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# International Business Management Research Conference

Faculty of Business Administration, Chiang Mai University, Chiang Mai, THAILAND

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**IBMRC**



The 3<sup>rd</sup> International Business Management  
Research Conference

Venue: Le Meridien Hotel, Chiang Mai, Thailand

Friday 15<sup>th</sup>, November 2013

Organized by  
Faculty of Business Administration,  
Chiang Mai University

## Welcome Message from the Dean

Faculty of Business Administration, Chiang Mai University proudly welcomes all participants of the 6<sup>th</sup> Business Management Research Conference (BMRC) and the 3<sup>rd</sup> International BMRC.

Once again academic experts, businessmen, graduate students and representatives from government agencies and private organizations join us to enrich knowledge and understanding through research exchange as well as building up network for further academic cooperation. We also continue to provide a forum to publish academic papers.

The conference encompasses papers including three themes which are: 1) Logistics, Information Technology and Management, 2) Financial and Accounting, and 3) Hospitality and Marketing as well as doctoral presentation. At the end of the conference, we will award the best paper award, too. Most noteworthy, Professor Dr. Frank E.P. Dievernich, Co-Director of the Executive MBA Lucerne, Professor of Organization, Leadership and Personnel at the Lucerne University of Applied Sciences and Arts (Switzerland) and also Partner of the consultancy firm Witten School of Management GmbH (Germany) has kindly accepted our invitation to give a keynote lecture on The Future of Change-Management and the Rediscovery of the Human Being.

This year papers from international has outnumbered those from domestic authors. The evidence ensures us that BMRC has grown to an international forum. We sincerely thank all parties who make our global vision become a reality.



(Associate Professor Dr. Siriwut Buranapin)

Dean of Faculty of Business Administration

Chiang Mai University, THAILAND

### Message From Editor-in-Chief

Every year, our Conference brings together academicians and researchers in the areas of business management and other related areas in order to disseminate knowledge and exchanged the knowledge between academicians, researchers, as well as Master's and Doctorate students who are extending their studies on the innovative knowledge.

For year 2013, we are proud to present the publication of The 6<sup>th</sup> and 3<sup>rd</sup> volume of BMRC and IBMRC Conference Proceeding which had produced by the Conference Publications Committee of Faculty of Business Administration, Chiang Mai University. All BMRC and IBMRC Conference Proceeding articles are subject to a stringent process of review by at least two members of our Editorial Advisory Board. Manuscripts are carefully accepted for possible inclusion in the Proceedings before being considered for final publication.

For the 6<sup>th</sup> BMRC and 3<sup>rd</sup> IBMRC in the year 2013, the Faculty of Business Administration at Chiang Mai University proudly organized the events on November 15, 2013. The events had brought together around 100 delegates consisting of academic experts, businessmen, graduate students and representatives from both government agencies as well as private organizations. The conference encompasses manuscripts in various topics related to business management for today's context. We would like to express our sincere thanks to our stakeholders and the editorial boards as well as especially our delegates.

We would like to thank all the contributing authors for providing such a rich variety of outstanding research articles on a broad range of exciting topics.



Narumon Kimpakorn, Ph.D.

Editor-in-Chief

BMRC & IBMRC Conference Editorial Broads

### The area of manuscript

- 1) Marketing management research
- 2) Financial management research
- 3) Organizational management research
- 4) Human resource management research
- 5) Accounting research
- 6) Consumer behavior management research
- 7) Entrepreneurship development research
- 8) Information technology and management research
- 9) Organizational communication and marketing communication research
- 10) Corporate social responsibility research
- 11) Other related research topics

### Acceptance Manuscript

Individuals who are interested in taking part in the conference can submit a completed article which will be reviewed and selected by 2/3 experts to decide if the work meets with the conference requirements. Upon acceptance authors of the article will be asked to attend the forum to give a presentation. The presentation can be done in two ways.

The awarding of the "Best Concept Paper Award" is in accord with the criteria and discretion of the organizing committee. Papers will only be considered in the proposed meeting room.

In addition, the owner of manuscript has a right to request on prohibiting their work to be published in the Journal of Research and Conference Management (ISSN1906-7135), published by the Faculty of Business Administration, Chiang Mai University. However, the request will be fulfilled only if the editor board accept the manuscript



## Agenda 2013: BMRC & IBMRC

The 6<sup>th</sup> Business Management Research Conference

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The 3<sup>rd</sup> International Business Management Research Conference

Friday 15<sup>th</sup>, November 2013 Venue: Le Meridien Hotel, Chiang Mai, Thailand

