials like petroleum, metals, cement, chemical, electrical items from Iran and North Korea respectively.

When countries having animosity share borders, their trade is also influenced by the cultural similarities between them and this especially shows up in the food and agricultural trade between them like sugar between India & Pakistan, and clams, fish and other sea food between North Korea and South Korea.

When animosity levels increase between nations, they may switch, suddenly or gradually, their supply chain source to third countries, such as US increasing its procurement of petroleum from Saudi Arabia instead of Iran. Alternatively, they may also trade via third country such as North Korea-South Korea trade via brokers in Hong Kong.

During initial and belligerent phases of conflict, countries may trade in craft items like in case of North Korea-South Korea and US-Iran. However, with some normalization, this may gradually shift to manufactured goods as in the case of North Korea- South Korea.

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# THE ROLE OF CORPORATE SOCIAL RESPONSIBILITY ON EMPLOYEES: A STRATEGIC APPROACH

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## ABSTRACT

*Organizational culture is an important element in its development. Building a culture is complex process, which includes all internal aspects of the company and involve all staff. A company that integrates social responsibility and integrate it properly into its strategies, ensures greater employee retention and create a good employer image among prospective employees. The more an employee identifies with a company, the more it will have a positive attitude towards it. Staff plays an important role in customer satisfaction having a significant contribution to the successful implementation of company objectives. In these circumstances it becomes necessary a strategic planning of the organization oriented towards both inside the company (employees) and a socially responsible approach of business conduct. In this respect, the article presents the impact of social responsibility on the employees, and explains how to integrate this responsibility in the organization's mission statement.*

**Keywords:** CSR, employees, strategic planning, mission statement

## 1. INTRODUCTION

Organizational culture is an important element in its development. Building a culture is a complex process, that includes all internal aspects of the company and involves all staff, it is the way of life, inner balance of the company. (Cetina, 2009, p.119). In recent years, a marketing priority for large organizations has been internal marketing. Successful companies are able to attract, retain and develop staff and create a working environment which stimulates productivity and satisfaction among employees.

The marketing approach to employee motivation and satisfaction is to consider each employee as an extension of corporate image and an important element in customer satisfaction, so by default in achieving marketing objectives. For an employee to talk in appreciative terms towards the organization, efforts are needed from both the manager (information, coordination, mobilization, etc), as well as from specialists in human resources (to ensure cohesion, increased job satisfaction, motivation etc) and public relations (creating a feeling of identification with the organization and its values etc..). In this context, HR specialists and marketers should collaborate in order to identify what are the triggers of employee motivation and the way in which this can be realized.

## 2. THE ROLE OF SOCIAL RESPONSIBILITY IN EMPLOYEE SATISFACTION

Recent surveys highlighted the perceptions of employees on their job. One example is that the top Fortune Best Places to Work, that presents the best working conditions on the employers. The results revealed that if the employees appreciate and respect the social responsibility programs of the company and participate at them, have a high job satisfaction. CONE Report (2007) studies what are the expectations of American consumers towards companies and how companies can influence their perceptions of purchase intentions, willingness to get a job in that company and the investment decisions in the company. If in the initial study the focus was primarily on the consumers, the research has been extended to employees, investors and other key stakeholder groups. Many Americans said they are influenced in choosing a company, if there is a consistency and relevancy between the supported cause and the field of activity of that company. Environment protection and sustainable development are among the most valued causes by Americans. Cone survey indicates that companies that support a social cause are having a positive impact on current or prospective employees. Thus, 88% of employees who know a cause-related program conducted within the organization have a strong sense of loyalty to the employer, and 53% of them choose to work in the company partly because it is dedicated to social causes.

Other specialists (Morsing et al., 2008) noted that the level of confidence of external stakeholders to social responsibility activities of a company depends on staff commitment and involvement in them. The authors propose an approach from inside to outside the company, arguing that social responsibility will have a positive impact on satisfaction and productivity at work, which will be reflected in customer service. So supporting the personnel will affect positively or negatively, the company's credibility towards external stakeholders, depending on the degree of involvement in CSR activities. Motivation is the impetus that causes a person to act in a certain way. People are motivated when they expect a certain action will lead to achieving a particular goal - a reward that meet specific needs.

One of the most important theories on motivational factors at work, Herzberg's theory, speaks about two types of motivational factors: extrinsic motivation and intrinsic factors. While their extrinsic motivation originates outside the person or work station, intrinsic motivation comes from how the employee perceives the work itself. The main motivational factors for the organization are presented below.

External motivational factors:

- a) Salary: Particularly in the case of the lower prevailing needs;
- b) Working conditions: technical and functional aspects of the environment and job opportunities;
- c) Work Environment: atmosphere of working relationships with colleagues and superiors.

Intrinsic motivational factors:

- a) The structure of the job (type of activity and the degree of autonomy)
- b) Recognition of results: verbal or by rewards;
  - c) opportunities for advancement;
- d) Opportunities for personal development: and / or training;
- e) The balance between work life / personal life.

Employees do not just want a job where you earn enough to support their existence. They expect a more active role in the organization, in an environment where they can feel motivated and that can bring them additional benefits (eg to learn continuously and to progress). If employees are satisfied and attach the company, they will recommend it to friends and family as a good employer (Bhattacharya, Korschun and Sen, 2008). Successful companies have the ability to attract, retain and develop harmonious relations with talented employees, which will bring added value (Hoeffler, Bloom and Keller, 2010). In a recent study conducted on a sample of 400 managers of companies, which have standards aligned with the principles of the United Nations Global Compact, it shows that the effects of social responsibility initiatives are reflected mainly on employees (Bielak, Bonini, and Oppenheimer 2007). The more an employee identifies with a company, it will have a positive attitude towards it and will achieve its objectives.

Staff plays an important role in customer satisfaction, it has a significant contribution to the successful implementation of relationship marketing in companies. Bhattacharya, Korschun and Sen (2009) argue that perceptions of social responsibility provides benefits for employees and these benefits determines the quality of relationship with the company and behavioral outcomes that may affect the company directly or indirectly.

### **3. MISSION STATEMENT AN IMPORTANT INSTRUMENT OF GUIDING EMPLOYEES**

Strategic planning at corporate level is the first and most important step in the planning process. Incorporating elements of social responsibility at this stage represents the highest level of internalization of social responsibility into the company. The integration of social responsibility at this stage may change the way in which management can take decisions on business development of both the economic and societal criteria. In this sense, the company may decide to develop new strategic business units that are environment-friendly (an energy company may decide to invest in production of wind energy for example), or may exclude certain businesses that are polluting. Therefore, for social responsibility is an integral part of the decision making process at the company must acquire a more active role in the mission, vision and company values.

Each organization has a purpose for which it was founded, and one must be very clearly defined. Before defining the mission, the management team must have a vision of business relevant to the various categories of stakeholders: customers, employees, shareholders and the community in general.

Conducting research on mission statements of Fortune 500 companies, literature identifies (Pearce, J.A. II, David, F, 1987) eight key components that companies use to define their mission:

- identify customers and markets;
- identify the main products and services;
- specify the geographic location;
- Identifying technology used;
- expressing desire for survival, growth and profitability;
- specifying the main elements of philosophy;
- identify corporate identity;
- Identifying desired public image of the company.

In literature, these are known as coordinates or parameters of the mission statement. Integrating social responsibility and employee orientation into the mission-statement of the company either adding new coordinates, or by supplementing the existing ones.