Organized by Faculty of Business Administration, Chiang Mai University

8.30-9.00 am.	Registration ( <i>Upload Power Point file for presentation at registration desk</i> ) (Grand Ballroom at 2 <sup>nd</sup> Floor)
9.00-9.15 am.	Opening Ceremony by President/Representative of Chiang Mai University (Grand Ballroom at 2 <sup>nd</sup> Floor)
9.15-9.45 am.	Key Note "The Future of Change-Management and the Rediscovery of the Human Being" by Prof. Dr. Frank E.P. Dievernich, Co-Director of the Executive MBA Lucerne, Professor of Organization, Leadership and Personnel at the Lucerne University of Applied Sciences and Arts (Switzerland) and also Partner of the consultancy firm Witten School of Management GmbH (Germany). (Grand Ballroom at 2 <sup>nd</sup> Floor)
9.45- 10. 15 am.	Coffee-Break (Grand Ballroom at 2 <sup>nd</sup> Floor)
10. 15-12.00 am.	Seminar presentation – Session 1 (divided into 2 rooms) (presentation 15 min. , Q&A 5 min./paper) -Room 1 Voyage (3 <sup>rd</sup> Floor) - Room 2 Journey (3 <sup>rd</sup> Floor)
12.00 -13.00 pm.	Lunch (Latest Recipe at 1 <sup>st</sup> Floor)
13. 00 -14. 00 pm.	Seminar presentation – Session 2 (3 <sup>rd</sup> Floor)
14. 00-14.20 pm.	Coffee-Break (in front of seminar room)
14.20-15.30 pm.	Seminar presentation – Session 2 (3 <sup>rd</sup> Floor)
15.30-16.00 pm.	<b>Announcement for "Best Paper Award"</b> (Grand Ballroom at 2 <sup>nd</sup> Floor)

## IBMRC: International Conference

### Journey Room (3<sup>rd</sup> Floor)

- |    |   |
|----|---|
| B1 | FIXATION AND RECALL: AN EYE TRACKING EXPLORATION INTO AD BANNERS ON YOUTUBE<br><br>Present by Chatpong Tangmanee, THAILAND  |
| B2 | THE COMPARATIVE STUDY OF PRINCIPLES OF ACCOUNTING LEARNING ACHIEVEMENT: A COMPARISON BETWEEN PRE-EXAMS AND CHAPTER QUIZZES<br><br>Present by Patcharanee Utamawoottikumjorn, THAILAND |
| B3 | INSTITUTIONAL INVESTOR RECOGNITION ON FINANCIAL ASSET TRANCHES: A STUDY OF THE THAI PROPERTY SECTOR<br><br>Present by Pattaragit Netiniyom, THAILAND                                  |
| B4 | DEVELOPING A KNOWLEDGE SHARING BEHAVIOR WITHIN COOPERATIVE EDUCATION STUDENTS: A KNOWLEDGE AUDIT EVALUATION<br><br>Present by Ravee Phoewhawm, THAILAND                               |
| B5 | A CASE STUDY ON BUILDING TRUST AS A COLLECTIVE UNIT FOR KNOWLEDGE SHARING<br><br>Present by Ravee Phoewhawm, THAILAND   |
| B6 | RETHINKING SUSTAINABILITY ISSUE: ENTREPRENEUR'S POINT OF VIEW<br><br>Present by Boedi Hartadi Kuslina, INDONESIA  |

## IBMRC: International Conference

### Journey Room (3<sup>rd</sup> Floor)

**B7 "MILK LOTTO": BUSINESS INNOVATION FROM LOTTERY CONCEPT**

Present by Pichayalak Pichayakul, THAILAND

**B8 IMPACT OF DEMOGRAPHIC DIVIDEND ON EXPANSION OF JAPANESE  
OVERSEAS SUBSIDIARIES**

Present by Yuzuru Utsunomiya, JAPAN

**B9 THE EVALUATION OF LEARNING ORGANIZATION OF SMALL AND MEDIUM  
SIZED ENTERPRISES IN THE UPPER NORTHERN PART OF THAILAND**

Present by Kemakorn Chaiprasit, THAILAND

**B10 SME'S INTERNATIONALIZATION AS A BALANCING ACT BETWEEN  
RATIONALITY, EMOTION, AND INTUITION**

Present by Frank Dievernich and Jie Gong, SWITZERLAND

## Consultants

1. Associate Professor Dr.Siriwut Buranapin Dean of Faculty of Business Administration,  
Chiang Mai University
2. Professor Dr. Richard Wright Fulbright senior specialist, USA
3. Professor Dr. Kim Byong Shrik Kyonggi University, Korea
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17. Associate Professor Dr.Pattaragit Netiniyom Kasetsart University, Thailand
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21. Dr.Narunard Sarapaivanich Chiang Mai University, Thailand
22. Dr.Pichayalak Pichayakul Chiang Mai University, Thailand
23. Dr.Kemakorn Chaiprasit Chiang Mai University, Thailand
24. Dr.Adisak Theeranuphattana Chiang Mai University, Thailand