A well-defined mission statement will provide a vision regarding the economic, legal and societal environment of the business. The main benefits of a good mission statement are:

- provides a direction for the company;
- increases the possibility of tracking and control over the manager;
- establishes standards of behavior;
- creates premise for employees to identify with the organization;
- gives greater recognition to the external stakeholders;
- inspires and motivates employees;
- guides the organization during a crisis;
- improves the way the resources are allocated;

Values define the nature and culture of the company. On its website the company Unilever presents its objective and principles which underlie the whole of its business: "The objective of the Unilever corporation stresses that, to have the desired success, it is necessary to give proof of the highest standards of behavior towards all those who work against the communities in which we operate and the environment on which our activities have an impact. " The central argument offered by the company for this kind of behavior is explained further: " Being a multi-local and multinational company, we want to have a positive impact on the community and environment through local actions that take place in partnership with local authorities and organizations. "Analyzing the Unilever can see that are oriented stakeholder categories with which contact employees, suppliers, communities and the environment (<http://www.unilever.ro/ourvalues/>).

Vision is market oriented and should express the aspiration in terms of how the company wants to be perceived in the future and which aims to reach. From the perspective of social responsibility, a vision must incorporate how the impact of the company will be managed by it. Vision provides the company with a clear set of directions for action at the corporate level, which will develop business strategy.

Analyzing companies in Romania we can identify 5 orientations of integrating CSR into the mission statement.

• **Orientation towards the community.** In this case company is defined as a citizen of the community with rights and obligations, and has a role to participate actively in community development. This type of orientation falls within the concept of "corporate citizenship". Such is the mission of the Romtelecom company, one of the main phone company in Romania, member of OTE group: Romtelecom will engage in providing products and telecommunications services that meet consumers' requirements and legal clients in Romania. The company will operate to produce dividends for shareholders and become a respected member of the Romanian society. "With this mission statement company Romtelecom plan puts the main points of reference: the shareholders and society. Company acknowledges that in order to provide important dividends to shareholders must satisfy customer needs and legal persons, but must act

in the spirit in which they operate. From here you can see from one transcends orientation to marketing orientation to social responsibility. Moreover, the statement is indicative of the founder of restaurant chain McDonalds: "We feel grateful to help communities that give us so much" Ray Kroc - McDonald's founder.

- **Orientation towards environmental protection and sustainable development.** Companies may include in their mission statement, a desire to minimize the impact of business on the environment. HeidelbergCement Romania made a commitment to sustainable development. Company initiatives are built on the principles of sustainable development. We care about environmental protection, welfare of our employees and local communities.

- **Orientation toward welfare of clients** - in this case the company says it is not only concerned about satisfying consumer needs, but more than that, taking care of their health and welfare. Zepter believes that only an educated consumer will make the right choice when purchasing products with the appropriate impact on his health. Zepter products act as a bridge between humanity and nature. With this bridge, we can return to a natural and healthy living. This mission statement speaks of the tendency of consumers to nurture healthy and on their characteristics (consumer education).

- **Orientation towards the welfare of employees.** Company may include in its statement of how the mission relates to its employees. Such statements may refer to non-discrimination in the workplace based on criteria other than professional, workplace safety and health of employees. RTC Holding mission - playing us well, find solutions to market needs, with the secondary effect of job sites sustainable and competitive. For each of us is true: "I care! I Can! I love it!"

- **Orientation towards ethical conduct in business.** In this case, the company is considering how to establish its relationships with its market. Approaching an ethical issue the company encourages the development of partnerships in the upstream and downstream of the value chain. The Body Shop is famous for socially responsible conduct on the market. Its mission is: "we believe that every woman has the right to feel fabulous, we channel all efforts to find quality natural ingredients, grown and bought in an ethical manner, to transform them into innovative products, put on the market in a fair and the price of which is accessible to everyone."

#### 4. CONCLUSIONS

Employees of the company are one of its most important resources, and, moreover, one of its most important stakeholders. Under these conditions companies will have to behave responsibly towards employees, to realize those internal marketing activities to increase the attractiveness of jobs, and to engage with them in social causes. Corporate social responsibility initiatives will have a good starting point in the wishes and needs of employees and their community. Integration of employee orientation in the company's mission statement gives greater credibility to its actions, and also provides direction for action to them.

#### ACKNOWLEDGEMENTS

This work was supported by CNCSIS-UEFISCSU; project number PN II-RU 663/2010.

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<http://www.unilever.ro/ourvalues/>

<http://www.zepter.ro/>

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# FACTORS AFFECTING THE CHOICE FOR FURTHER STUDY IN THAILAND OF CHINESE STUDENTS WHO CURRENTLY STUDY IN THAILAND

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## ABSTRACT

*This research interests in finding the factors affecting the choice for further study in Thailand of Chinese students currently study in Thailand. The data was collected from Chinese students who are studying undergraduate and postgraduate at Burapha University, Thailand, total of 400 samples. The sample sets attitude towards Thailand. The highest score is the friendliness of Thai people. The overall statistic results found that the standard of healthcare, financial, security and reliability and trust in Thai people have significant positive effects on Word-of-Mouth.*

**Keywords:** word-of-mouth, country image, Chinese attitude

## 1. INTRODUCTION

At present, we have to accept that China if compared to other countries in Asia or globally, it is one with high economic growth. Because China has a population of over 1,300 million people, working in China are very competitive. Therefore, Chinese students need to develop themselves and gain work experiences as much as they can accordingly. As we can see that China economic is growing rapidly which then increase the living financially for some part of the country. From the statistics of Chinese Ministry of Education found that number of Chinese students who studied abroad in 2010 were up to 2,200,000 people (FuPeiPei 2010) that increased 54% from last year and will likely to increase every year. The highest values are USA, Australia, UK, Canada and Asian countries respectively and with the Chinese government's policy to build relationship with Asian countries; it found that Thai, Cambodia or Vietnam, all have Chinese students studying in these countries. The reasons for choosing to study in other countries are either government policy, parents, students themselves, etc.

To expand the education market in China, the most important thing is to make Chinese people especially the target audience understands more about Thailand and the education system. They can obtain information from multiple sources such as personal sources, commercial sources and public sources. However, the most effective source is from personal source. Generally, buyers are informed by commercial source. But personal source will evaluate products to the buyer. People often ask for advice about products and services from other people whether it will be from their friends, family or someone they know or an expert. Therefore, the marketers will have to pay more attention to create word-of-mouth information. This research is to study the factors affecting the choice for further study of Chinese people who currently study in Thailand which is a potential and reliable group that can effectively propose for people who are interested to study in Thailand.

## 2. LITERATURE REVIEW

### 2.1 Country Image and Components

Han (1990) gave the meaning of The Country Image that the consumer attitude towards the quality of goods or services produced in that country, especially in developing countries, the country image highly affects the attitudes of consumers. This is consistent with Secord (1982) which stated that the perception of consumers towards producing countries affect the attitude toward the product or service in that country.

There are many researches discussed about the method to measure the level of Country image's perception (Shimp, Samiee, and Madden 1993; Han 1990). However, the research that is appropriate and aligned with this research is the study of Elliot (2007) which identified the topics of the country image that required studying such as standard of the health care, the beauty of the environment, the financial position, the excitement of the events and tourist attractions, fundamental Infrastructure and advanced

technology, the friendliness of the people, education level of people, the safety, reliability and trust in people.

## **2.2 Word-of-Mouth Communication**

Intention to introduce /tell the other people is consistent with the strategy for word of mouth marketing. Communication among consumers is very powerful such as when the consumer says something to another consumer, the message is moving fast, private, reliable and more acceptable.

Word of mouth means that the user is communicated to each other about our service in both the good and the bad. It is considered as a factor that can influence the expectations. There is a research which has indicated that the recommendation from colleagues and neighbors are very effective against the expectations of the service users for various types of services.