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## FIXATION AND RECALL: AN EYE TRACKING EXPLORATION INTO AD BANNERS ON YOUTUBE

Chatpong Tangmanee<sup>\*</sup>

### ABSTRACT

Although an ad banner has been validated through eye tracking that it fails to secure a website visitor's fixation, there has been a recent practice through which the banner appears on the YouTube clip. No publication has however verified if the ad banner could attract the fixation. Through eye tracking, this study attempts to explore (1) if YouTube visitors fixate on the ad banner and (2) the extent to which they could recall details of the ad banner and those of the clip.

Using the Miramatrix eye tracker to record 103 visitor's eye movements while watching the YouTube clips, nearly all visitors have fixated at least once on the ad banner. However, less than 10% were able to correctly recall the ad content. Nevertheless, about half of the visitors are still able to correctly recall the clip details.

In addition to extending theoretical insight into advertisement on YouTube through eye tracking, practitioners should be attentive to selecting the clip on which an ad banner will appear for the relatively low ad recall.

**Keywords:** Fixation / Recall / Eye tracking / Ad Banner / YouTube

### PROBLEM STATEMENT

According to the empirical evidence, Internet banner may not be so useful for marketing promotion as it was decades ago (Dreze & Hussherr, 2003; Pieters, 2008; Moore, et al., 2005). Hervet and coworkers (2011) confirmed that the Internet surfers avoid looking at the banner. This was not by accident but because of their direct intent to refrain from looking at it. Moreover, viewers did poorly on recall and recognition tests on what appeared on the banner; yet, the tests were mostly in the printed contexts (Hervet, et al., 2011; Moore, et al., 2005).

In an attempt to validate the banner blindness situation, Dreze and Hussherr (2003) claimed that online viewers may be aware of the banners on a webpage since they shared "their bandwidth with other

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elements of the page in which they are being displayed” (p. 10). As a result, they could easily avoid looking at an ad banner. Moreover, online surfers often recognize the locations (e. g., on the top with horizontal design) in which a typical banner would appear, thereby increasing the likelihood that their viewing focus is automatically shifted to the content in other locations. Through eye-tracking, Lee and Ahn (2012) confirmed that animated banners could attract less attention from online visitors than static design. However, the animation still unconsciously affects the visitor’s attitude.

Not only is the banner blindness empirically validated, but previous studies have also ascertained that online visitors’ attention was not paid evenly to all contents on the same screen (Goldberg, et al., 2002). In other words, they allocate their attention to online contents in one location of display more (or less) often than those in the other locations. For example, to draw the Y generation’s (age 18-31) attention, website owners must include a large image, especially those of celebrities and a search feature but a small amount of text (Djamasbi, et al., 2010b).

Despite the banner blindness and online visitor’s different attention given to web contents, there has been a recent practice through which an ad banner appears at the bottom of YouTube clips. The rationale behind this strategy is that once the YouTube visitor starts watching a clip, he or she may notice and fixate on the ad banner and eventually click on it to learn more about what is on the banner. Based on the example in Figure 1, the clip as noted in Area B is being watched while one banner as noted in Area C appears at the bottom of the clip. We intend to blur the rest of the content as noted in Area A in order to draw readers’ attention to the clip and the ad banner. The clip in Figure 1 is a movie trailer of Die Hard5 and the banner advertises one real-estate project in Bangkok, Thailand. Specifically, the banner is urging a viewer to take certain action through the “register now” statement.



Figure 1: On YouTube displays a trailer of Die Hard5 (Area B) featuring a banner (Area C) that advertises a real estate project in Bangkok, Thailand

Among indicators of advertising effectiveness, recall is of our interest. Typically, online advertisers expect that viewers should be able to recall what they have seen on a computer screen via an online campaign. The greater extent they recall, the more effective the campaign is. A few empirical studies have confirmed the small amount of recall on banner promotions (Bayles & Chaparro, 2001; Razzouk, et al., 2003). Among the few studies, virtually none has yet examined recall in the context of YouTube clips.

As a result, the three objectives in the present study are (1) to examine whether YouTube visitors have fixated on ad banners appearing at the bottom of the clips, (2) to explore the extent to which the visitors could recall what was advertised on the banners, and (3) to explore the extent to which they may be able to recall the clips and their details.