## **2.3 Type of Word of Mouth communication**

Word of mouth communication is an important reference source, especially for service business. This information released could possibly be both positive and negative as follows.

### **2.3.1 Positive Word of mouth communication**

When customers are satisfied with the services, they will talk to others and it is an importance references especially in medical treatment services, education or professional services such as doctor, dentist, management consultant, architecture and accounting etc. Communication with this method will help the organization to save costs when compared with others methods.

### **2.3.2 Negative Word of mouth communication**

If the customer is not satisfied with the service received, they may pass their dissatisfaction to other customers as well. Therefore, service marketers should be more prudent to the effect on negative word of mouth communication.

## **3. METHODOLOGY**

The population in this study was Chinese students, 594 people, studying undergraduate and postgraduate at one of the most popular universities in Thailand. Data were collected by questionnaires and a response rate is 67%, 400 respondents. The scale for measures of each construct used a five-point Likert scale with strongly disagree - strongly agree as the end points. The reliability of summated scales is best represented by Cronbach's alpha; the reliability values should exceed the recommended level of .70, although slightly lower may sometimes be acceptable for initial work on a concept (Hair et al. 1998).

## **4. KEY RESULTS & FINDINGS**

The sample surveyed in this study consists of 44.5 percents of males and 55.5 percents of females. Eighty-nine percents are age ranges between 18 to 24 and the most population. Seventy-seven percents live the South West region of China and among the highest. The second highest is 13.8 percents and live in the North East region. Most samples are exchange students with 55.8 percents and followed with 44.3 percent of the local students. Moreover, the result found 33 percents with family income are more than 60,000 Yuan per year and followed by 22.3 percents with family income between 20,001-35,000 Yuan. Eighty-eight percents are currently study undergraduate and 12.5 percents are in Master level.

### **4.1 Word of mouth level to choose Thailand for further study**

Word of mouth to choose Thailand for further study sort by average, the top one is word of mouth when someone asked (mean = 2.59), followed by willingness to tell before (mean = 2.30) respectively. When including all factors, the word of mouth level to study in Thailand is in the level (mean = 2.40). (Table 1)

**TABLE 1: WORD OF MOUTH LEVEL TO CHOOSE THAILAND FOR FURTHER STUDY**

<b>Scale Items</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Willingness to tell before	400	1	5	2.30	1.08
When asked	400	1	5	2.59	1.17
Word-of-Mouth (WOM)	400	1	5	2.44	1.07
Scale Reliability (Cronbach's alpha = .8848)					

**4.2 Attitudes towards Thailand**

Sample attitude towards Thailand by sorting based on an average. The first maximum is the friendliness of the people as a whole (mean = 3.91), followed by fundamental infrastructure and advanced technologies (mean = 3.31), the educational level of people (mean = 3.29), financial (mean = 2.90), The beauty of the environment (mean = 2.89), security (mean = 2.85), reliability and trust in people (mean = 2.75) and ultimately the standard of health care (mean = 2.34) respectively. When combine all factors, attitude of the samples to Thailand in class mean = 3.07. (Table 2)

**TABLE 2: ATTITUDES TOWARDS THAILAND**

<b>Scale Items</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
The standard of health care	400	1	5	2.34	1.12
The beauty of the environment	400	1	5	2.89	1.05
Financial	400	1	5	2.90	1.05
Fundamental infrastructure and advance technologies	400	1	5	3.31	1.05
The friendliness of people	400	1	5	3.91	1.00
Education level of people	400	1	5	3.29	1.07
Security	400	1	5	2.85	1.16
Reliability and trust in people	400	1	5	2.75	.97
Mean of ATTITUDE	400	1.38	4.88	3.03	.60
Scale Reliability (Cronbach's alpha = .6901)					

**4.3 Antecedents of Word-of-Mouth (WOM)**

Multiple regression analysis was performed for Word-of-Mouth (WOM) with the standard of health care, the beauty of the environment, financial, fundamental infrastructure and advance technologies, the friendliness of people, education level of people, security and reliability and trust in people are used as independent variables. Table 3 shows the model is significant (sig. = .000) and the independent variables account for over half of variance ( $R^2 = .299$ ). The standard of health care, financial, security and reliability and trust in people have significant positive effects on Word-of-Mouth, The standard of health care ( $\beta = .370$ ) is more important than reliability and trust in people ( $\beta = .138$ ) or financial ( $\beta = .117$ ) or security ( $\beta = .093$ ), as indicated by the standardized coefficients.

**TABLE 3:  
REGRESSION OF WORD-OF-MOUTH (WOM) ON THE STANDARD OF HEALTH CARE, THE BEAUTY OF THE ENVIRONMENT, FINANCIAL, FUNDAMENTAL INFRASTRUCTURE AND ADVANCE TECHNOLOGIES, THE FRIENDLINESS OF PEOPLE, EDUCATION LEVEL OF PEOPLE, SECURITY AND RELIABILITY AND TRUST IN PEOPLE**

Independent Variables	B	Beta	t	Sig.
The standard of health care	.353	.370	7.601	.000*
The beauty of the environment	.079	.078	1.516	.130
Financial	.119	.117	2.094	.037*
Fundamental infrastructure and advance technologies	-.052	-.051	-.935	.351
The friendliness of people	.046	.043	.773	.440
Education level of people	.063	.063	1.145	.253
Security	.086	.093	2.174	.030*
Reliability and trust in people	.151	.138	2.682	.008*

**Model Summary:**  $R^2 = .299$ ,  $F(8, 399) = 20.826$ ,  $sig. = .000$

## 5. DISCUSSIONS & RECOMMENDATIONS

The results of this study shows that attitude factors that has effected in word of mouth in choosing to study in Thailand for Chinese students who currently study in Thailand with the attitude towards the standard of health care, financial, security, reliability and trust Thai people will also have the high level of word of mouth too. Therefore, countries that has the need to invite more Chinese students to study in their own countries. Should plan to standardize their health care, financial, security and reliability and trust in their people in order to remain competitive and including planning of their public relations and effective communication to target group. This study is a study in Thailand. If the study is taken to survey in other countries, it may obtain more information which will enhance the summary and may provide more useful methods.

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# IMPROVING CREATIVITY AND ENTREPRENEURIAL SKILLS FROM THE E-MARKETING CLASS: A CASE STUDY OF BANGKOK UNIVERSITY'S UNDERGRADUATES

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## ABSTRACT

*This paper is aimed to illustrate the teaching methods of the e-marketing class at Bangkok University, Thailand, and to explain how successfully the theories and concepts are practiced through the actual business projects created by the undergraduates. The main objective of this class is to strengthen students' business backgrounds, creativity and entrepreneurial skills. I have tried several methods of teaching my e-business management and e-marketing classes, belonging to the school of business, starting from the year 2006 until 2011 to the undergraduates at Bangkok University, Thailand. Such teaching methods include lecture, case study, marketing plan presentation, and actual business establishment. Data is collected from 198 group projects created by the undergraduates from schools of business, communication arts and liberal arts from the year 2006 to 2011. The most effective web sites from the group projects have the following characteristics: good domain name, a variety of products, attractive pricing, good web site design, effective promotion, customer relationship management and corporate social responsibility. Key performance indicators include online sales, number of visits, and relationship building.*

**Keywords:** e-business, e-marketing, internet marketing, CRM, social media

## 1. INTRODUCTION

As the school of business at Bangkok University aims to promote undergraduates' creativity and entrepreneurial spirits, many courses have been designed to equip students with necessary skills that enable them to readily start a business. E-Marketing is one of the business classes aimed to promote entrepreneurial skills as it helps modern entrepreneurs or marketers generate awareness, income, and efficient gains in communication and cost reduction. At the beginning of each class, many Thai students perceived that E-Marketing subject which requires some knowledge of computer and technology was a difficult class and rarely relevant to their daily lives. More than half of students in each class, according to my pretests, had low level of information technology knowledge. Therefore, I have tried for years to design and develop the contents of this course to extract skills of Thai undergraduate students and to meet the class objectives which are enabling students to understand the concepts of marketing management as well as information technology and enabling students to practice the business skills through the real business establishment. I expected to study the factors that contribute to students' success in their projects and the best ways to teach the E-Marketing class.

## 2. THE E-MARKETING COURSE CONTENTS AND ACTIVITIES

In my E-Marketing class, course contents include overview of information technology and the internet, business in the digital age, strategic planning, e-business environment, market offerings, pricing management, distribution management, marketing communications, and e-CRM. However, I have divided my classes into 3 parts (See table 1). Part I concerning understanding e-commerce, e-business and e-marketing embraces information technology and the internet, businesses in the digital economy, ecommerce models, and e-business planning. Students' skills are evaluated by quizzes and tests on this session. Part II concerning starting an e-business provides students ideas to create their own businesses using the internet. The contents in this part include selecting a business and products, analyzing the business environment, selecting a proper domain name, building an e-commerce web site as well as deciding for payment methods. In this part, students are taught useful

applications for building a web site such as Adobe Photoshop, Dreamweaver, Flash Banner Maker, ProShow Gold, Photoscape etc. Moreover, students are familiarized with a variety of social network websites and mobile applications such as Foursquare, Gowalla, Layar, Skype, and Whatsapp for marketing communications. And the last part of this course deals with marketing the e-business. In this part, students are encouraged to learn how to build traffic on their web sites, promote their web sites and their products and enhance the customer relationship. In addition, students' performances are measured by the number of unique visitors as shown on their web sites, the movements of their forums, and sales.

One important activity of this course is the eBiz Fair in which students are assigned to hold an event for each semester. The date is announced two weeks before the event for students to promote it via online and offline campaigns. I also check the movements of students' web sites and their social media to give points for their efforts. It is mandatory that each group of students use social networking web sites, design one activity or more to attract visitors. For example, a visitor on a web site may print out an e-coupon to display at the event to receive some souvenirs. At the event, each group of students brings the products from their web sites to display and sell. The main objectives of the event are to promote students' web sites, to evaluate students' abilities to manage their project and to equip students with actual business skills. After the event, students are asked to update their web sites with pictures of activities from the event.

Session	Topics
1 - 4	<p><b>Part I : Understanding E-Commerce, E-Business and E-Marketing</b></p> <ul style="list-style-type: none"> <li>- Information technology and the internet</li> <li>- Businesses in the digital economy</li> <li>- E-commerce models</li> <li>- E-business planning</li> </ul> <p><b>Related Activities:</b> Written and Verbal Quizzes</p>
5 - 8	<p><b>Part II : Starting an E-Business</b></p> <ul style="list-style-type: none"> <li>- Selecting a business and products</li> <li>- Analyzing the business environment</li> <li>- Selecting a proper domain name</li> <li>- Building an e-commerce web site</li> <li>- Deciding for payment methods</li> </ul> <p><b>Related Activities:</b> Presentation of project proposal, practicing web site applications, constructing the web site</p>
9 - 14	<p><b>Part III : Marketing Your E-Business</b></p> <ul style="list-style-type: none"> <li>- Traffic Building : Promoting Your Web Site</li> <li>- E-CRM</li> </ul> <p><b>Related Activities:</b> Promoting web site through banners, emails, social media, mobile applications and event marketing</p>

Table 1: E-Marketing Class Schedule

### 3. MEASURING THE CLASS EFFECTIVENESS

I have researched how to increase the effectiveness of teaching the E-Marketing classes since 2006 by the experimental study, testing the theories and concepts with the actual business projects. The first part of the class teaches the students about concepts and theories. The second part deals with giving students ideas to start an e-business by selecting a product or service, selecting a proper domain name and a web host, constructing and designing the web site. And the third part deals with building traffic on web site and promoting the business through various communication channels. From 2006 to 2011, there have been 198 groups of 3 to 8 students to form 198 online businesses (See table 2). 92 groups or 46.5% select fashion and accessory businesses (such as apparels, shoes,

necklaces), 29 groups or 14.6% select handmade and souvenir products (such as dolls, bags, key rings), 7 groups or 3.5% select books (used books and comics), 6 groups or 3.0% select pet items (pets and pet foods), 9 groups or 4.5% select food items (desserts and bakery), 11 groups or 5.6% select technology products (computers, music players, external drivers), 17 groups or 8.6% select toys and games (models) and 27 groups or 13.6% select other types of businesses such as furniture, home appliances and sports.

Business Category	Number (Businesses)	Percentage
Fashion and accessory businesses	92	46.5%
Handmade and souvenir products	29	14.6%
Books	7	3.5%
Pet items	6	3.0%
Foods	9	4.5%
Technology	11	5.6%
Toys and Games	17	8.6%
Others	27	13.6%
<b>Total</b>	<b>198</b>	<b>100%</b>

Table 2: E-Business Projects from 2006 - 2011

80% of undergraduates are in the 4<sup>th</sup> year and major in business administration and the rest are from communication arts and liberal arts. One class consists of 40 – 80 students aged 20-22 years old. 82% of the products that students choose come from the existing brick and mortar stores or the business without e-commerce web site owned by themselves, their friends and their relatives. 18% are new pure dotcoms. The criteria for selecting a business include that the products should be easy to purchase online and easy to ship, that the products should be easier to buy online than from a physical store, that the products should be standard (the same quality everywhere such as books and CDs), that the products can be stocked, and that the products should be of great variety within the same category (such as different patterns, styles or colors for clothes). However, some groups did not exactly follow the established criteria. For instance, some groups sell furniture and home appliances but they can use the web site to direct customers to buy from stores. Other groups sell pets such as cats, dogs and fish, but they deliver their products at customers' residences or an appointed place. One group is suggested to sell one product category because it is simpler to manage and learn. But one product category can contain a variety of product items. Domain name is an important criterion for measuring success of a group. According to "The 7 Characteristics of Good Domain Names" from <http://www.dailyblogtips.com> (2007), a good domain name should be short, easy to remember, easy to spell, having dotcom extension, descriptive, brandable, and without hyphens or numbers. For example, one group selects the domain names "www.ohotech.com, www.wowtrendy.com, and www.intrendcity" the name is short, easy to remember, easy to spell, having dotcom extension, descriptive (implying technology and fashion respectively), easy to brand, to design a logo and without any numbers or signs. In addition, the domain name should be internationalized in order to be ready to go global. For example, one group names their URL, "www.konglen.com" a Thai name for 'toy' but maybe unknown to foreigners.

The next step is constructing a web site. 7C's model for building a good web site is recommended for students, starting from Context (layout), Content (pictures and information), Community (forum and social networks), Customization (personalization and member areas), Communication (address, emails and telephone numbers), Connection (banner or link exchanges) and Commerce (shopping

carts and sponsorship). Basic menu buttons are About Us, Contact Us, Forum, Help or FAQ, and Products. Most groups use pre-designed templates from Thai web hosts such as [www.weloveshopping.com](http://www.weloveshopping.com), [www.tarad.com](http://www.tarad.com), [www.ibuy.co.th](http://www.ibuy.co.th), and [www.shopup.com](http://www.shopup.com). According to my class criteria, a good web site should be considered in terms of ease of use, customer confidence, on-site resources, relationship services, and overall costs (Chaffey, 2006). Each group is assigned to prepare a report of business result on the last day of the class. Topics in the report include financial results, marketing efforts, copy of web pages and the future plan. Students' performances are evaluated by online sales, number of visits, and relationship building.