## LITERATURE REVIEW

### Eye Tracking Approach

Tracking what a person fixates on is challenging. Subjects' reaction to a survey questionnaire items asking about what they were looking at would raise an issue of validity and reliability. The possible reason would be (1) the subjects could not accurately recall what they were seeing or (2) they may refuse to admit what was looked at. The advance in eye tracking technology however has come to provide such valid insight. What people look at could fairly indicate the moment at which they encounter a cognitive gap with which they need further information to cope. Irwin (2004) recommended two variables associated with eye tracking examination. They are fixation duration and fixation counts. The two constructs are valid indices of one's cognitive processing. Basically, an eye tracking device detects one's retina, records eye movement as he or she is exposed to visual stimuli and aggregates the data in both qualitative (i.e., footage of what is looked at) and quantitative styles (i.e., coordinates of fixation areas or magnitude of pupil dilation).

Eye tracking can be applied to many contexts including landscape architecture, printing technology or online advertising. Prior to any session of an online experiment, a researcher typically needs a few minutes to calibrate an eye tracking device for each subject. The actual tracking process after the calibration is non-intrusive and possible for everyone including those with glasses or contact lens. Yet, in a rare occasion, a subject may wear so extremely thick lens or has so oddly-shaped eye balls that the calibration of the tracking device is impossible. Such a subject may be dismissed from the experiment.

### Banner Blindness

The large volume of findings in previous empirical research have validated the banner blindness phenomenon (Burke, et al., 2005; Dreze & Hussherr, 2003). It is commonly defined as the absence of fixation on banners (Hervet, et al., 2011, p. 25). Yet, Hervet and colleagues (2011) used an eye tracking device to prove that 82% of the subjects at least once fixated on the banners. They claimed that visitors were not blind to see the banners but they deliberately avoided to fixate on them.

An ad banner and the other content on the same webpage often compete for viewers' fixation. A number of studies have therefore examined banner design features that could lead to high attention or could secure viewers' frequent fixation (Moore, et al., 2005; Fortin & Dholakia, 2003). Lee (2000) contended that visitors became blind to see a banner because of information overload. In response to continuous flow of information, online visitors simply ignore much of the information they encounter. They

pay attention to only what they consider “highly relevance” to themselves. As such, what is obvious to some may be very blind to the others. Combining the habituation-tedium theory and the ergonomics domains, Portnoy and Marchoinini (2010) claimed that the banner blindness is not the sole result of visitors’ strong intent to skip looking at it but also depends on the frequency at which the visitors have physically encountered the banner. During search sessions, searchers are differently aware of their online surroundings. Consequently, they could be blind because (1) the stimuli could not earn their attention or (2) they intend to ignore the stimuli (Portnoy & Marchoinini, 2010). Cho and Cheon (2004) examined why people avoided advertising on the Internet. Perceived goal impediment is a significant antecedent of the advertising avoidance.

### Examination of Fixation and Recall

An online advertising campaign often relies on visual stimuli. Advertising designers assume that the stimuli could trigger viewers’ fixation, attract and ultimately retain their attention. In a printed ad, Wedel and Pieters (2000) confirmed through eye tracking that magazine readers’ fixation on the ad led to their memory for brands. Seo and colleagues (2012) noted the effects of brand image on visual attention and on purchase intention in an Korean electronic commerce website.

The use of an eye tracking device allows researchers to count the number of fixation on any given area on a screen. For instance, they may count fixations on an ad banner to quantify the extent to which a web visitor has seen it. Through eye tracking, Hervet and colleagues (2011) verified that about 9 in 10 subjects had once fixated on the ad banner. So, the chance of banner blindness is slim.

Previous research has attempted to examine the factors that contribute to the large amount of attention or the high fixation counts. Through eye tracking, facial images could attract the higher fixation counts than corporate logos in a financial service website (Djamasbi, et al., 2010a). Seo and colleagues (2012) discovered that the use of famous endorsers (or human brand image in their own terms) on an electronic commerce website could attract longer duration of fixation than typical presenters. An eye tracking analysis on a job-recruitment website revealed that web-based job seekers had the higher number of fixations on hyperlinks or text than on graphic images (Allen, et al., 2012). These findings implies that online visitors fixate on some digital detail more often than the others. Hamborg and colleagues’ (2012) experiment confirmed that animated banners could better trigger visitors’ fixation, leading to higher recall of the advertised products and the product details than the static ones. 55% of the visitors fixated at least once on static banners while 94% fixated on animated banners. However, 62% of the visitors who responded to survey questionnaires falsely admitted they did not notice any banner on the experimental website.

In the context of search engine, the location of content display is much critical (i.e., whether it is on the top, right or bottom of the screen), given the large number of stakeholders on a webpage displaying search engine results. The fixation counts on contents at the bottom of a page should be less than those at the top of the page. This speculation was empirically confirmed in Guan and Cutrell (2007). In fact, Goldberg and coworkers (2002) verified through eye tracking that users of search engines process information on the result page from left to right in the same column. Guan and Cutrell (2007) further remarked that the results of search engine optimization and those of sponsored items may receive the different counts of fixation. The conclusion from past research is that a search engine web designer must be very careful in displaying various contents on a search result page since searchers fixate only on some items and may have missed the others.