#### **4. THE RESULTS**

According to the study, it has been discovered that the most popular and revenue-generating businesses selected by undergraduates from the year 2006 to 2011 are fashion and accessory items especially big-eye contact lenses, cosmetics and apparels. It can be indicated that the students select businesses because of their interests, business knowledge and skills. Fashion and accessory items have generated the greatest revenues compared to other categories according to the financial reports prepared by the students. The most effective web site from the class group project has the following characteristics: good domain name, deep product lines, attractive pricing, good web site design using 7 C's, effective promotion, customer relationship management and corporate social responsibility.

It has been found that the successful group use the dotcom extensions without the host names such as [www.sweetberry.com](http://www.sweetberry.com) (instead of <http://sweetberry.weloveshopping.com>), [www.intrendcity.com](http://www.intrendcity.com) and [www.cattygift.com](http://www.cattygift.com) because registered domain names are more trustworthy and memorable.

A variety of product items attract customers to an online store. For example, big-eye contact lenses include moonlight, cherry, allure, diamond, big soul, forest, or flora colors. One line of product is enough for an online store but should be of great variety.

Price is one of the most important attractions. Many customers go shopping on pure dotcom web sites because of lower costs than physical stores with attractive sales promotion like price bundling and free shipping.

For the web site design, the important parts of a web site that aid in attracting customers and enhancing trusts are product details, web board, contacts (phone number, emails, maps), and e-commerce registration icon. Some students said that they could sell more through phone calls from online customers than from the web page. Fast and safe delivery is another important success factor. Online customers expect the shortest lead time as possible. Successful groups provided the information that they had the products in stock ready for shipment and quickly shipped the products after they had received the orders.

Sales promotion tools are also required to help boost sales. The successful groups place the banners of promotional deals on the first page of the web site and they could attract customers as many buyers order the items advertised on the banners. Customers also provided some information that attractive deals were not available on physical stores and they could save a lot of money when purchasing online. Special offers are changed frequently to raise customer expectations. Moreover, groups that have their own social media like Facebook, Twitter, Foursquare or Youtube tend to receive positive responses from customers. For instance, students are assigned to produce a video to publicize the product information with group members as presenters. The video is posted on the web site and receives responses. Social media help tighten customer relationship, customer engagement and customer advocacy. A large number of online customers make buying decisions following responses of others. They seem to trust other customers more than the sellers. It has been found that the more the movement on web boards or social media, the greater the tendency to purchase.

Customer relationship is also an important factor to maintain customers. Nowadays, there are many competitors for the same products. The students are new to the market. But with the guidelines provided in class, students find it easier to compete online. Customer services and quick response to customer problems help make customers come back and repurchase. In addition, some students promote social marketing such as visiting an orphanage and having an environment saving campaign, and post photos on their web site. After that they also receive the positive responses. Their sales also increase with a cause-related marketing campaign.

## 5. CONCLUSION

An effective course is the course that can teach students to be successful from scratch. My e-marketing classes are aimed to improve students' creativity and entrepreneurial skills during their study and after they graduate. Not all groups of students are successful from setting real e-businesses though but at least they have learned how to apply the theories and concepts to benefit their future. They have learned to work as a group to achieve the same set of objectives. The aim of this experimental study is to test the relevant theories and concepts of e-marketing if they work in real situations. Successful groups that follow the instructions and meet the criteria of a good online business tend to continue their businesses even after they complete the course in the forms of new businesses and existing family businesses.

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## A STUDY OF SUPPLIER'S INVOLVEMENT IN NEW PRODUCT DEVELOPMENT IN CHINA

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### ABSTRACT

*Today's market is characterized by rapid technological development, shorter product life cycle, fierce competition, and increased outsourcing. Many firms are forced to move toward quickly providing better products in shorter time by involving their suppliers the new product development activities. Suppliers can provide a source of innovative ideas and critical technologies. Extensive involvement of suppliers in product development is shown to be one of the ways to enhance product development performance in terms of productivity, speed, and product quality. Many studies have been conducted to investigate how to improve supplier involvement in the new product development. Examining the literature, it is found that previous research is insufficient. Most studies are focused on the manufacturer's side. They address the impact of supplier's involvement on manufacturer's new product development performance. Researchers argue that manufacturers could benefit from suppliers' skills and strengths in the new product development and eventually achieve high quality, high speed, and continuous cost reduction in product management. The examination of supplier firms in the relationship, however, is lacking. Two main questions therefore arise. (1) What is the supplier firm's perception in the involvement in manufacturer's new product development? (2) How suppliers can benefit from the involvement? This study analyzes supplier firms when they are involved in manufacturers' new product development. Based on social dilemma theory, solutions for supplier involvement were proposed, namely, informational sharing, flexibility, and relationship structure. The model was tested using data collected from Chinese supplier firms, which have the tradition of supplier involvement in manufacturers' new product development.*

**Keywords:** *New Product Development, China, Supplier*

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## **SOCIAL MEDIA: A LEARNING PEDAGOGY?**

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### **ABSTRACT**

*E-Learning is providing alternate ways of learning for non-traditional students. Students do not come to classes but contents go to students. Anybody can take classes if they have a modem and internet access. However, e-Learning is self-driven in that students become the driver and faculty becomes the mentor. Many students taking on-line classes, typically, are part of the millennium or X-generation and are computer savvy (glen, 2000; Kennedy et al, 2008). Some of them are well versed in social media such as iPod, blackberry and youtube to name a few and social networking concepts like facebook, twitter and blogs. Based on our many years of teaching experience, we find students using laptops and twittering in face-to-face classes. This raises an interesting question, can we use social media and social networking as a learning tool? This paper presents a case study that involved using social media and social networking to enhance e-Learning.*

*Key words: social-media, e-learning, pedagogy*

### **1. INTRODUCTION**

Many researchers (Merill, 2011; Medved, 2010, Wilkin, 2009) have argued that social media can also be used as a productivity tool. Given the importance of social media in corporate world it is not surprising that academia is moving in that direction. E-learning is diffusing at an unprecedented rate and more and more students of all ages are opting for learning on the web. According to a recent report (Allen and Seaman, 2010) online education is increasing at the rate of twenty percent. This millennium learners are computer savvy and want to learn at their own pace using their preferred medium. The medium is the internet and the tools are internet based social media sites like the twitter, youtube, facebook, wiki, blogs etc. These students do not want to commute but want “contents” sent to them. This is changing the very “basics” of education pedagogy. We are moving from one-way delivery to peer-to-peer learning. Social media basic concept is also based on peer-to-peer communication which can also revert to sharing and learning. This requires competent professors who themselves are savvy and are able to deliver via new technologies. This paper addresses the social media related pedagogical issues in the context of a classroom experiment. The sections are organized as follows. The next section describes the research design, and the following sections discuss the experiment, preliminary research results, their implications and finally the conclusions.

### **2. RESEARCH DESIGN**

We used introductory undergraduate information systems class for experiment. This is a challenging class to teach due to the nature of the contents. Contents are introductory and fairly broad that relate to IT components and its applications. Some students are well versed in these while others are naïve (students returning or house wives). The class can be quite boring for savvy students while difficult for others. Social medias are proliferating (Wu et al, 2009) and they would be good candidate as a learning tool (Baird, et. al., 2005; Kozma, 1991) . This motivated us to study if social media can be used as a teaching tool in e-learning. An assignment involving social media was created. This allowed student to create a 1) blog site, 2) develop a clip on youtube or 3) develop a myspace page.

Students were asked to clear the topic with the instructor for blog and youtube. This was done to make sure that selected topics related to information systems. Since this was an experiment, students were not required to do this assignment but were given extra credit for the project. Several students took the challenge, however the number was low. Students who volunteered were from different age group and level of expertise . The motivation for the most part was to “up” their grade. Students were asked questions related to emerging technologies and social media in the final exam. It would be interesting to

see if students who performed extra assignment performed better than those who did not. The next section discusses various steps of this experiment.

### **3. THE EXPERIMENT**

The present study is being conducted at an urban public university in the Mid-Atlantic area. The university offers undergraduate BS in MIS and BBAs with MIS. The introductory MIS course, however, is required for all undergraduate business majors. Typically, this course has a diverse group of students with respect to IT and internet skills. This makes this course very challenging to teach. Some students are internet savvy whereas others are novices. In on-line classes internet based skills are important since students have to communicate with peers and the professor through the course management systems. Skills may require downloading articles, streaming videos, posting files and/or using the chat area for group work (Adlakha & Aggarwal, 2009). In addition, some IT savvy students find content to be boring and want more web 2.0 hands on experience. The following hypothesis was developed:

H1: Students who opted for social networking assignment performed better on the final exam.

#### **3.1 Collect data**

##### **Students' Backgrounds**

This experiment was conducted in spring 2009 and continuing in Spring of 2010. Several items related to skill levels were collected. Students were given 2% of the final grade for completing the questionnaire at the beginning and ending of semester. The following sample characteristics were observed at the beginning of the semester.

We also measured student's perception of their competencies in internet related skills. This would reveal if students would need additional guidance for the extra project. Our data revealed student felt they had browsing skills of almost 8 (80%) but web page creation capability of only 5. Based on frequency distribution (not shown here) 90% of students had capability of 6 or higher and almost 43% had 8 or higher. This would imply student's feel they have excellent browsing capability and they should be able to search a document or a concept on the internet quite easily. we did provide extra guidance for the project.

We also asked if students were interested in an extra credit assignment on social networking concepts and almost 87% of students who responded were interested in working on extra credit assignment. However only 6 out of 24 students did the extra work. We are continuing our experiment this semester and will report the results in the final version.

### **4. DISCUSSION AND CONCLUSIONS**

This paper has used social media as a learning tool both to teach and maintain student's interest in learning and found some success with it. Further research needs to be done to validate the current study.

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Provided on request.

## **CULTURAL TRANSFORMATION IN THE WORKPLACE**

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### **ABSTRACT**

*Organizational cultural transformation is a necessary modification that must be made for a business in today's ever-changing world. This is necessary due to technological advancements, competition and the changes in the world economies. This transformation requires the linking together of the company's vision, management and staff.*

**Keywords:** *cultural, workplace*

### **1. INTRODUCTION**

Organizational cultural transformation is a change that takes place when top management realizes that it is important to step away from the familiar hierarchy style of management and integrate a team-oriented theme throughout the company. It is vital that the top management believes in the transformation and supports the change one hundred percent. According to Gilmore, Shea and Useem (1977), when the change is successful, the company will be vision-driven, entrepreneurial, team-based and "boundary less".

### **2. A NECESSARY TRANSFORMATION**

Cultural transformation is a necessary modification that must be made for a business to survive in today's ever-changing business world. This change is a decision that is made due to the technological advancements that are taking place daily, new competitors that are entering the business world and the changes that are taking place daily in the world economies. Change needs to take place in any company that wants to stay competitive in their business sector. If a company fails to see the importance of change, that company will not succeed. It is important that top management is 100% behind the transformation and is actively involved with the change.

There are definite steps that need to be taken when going through this process. The first step is to define future desired outcomes. The second step is to brainstorm for any factors that hinder or help the transformation. The third step needed is to work on any hindering factors that may cause problems in the future.

There are four common negative consequences that may occur due to this transformation: ambivalent authority, the projection of polarized images, disappointment and blame, and behavioral inversion. It is important that a company going through a transformation has a plan to use if any of these consequences do occur. An alternate approach is a way that a company can use as a defense, if problems do arise.

This transformation requires the linking together of the company's vision, management and staff. The vision needs to be clearly defined and easily understandable so there are no mixed signals or confusion. The vision needs to be achievable to be effective because if it is unrealistic, there will be a high rate of negativity towards the change. Employees will not try to change if they feel the change is not within reach. Atkinson and Millar (1999) say the answer to this is modeling or bench marking excellence, motivating others to express their skills and achieve results through teamwork.

The cultural transformation of a company not only requires a vision, it also requires the tools necessary to make that vision a reality. The company needs to make that vision a reality by taking action, monitoring the results, finding out what is working or not working, and also to have the flexibility to make nay changes that are necessary (Atkinson & Millar, 1999).

Management is a very important piece to a transformation within a company. Top management needs to feel one hundred percent comfortable with the change and needs to be able to show its employees that they really believe the new culture will benefit the company and everyone involved. Mohan (1993) states that it is important for management to be effective leaders. To do this the effective leader must facilitate the new vision, not impose it. Employees need to be able to see for themselves that the results are for their benefit as well as for the company. They do not want to feel forced to do something they do not fully understand. They need to be able to see that management is working as hard as everyone else to make the transformation a reality.

The Fluor Daniel Company used cultural transformation as a step in their reengineering strategy. They did this so more people could contribute to the development of business strategies, creating widespread awareness for the company's strategic goals (Valenti, 1997). This is an example of the importance of making the vision understandable by all. This company wanted widespread involvement in the transformation process because they felt it was important that everyone be aware of what was happening.

### **3. THREE IMPORTANT STEPS**

According to Atkinson and Millar (1999) there are three important steps that a company needs to take when they are preparing for a cultural transformation in their firm. The first step is to define future desired outcomes. This is important because the company needs to know what they want in the end. They need to make sure their employees do not feel what they are doing has no apparent reason. It is important that the outcomes be written down in a language, which is easy to understand and placed in view for all employees. The second step is to brainstorm for any factors that may hinder or help the transformation. This step may include involving first-line workers as well as management to get their feelings on the goal the company is interested in achieving. They need to come together and contemplate any problems they have and also any ideas that may help reach their goal. The third step needed is to work on any hindering factors that may cause problems in the future. This is important because a company wants to have a plan intact which will have as few anticipated problems as possible. A company may also need to write an alternate approach to their goal in case problems arise with their first attempt.

As a company goes through this transformation in the workplace, they may come upon bumps in the road. Most firms have very diverse employees and management-some who have worked for the company all their lives-and others who are just starting their careers. Due to the diversity, there are side effects that may arise with the cultural transformation.

Gilmore et. al. (1977), reported that a cultural transformation often introduces downsizing, delayering, and decentralization at the same time it is pressing for cultural revitalization. These factors bring stress into the workplace which may cause turmoil among employees. It is also important to note that a transformation brings both positive and negative changes to the firm.

There are four major side effects of cultural transformation that Gilmore et. al. (1977) identified. The first side effect is ambivalent authority. This happens when the old way is being unlearned and the new way is not yet mastered. It is important for the management to learn the magnitude of their new position due to the transformation. They also need to understand that when there is a rough spot in the plan, it is important that they do not revert to the old style just because they may be more comfortable with that authority.