In addition to the fixation counts, fixation duration is another interesting research topic. It is defined as the amount of time (in millisecond) a viewer spent fixating on the banner. Only few previous research has addressed the fixation on an ad banner (Seo, et al., 2012; Burke, et al., 2005; Fortin & Dholakia, 2003). Among the few is Lapa (2007) who found that the fixation duration decreased when the structure of successive webpages are the same. Given the identical layout, Internet users could have learned quickly to avoid looking at the same area on a screen where they are aware of what to expect.

Based on Figure 1, we could classify the content on a main page of YouTube into three types based on the three major locations of display: the ad banner (Area C), the clip (Area B excluding the ad banner) and the other (Area A where Areas B and C were excluded). Presenting an ad banner on a clip is one of YouTube's services. While YouTube visitors enjoy the clip, they are assumed to have seen the banner. We believe that if an ad banner is effective in retaining an attention, the fixation duration on the banner should be long enough to attain the high counts of fixation on the banner.

In typical online advertising contexts, an ad banner competes with other content on the same webpage for a viewer's attention. On the YouTube website; however, an ad banner is perceived as a compliment to, not a competitor with, the clip since the placement of the former is embedded in the latter. On YouTube, beside the clip and the ad banner, the other content still have certain role in online marketing strategy. Intuitively, the other content should be so plain and basic that YouTube visitors' attention would be mainly on the ad banner or on the clip.

Whether a visitor fixates on the YouTube's ad banner is not the only indicator of online advertising success. Marketing practitioners are often interested in examining if the visitor is able to recall what is on the banner. As such, recall in this study is the extent to which a visitor can remember the details on the banner and recall them with no aid (or with no trigger). Given that the banner is supposed to compliment to the clip, we would like to see if the visitor could also recall the detail associated with the

clip. To examine if visitors can recall the content on the clip and that on the banner is in line with how Till and Baack (2005) investigated effects of creative television commercials. According to Hamborg and coworkers (2012), about 11% of the visitors were able to correctly recall the products on banners but none was able to recall written details on them. Similarly, only 8% of viewers correctly identified if an ad banner was presented (Razzouk & Seitz, 2003). Moreover, Bayles and Chaparro (2001) discovered that less than 50% of viewers could recall the presence of ad banners,

Recall can be measured in two styles: unaided and aided recall. While the former is to test if a person could properly describe detail of any stimulus, the latter is to assess if the person could confirm that of the stimulus, once it is presented. The aided recall is thus much similar to recognition (Singh, et al., 1988; Bagozzi & Silk, 1983). Consequently, the present study had a focus on the unaided recall. Moreover, an effective advertising project should attract viewers' attention and retain their ability to recall the advertised detail. Till and Baack (2005) found that creative television campaigns were better at recall over time than the control programs.

## METHODOLOGY

### Population and Participants

The target population are those who at least once watched a clip on YouTube. Since Chulalongkorn Business School allowed us to use their eye tracking device together with their lab facility, the participants in this study were college students in the business school. We announced a call for research participation in two undergraduate and two graduate classes. 107 students voluntarily signed up to take part in the study. Note that some of the participating students were given extra points as reward by the faculties of the four classes but they learned about the points only after they completed the experiment. As such, their participations were voluntary.

### Operationalization of Key Variables

The two major variables in this study are (1) whether the YouTube visitors fixated on the ad banner placed at the bottom of the YouTube clip and (2) recall of (a) what was advertised on the banner (referred to later as the recall of the banner) and (b) what was featured on the clip (referred to later as the recall of the clip). We used an eye tracking device to verify if visitors have gazed on an ad banner. The tracking was from the data recorded by our Miramatrix eye tracking device. The Miramatrix s2 system was connected to a desktop computer with a resolution of 1024x768 pixels. The eye-tracker's resolution and a sampling rate are at most 1° and 60 Hz. The eye movements were captured by the camera placed beneath a 17" computer screen located at about 50 cm from a participant.

Given the college students as the subjects, we strived to select movie trailers that could be of their interest. The visual stimuli were thus three clips on YouTube. They are movie trailers of Die Hard5,

Smurf2 and one supplied from Cieon channel (the YouTube clip supplier). Die Hard5 and Smurf2 were chosen to represent two categories of action and animation movies, respectively. The third clip was included from the Cieon collection. Cieon is one of the clip subscribers to YouTube, supplying a variety of new movie trailers. We selected the clip from Cieon to ensure various movies for the rest of the participants. There are two reasons for which we chose these clips for our data collection. First, we want our finding, to some extent, generalizable. This is why one clip seems inadequate. Second, we prefer to have the clips of comparable length on which one ad banner would appear while the clip is being played. Each of these three clips last between 1:30-2:00 minutes, the period of which we believe sufficient enough for the participants to enjoy and for us to track their gaze. In other words, it is long enough to observe if the subjects fixate on the clip or on the ad banner but it is not too long for an experiment. Although all clips are in English, there should not be a problem of the subjects following them since the clips are of brief length. During the three-day observation prior to the actual experiment, all three selected clips met our selection requirements. We thus kept all three in our experiment.

The measurements of the banner recall and the clip recall were unaided. After viewing the YouTube clip, subjects were asked if they remembered for which the product the banner was. Indeed, they were asked to write down the advertised product title. The unaided recall was chosen because we wanted to test a viewer's memory of what was on the banner. It is the measurement of the banner recall. This is the first step before the subsequent researchers could test for other aspects of memory (Singh, et al., 1988).

Once the subjects responded to the banner recall question, they were further asked to answer two questions that measured the recall of the clip. In the two questions, we asked the subjects to write (1) the clip's movie title and (2) the day it went to a theatre. The subjects would earn 0 for each of the two questions if their answer is incorrect, 1 if it is partially correct and 2 if it is perfectly correct. The two questions were to measure the recall of the clips.

#### **Procedure and Analysis Framework**

One day prior to the day of appointment, we reminded the participants about the experiment. After the participants arrived at the lab, they received a short note describing the research purpose and their important contribution to the study. When they were ready, we started calibrating the eye tracking device on the participants. It took about 1-1:30 minutes, after which the participant started viewing the clip on YouTube. A participant was randomized to see one of the three selected clips. While viewing it, the subject's eye movement was tracked and recorded for further analysis. After the clip ended, the participants were thanked, asked to (1) answer the recall questions, and (2) fill in their demographics and given a ball pen as a token of appreciation for their contribution to the study. Among 107 students signing

up to participate in the study, four were absent, leaving us with 103 usable records. We then processed the collected data in order to derive values of the four major variables. We presented descriptive statistics of all variables. The exploration of fixation and recall was mainly through percentages and cross tabulation.

## RESULTS

Table 1 presents a basic profile of the participants. Three out of ten samples are men. 62% are 18-19 years of age whereas 68% are in the undergraduate level. Only 37% of the participants have normal vision.

**Table 1:** Profiles of the participants (n=103)

Profiles	N(%)
Gender	
Male	28(27)
Female	72(73)
Age	
18-19 yrs	43(42)
20-25	48(47)
> 25	12(11)
Education	
Undergraduate	70(68)
Graduate	33(32)
How is a subject's vision?	
Normal	38(37)
Glasses (or lens) needed	65(63)

According to Table 2, 97% of samples fixated at least once on the YouTube's ad banner. It thus implies no condition of banner blindness (Hervet, et al., 2011). The subsequent analyses are therefore based on the 100 samples who we found through eye tracking to gaze on the ad banner at least once. Based on Table 3, among those who had fixated on the ad banner, only 8% were able to correctly recall what was advertised on the banner. When asked about the clip; however, 6 in 10 could give the correct movie title and 5 in 10 were able to recall the its correct air time. In short, about 5-6% of the subjects were able to correctly recall the clip details while 8% could remember the clip titles properly.

**Table 2:** The Number of Fixation on YouTube's Ad Banner (n=103)

The number of fixation	N(%)
No Fixation	3(3)
At least one fixation	100 (97)

**Table 3:** The number of recall of the three contents on YouTube (n=100)

Content	N (%)
Recall of ad on the banner	
Correct recall	8(8)
Incorrect recall	92(92)
Recall of the movie titles	
Correct recall	58(58)
Partially correct recall	36(36)
Incorrect recall	6(6)
Recall of the movie details	
Correct recall	43(43)
Partially correct recall	10(10)
Incorrect recall	47(47)

## CONCLUSION AND DISCUSSION

This research has used an eye tracking approach to explore YouTube visitors' fixation on, and recall of, the ad banner placed on the clips. 103 students in Chulalongkorn Business School were recruited randomly to view one of three movie clips on YouTube. While enjoying them, their eye movements were recorded and converted into the fixations on YouTube's ad banner. Although the subjects as college students tap into a small part of the Internet users, they fairly represent a major group of YouTube viewers (NECTEC, 2012). As a result, the finding based on this group of subjects are valid.