The second side effect is that the company may project polarized images. This happens when the old and the new ways are contrasted. This leads to the desirability and credibility of the transformation, and conflict among the employees. This contrasting that takes place has at least three unintended but predictable consequences: 1) it underemphasizes the company's historical strength that should be retained; 2) it downplays the downsides of the firm's new way of doing business; and 3) it heightens the apparent discontinuity of the change (Gilmore, et. al., 1997). These consequences hurt the company's effort to change from the old culture to the new because employees do not want to accept the new ways

because there are so many hassles. Most employees do not want to work in a place they are unsure of where they stand and the company's beliefs.

The third effect of cultural transformation is disappointment and blame (Gilmore, et. al., 1997). This effect mainly deals with the management of a company. When the transformation does not take place as expected and setbacks occur, management tends to blame someone else. They usually blame upper or lower management for the problems. There are many excuses but management should take the time to assess the situation and devise a plan to correct the problem.

The fourth side effect is behavioral inversion (Gilmore, et. al., 1997). This takes place when the old seems new and the outcome looks as if the change took place when really nothing changed. This is a problem that takes place when results do not appear as soon as desired.

A company going through a cultural transformation needs to have a plan intact to manage these side effects. It is important that management have a clear and decisive vision where the company is headed and then reassure their employees that what they are doing will help the company be more competitive. Top management needs to show that they are involved in the transformation process. It also needs to be made aware that there will be problems along the way but if everyone sticks together with the new vision in mind, the company will survive this transition.

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# USING FOREIGN WORDS TO POSITION A BRAND AS FOREIGN AND GLOBAL: HOW PERCEIVED BRAND GLOBALNESS AND COUNTRY OF ORIGIN AFFECT CONSUMER PERCEPTIONS

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## ABSTRACT

*In America's competitive and globalized marketplace, it is essential to understand the advertising techniques that may provide a competitive advantage to the brand. The following study attempts to examine the use of codemixing in advertisements to influence brand attitudes and purchasing behavior through the distinct pathways of perceived brand globalness (PBG) and country of origin effect (COO) by mixing the German language into an English advertising slogan. Using data from subjects in the United States, this study finds that PBG has a strong influence on purchase intentions through perceived quality.*

**Keywords:** Country of Origin, Perceived Brand Globalness, Codemixing, Advertising Effects, Slogans

## 1. INTRODUCTION

As advertising competition and ways for consumers to opt-out of advertising increases, it's becoming more important for companies to find ways to differentiate themselves. Internationally, companies are employing foreign languages in advertising, most frequently English, to increase effectiveness, symbolize globalism and to reference associated stereotypes. English symbolizes globalism, modernism and prestige (Hornikx *et al.*, 2010). In turn, globalism impacts attitudes of prestige, quality, and purchase intent (PI) (Steenkamp, *et al.*, 2003). When English is used as a foreign language in advertising it also leads to greater attention, or markedness, to the marketing message (Domzal *et al.*, 1995). The extensive studies of English and of attitudes towards globalism suggest that similar results may be found by using other foreign languages. In American advertising, the use of foreign languages to achieve the benefits described above is somewhat scarce, as are research attempts to understand its possible effects on consumers. The following study attempts to elaborate on the previous research on codemixing in advertising by studying the effects of foreign words in American advertising.

## 2. RESEARCH HYPOTHESES

The effects of foreign words on consumers' perceptions are tested using a model similar to the one used by Steenkamp *et al.* (2003). See Figure 1. The model is adapted to include associations related to COO in addition to the associations related to Perceived Brand Globalness (PBG.) The model reflects the pathways through which known or unknown foreign words may influence Country of Origin effect (COO) and/or PBG, in turn influencing prestige, quality and PI and the moderating effects of Consumer Ethnocentrism (CET.)

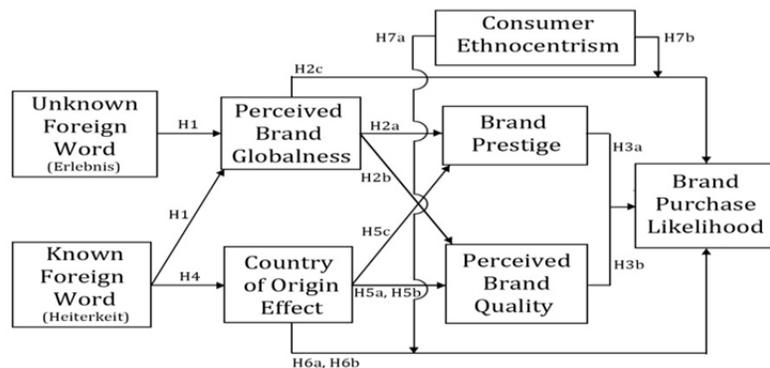


FIGURE 1. MODEL OF FOREIGN WORDS EFFECTS ON CONSUMER PERCEPTIONS

Consumer perceptions of brand globalness are based on the direct or indirect observation that the brand is marketed in other countries and the brands' marketing communications, such as its slogan, that assert its own "globalness" (Steenkamp *et al.*, 2003). The slogan offers a strong context for studying language-based effects on advertising because it is highly associated with the brand (Krishna & Ahluwalia, 2008). However, there is no concrete evidence that a slogan containing a foreign word will increase PBG. The following hypothesis is used to test this idea:

H1: A known or unknown foreign word, when introduced into an English slogan, will be positively related to perceived brand globalness.

The potential associations related to PBG are perceived prestige, perceived quality and PI. PBG has been empirically proved to enhance prestige and quality in research done by Steenkamp *et al.* (2003) that included well-known brands selected for their global appeal. PBG has not been empirically proven to influence PI directly. In Steenkamp *et al.*'s (2003) study, the link was not statistically significant. Despite this result, it is still likely that PBG might be directly related to PI through what Steenkamp *et al.* (2003) refer to as the "belongingness pathway." Consumers want to belong to the Global Consumer Culture (GCC.) Members of this worldwide community want to signal to other members that they belong and can only do so through certain purchase behaviors (Alden *et al.*, 1999). The following hypotheses seek to firmly establish the relationships between PBG, prestige, quality and PI.

H2a: PBG is positively associated with the brand's perceived prestige.

H2b: PBG is positively related to consumer perceptions of brand quality.

H2c: PBG is positively associated with consumers' purchase likelihood.

H3a: Perceived prestige is positively associated with purchase likelihood.

H3b: Perceived brand quality is positively associated with purchase likelihood.

The slogan also gives clues to the product's origin when a known language is used. In this study, since the brand is fictional, the only COO information comes from the slogan. This leads to the next hypothesis that a word in the slogan that is obviously German (known, Heiterkeit) will imply COO while a word that is English, or not obviously associated with any country, (unknown, Erlebnis) will not imply COO in American consumers.

H4: A known foreign word, when introduced into an English slogan, will be positively related to country of origin effect.

This study posits that COO is not a pathway alternative to PBG, but a pathway that works collaboratively with PBG. The pathway is only present when there is COO information available to the audience, as stated in H4. Furthermore, the pathway through quality is only relevant when the COO information relates to the product category at hand. The pathway through prestige, however, is not dependent on product category. Consumers are said to purchase global brands because it adds to their self-image as being cosmopolitan, sophisticated and modern (Friedman, 1990). Likewise, purchasing products from a foreign country, as opposed to purchasing them domestically, will enhance prestige in the mind of the consumer, regardless of product category. The following hypotheses attempt to establish the relationships between COO, prestige, quality, product category and PI.

H5a: Country of origin effect is positively related to consumer perceptions of product quality when the country is perceived as producing quality products of that particular category.

H5b: Country of origin effect is not related to consumer perceptions of product quality when the country is not perceived as producing quality products of that particular category.

H5c: Country of origin effect is positively associated with the brand's perceived prestige.

H6a: Country of origin effect will be positively associated with consumers' purchase likelihood when the country is perceived as producing quality products of that particular category.