Through eye tracking, 97% of the subjects have fixated at least once on the ad banner placed at the bottom of the YouTube clips. It thus confirms the scant chance of banner blindness if it means lack of fixation on a banner. Compared to the number of fixation on ad banner reported in previous research, the present study's 97% is similar to the number on animated banners (94%) but slightly higher than that on static banners (55%) in the same experiment (Hamborg, et al., 2012). The raising figure may hint that placing an ad banner on the YouTube clip could be a better choice than presenting it via other channels,

given the static condition of the banner in the present study. Nonetheless, more research is needed to validate the hint.

Among those who had fixated on the ad banner in this study, only 8% were able to correctly recall what was presented on the banner. Although the 8% is relatively low, it is consistent to the results in previous studies (Hamborg, et al., 2012; Razzouk & Seitz, 2003) in which about 8-11% of viewers could correctly recall whether there were banners or what was on them. The subjects in this study were able to recall the detail of the clip (e.g., the movie title and its air time) more correctly than the banner content (see Table 3 for detail). Given the study's exploratory nature, there are two possible explanations for the different recalls. First, website viewers may have tendency to pay higher attention to content in a relatively large area than to those in a small area. Since the banner at the bottom of a clip is often smaller than the clip, viewers may see and perceive the banner as an annoying object that could hinder the recall. Opposite to the first, the second explanation could be the matter of competing contents. In the present study, the ad message was recalled with less accuracy than the clip, perhaps, because the clip movie was much more exciting to watch. Had the advertisers selected the more boring clip, the high fixation counts on the ad banner could have led to the more correct percentage of recall. Yet, the two explanations are much conjecture. We need more examination to verify which one is valid.

The findings have both theoretical and practical contributions. Theoretically, they have extended insight into the eye tracking application to the online advertising context of YouTube. Our major conceptual contribution stems from our findings through which YouTube visitors are not blind to an ad banner at the bottom of the clip but they could not correctly recall what was on the banner. Yet, they still have better recall of what are the movies and their detail on the YouTube clip. Practically, practitioners including online advertisers may opt for two recommendations based on the study's findings. First, an online media planner or a client must be aware of the low recall of YouTube's ad banner. Although it seems novel to embed an ad banner in a clip at a popular content-sharing website, viewers may not pay sufficient attention to the ad banner. Second, the low recall may be a result of the clip which might be so stimulating that it captures all of the viewers' attention. Nothing is thus left from the ad banner. This is from the finding that the viewers' recall of the clip is more correct than the ad banner. As such, an online marketer should be attentive when selecting the clip on which the ad banner will appear. If the clip is too thrilling, viewers may overlook at the banner. Yet, if clip is so mundane, viewers may not even want to watch the whole clip and easily miss the ad banner.

Similar to other research, this study does have two limitations. First, the online context always changes rapidly. What happens on YouTube today may not be true tomorrow. It thus imposes limitation to the finding's generalizability. More prompt research could be the remedy. Second, the data collection

was through a captive experiment. As a result, subjects are limited to those who have access to a lab facility. They were college students in the current research. The subsequent eye tracking examination may thus extend to cover the other types of viewers on other websites.

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## THE COMPARATIVE STUDY OF PRINCIPLES OF ACCOUNTING LEARNING ACHIEVEMENT: A COMPARISON BETWEEN PRE-EXAMS AND CHAPTER QUIZZES

Patcharanee Utamawoottikumjorn \*

### ABSTRACT

The purposes of this study were 1) To study the effects of the tests on the learning achievement 2) To compare the learning achievement of two teaching and learning methods firstly chapter quizzes and secondly no test 3) To compare the learning achievement of two teaching and learning methods firstly pre-exams and secondly no test and 4) To compare the learning achievement of two teaching and learning methods firstly chapter quizzes and secondly pre-exams. The experimental design was conducted in this study. The first year bachelor degree students Block A in Faculty of Business Administration were assigned randomly to three classrooms (Total students in Block A = 400 persons) in Subject Principles of Accounting. Treatments were tests, 1) no test (n = 43 persons) 2) chapter quizzes (n = 35 persons) 3) pre-exams (n = 38 persons). Assigned group A1 as a control group with no test, group A3 as an experiment group that was treated chapter quizzes and group A8 as an experiment group that was treated pre-exams. All classes were taught by the same instructor, same teaching instruments and same materials. The instructor provided all Introduction to Accounting and evaluated them before assigned to each classes. All chapters were chapter 1-2 (before midterm) and chapter 3-5 (before final). The time frame for all classes was 3 months. All classes were evaluated by the same midterm and final paper and all were graded by group assessment. The results are 1) The tests significantly effect on the learning achievement ( $\alpha = 0.05$ ). The Pre-Examination group learning achievement is significantly different from the No Test learning achievement (mean different +0.8253). 2) The learning Achievement of the class which instructor applied chapter quizzes is not significantly greater than the Learning Achievement of the class which instructor applied no test ( $\alpha = 0.05$ ) 3) The learning Achievement of the class which instructor applied pre-exams is significantly greater than the Learning Achievement of the class which teacher applied no test ( $\alpha = 0.05$ ) 4) The learning achievement of the class which instructor applied pre-exams is significantly greater than the Learning Achievement of the class which instructor applied chapter quizzes ( mean different +0.4837,  $\alpha = 0.05$ ).