H6b: The positive association of country of origin effect with purchase likelihood will be weaker when the country is not known for producing quality products of that particular category.

The hypothesized relationships between PBG, COO and PI assume that the subjects are not ethnocentric. Ethnocentric consumers take pride in domestic culture and have fear or even distaste for foreign culture (Steenkamp *et al.*, 2003). Therefore, the following hypotheses attempt to prove that the relationships between PBG, COO and PI will be weaker for ethnocentric consumers.

H7a: The relationship between perceived brand globalness and purchase likelihood is weaker for consumers high in ethnocentrism.

H7b: The relationship between country of origin effect and purchase likelihood is weaker for consumers high in ethnocentrism.

### 3. METHOD

Two pretests were performed. The first test identified an obvious German word (Heiterkeit) and a non-obvious German word (Erlebnis). A second test identified two product categories – one in which Germany is known to produce high quality products (beer) and one in which Germany is not known to produce (perfume).

For the main study, each subject was shown two of six total ads in one of two groups based on product category: two target advertisements (beer) or two distracter ads (perfume). Each ad used the same brand name, pretested for neutrality (Vaza). One of three words was inserted into the slogan: "Satisfy your craving for \_\_\_\_\_." "Adventure" was chosen for an English word, "Heiterkeit" for a German word and "Erlebnis" for an unknown word. One of the two ads shown to the subjects contained an English word. The second showed either an ad with a German word or an ad with an unknown word in the slogan. The product category was randomized, but both ads shown were in the same product category. The order was also randomized (English first or English second.) After viewing each ad, each subject was asked questions related to the design, placement and readability of the logo and attitude towards the brand to increase the level of ad processing. Subjects also answered questions pertaining to PBG, quality, prestige and the product's country of origin. After answering questions about both advertisements, the subjects were then asked questions to evaluate their level of CET.

PBG was measured using a scale expanded by Steenkamp *et al.* (2003) from the scale used by Batra *et al.* (2000.) Scales by Steenkamp *et al.* were used to measure quality and prestige (2003). CET was measured using the same scale Steenkamp *et al.* (2003) used, including four of the highest-loading items from the original CETSCALE study (Shrimp and Sharma, 1987). To measure COO, the top countries, as identified in the product category pretest, were used as options in a nominal question for the advertisement's respective product categories.

### 4. RESULTS

It was hypothesized that a known or unknown foreign word, when introduced into an English slogan, will be positively related to PBG and COO, (H1 and H4) which directly and indirectly through perceived quality and prestige will influence PI (H2a-H3b and H5c). One-way independent sample t-tests were run for H1 and H4. Linear regression tests were conducted for H2a-H3b. The results of these tests show that the only supported pathway through which PBG influences PI, is indirectly through quality (H2b and H3b). The slogan did not have an effect on PBG or COO (H1 and H4). PBG did not influence PI directly or indirectly through prestige (H2a, H2c and H3a). One-way independent sample t-tests were also run for H5a-H6b. The results indicate that COO did not have any effect, directly or indirectly, on PI (H5a-H6b) and the

hypothesized relationships relating product category to COO were not supported (H5a&b and H6a&b). It was also hypothesized that CET would have a moderating effect. Linear regression tests were conducted with PI as the dependent variable and PBG, CET and PBGxCET (H7a) and COO, CET and COOxCET (H7b). Both hypotheses were not supported (H7a&b).

## 5. CONTRIBUTIONS

It has been proven that there is a value to Global Consumer Culture Positioning (GCCP) (Steenkamp *et al.*, 2003) and Foreign Consumer Culture Positioning (FCCP) (Alden *et al.*, 1999; Leclerc *et al.*, 1994). The results of this study, in which PBG was positively related to quality and quality was positively related to PI, are therefore critical. These findings support the findings of Steenkamp *et al.* (2003) related to quality. H2b and H3b both hypothesized that there would be a strong link between PBG and perceived quality, and between quality and PI. The ads that were perceived to be global were also perceived to be of high quality. In the experiment of Steenkamp *et al.*, it was found that 60% of the PBG effect on PI in the United States (89% in Korea) is mediated through quality. The results support this strong connection between PBG, quality and PI.

The remaining unsupported hypotheses can be explained by the major difference between this study and Steenkamp *et al.*'s (2003). Steenkamp *et al.* chose familiar brands, while this study used a fictional brand. Subjects have previously formed attitudes to familiar brands due to experiences with the brand. For the fictional brand, the only information available is within the single advertisement. Prestige, for example, is generally associated with global brands because of their higher price and relative scarcity (Batra *et al.*, 2000). Quality, on the other hand, is usually attributed to brands because of their global acceptance (Kapferer, 1997). A brand is speculatively accepted globally because of its high quality, but not necessarily because of prestige. The fictional ad did not contain any price, availability, or quality information. The idea that the brand was global was enough to influence attitudes on quality, but not enough to influence attitudes on prestige. The chosen global brands perhaps had more prestige associated with them because subjects were more aware of their price and availability. Although Steenkamp *et al.* controlled for brand familiarity, they did not, and perhaps could not, control for the subject's price and availability awareness. Similar conclusions may be drawn related to COO's influence on prestige, quality and PI. Without additional information, the slogan is not enough to provide the correct COO information.

One of the unexpected results of the study was the relationship between COO and quality for the perfume advertisements. H5a and H5b hypothesized that there would be a strong relationship between COO and quality for the beer category, but not for the perfume category. As the pretest illustrates, Germany is known for high-quality beer but not for perfume. However, the opposite relationship was shown by the results. This effect is not so surprising in that there should be a relationship between France and perfume according to the pretest that would result in perceptions of higher quality. What is surprising was that this effect was not seen between Germany and beer. For the beer ads, there was no relationship between the COO and quality. The German words in the perfume advertisements should have weakened the link between France and perfume, therefore weakening the relationship between COO and quality. For the beer category seventeen people thought the brand origin was Germany and twenty-seven thought its origin was something other than Germany. For the perfume ads, only eight people identified that the origin was France and forty said some country other than France. In the perfume ad, the German words might have confused some subjects, but this did not affect quality assumptions.

Perhaps it is the product category of perfume alone that carries so much weight with the subjects. Those who thought the perfume was from France were assured of its quality as well, but this is not true for German beer. Looking back at the pretest data, high-quality beer was associated with more countries than high-quality perfume. Germany was the most popular first choice for beer with 52.2%, but the rest chose the Netherlands region in Holland, Ireland, Belgium, the United States and others. The category of perfume tells another story entirely. France was ranked first by 75.0% of the subjects. Italy, India and the United States made up the remaining 25.0%. The difference in the number of countries associated with each category, as well as the difference in popularity, is perhaps the reason why H5b was not supported. High-quality beer is thought to come from more countries than high-quality perfume is. Why this attitude

of high quality for perfume did not carry over to purchase intent is not certain. It may be due to the fact that purchase intentions related to perfume are not based on quality.

Finally, the moderating effects of CET were not found in this experiment. The difference in purchase intentions between high-CET and low-CET consumers was not significant. This could be due to the fact that the demographic sampled does not fit the demographic likely to be ethnocentric; therefore there were not enough cases of high-ethnocentric consumers to demonstrate a strong relationship between CET and PI. Indeed, only four cases out of eighty-nine were found to rate high on the CET scale. CET can be linked to geographic areas among other sociodemographic attributes and is subject to constant change (Shimp and Sharma, 1987).

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# Proceedings of the IABE-2011 Barcelona, Spain

Volume 9, Number 1, 2011

International Academy of Business and Economics®

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ISSN: 1932-7498



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