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## INTRODUCTION

The intention of National Educational Act 1999, was the focus on the developing individual's potential to be a long-life learning person and also able to construct the knowledge. All higher education institutes always develop their curriculum adjusted to the changing situation and also support their staffs develop learning and teaching process emphasis on Student Center. All aim students have learning achievement and expect the knowledge gained by students can be practical in their real life. The teacher takes a crucial role in learning and teaching process. To get the learning achievement the teachers should 1) have good concepts or learning principles 2) teach congruent to those concepts 3) use several learning and teaching methods (Kammanee, 2002). Each student also has different background, aptitude and interests. The role of teachers currently different from previously that the main interest was the materials teachers provided the students and expected the students' advancement and achievement. However now they are interested in information process and construction of knowledge. Materials will be meaningful if the students can comprehend and learn them (Pornkul, 2012). Assessment is an essential part of the educational systems. In this process data of students' advancement and achievement are collected and used. The change in quality and quantity of students on a variety of parameters including knowledge, skills and attitude are observed (Collins & DiCarto, 2002). The students' performance is measured through tests and exams (OECD Policy Brief, 2005). The tests affect on students' learning achievement and more frequency of tests can better change the learning achievement than less frequency of tests. Chapter Quizzes are Formative Evaluation while Pre-Exams are Summative Evaluation (Pipittakul, 2527). Formative assessment leads toward better performance and hence can improve the standards of education (Black et al, 2004). Chapter Quizzes increase achievement, especially for low-performance students (Kohls&standford,2003). Chapter Quizzes can better improve students' memory while Pre-exams can better students' critical reasoning, understanding and practices (Chinnawong,1975), (Paijit, 1978), (Pinyoanantapong, 1978), (Pinittai, 2000).

Many students in Faculty of Business Administration are not majoring in Accounting while Accounting is important to business as a tool to record business transactions and prepare financial statement for both insider and outsider users. Accounting is also a language to communicate and negotiate in business (Utamawoottikumjorn, 2012). Principles of Accounting is the first step for studying Accounting and also the hardship of the Non-major students. The students need to pay attention, understand accounting concept, analyze the business transactions, record the transactions and also be able to prepare financial statement for a small business. The knowledge students gain from the prior chapter will help students better understanding in the next chapter. To enhance the prior chapter will help students better understanding in the next chapter. To meet the subject objectives and achievement

students need to always practice. Teachers need to provide the introductory to Accounting and Business before they teach the other chapters and assign practices in each. For both Midterm Exam and Final Exam students are evaluated their learning achievement. In both exams the students need to do within the time frame 3 hours. The purposes of this study are 1 ) To study the effects of the tests on the learning achievement 2) To compare the learning achievement of two teaching and learning methods firstly chapter quizzes and secondly no test 3) To compare the learning achievement of two teaching and learning methods firstly pre-exams and secondly no test and 4) To compare the learning achievement of two teaching and learning methods firstly chapter quizzes and secondly pre-exams. The instructor expected 1) Tests effect on the students' learning achievement 2) The learning achievement of the class which instructor applied chapter quizzes is greater than the learning achievement of the class which instructor applied no test 3) the learning achievement of the class which instructor applied pre-exams is greater than the learning achievement of the class which instructor applied no test 4) The learning achievement of the class which instructor applied pre-exams is greater than the learning achievement of the class which instructor applied chapter quizzes. The researcher scope to study only the learning achievement of the students studying in Faculty of Business Administration majoring in Retail Business Management at Panyapiwat Institute of Management, Thailand. Furthermore the instructor assumes all the students push all their best effort in all exams and no different time effects on the learning achievement among the experimental groups and the control group.

## THEORETICAL FRAMEWORK/ AND HYPOTHESIS

### **Student-Centered Classroom**

The theory and practice of student-centered learning has been build over the past century. Many educators have made influential contributions to the understanding of learning and how best to maximize human potential through education. As these theorists and practitioners saw it, learning involved a careful coordination between the individual's capacities, abilities and tendencies and the learning environments in which new information and skills were presented of them (Jones, 2007).

All learning environments combine psychological, pedagogical, technological, cultural, and pragmatic elements (Land & Hannafin, 1996). Student-centered learning environments shift the focus of these elements from the person communicating new information-teacher-onto the person integrating new information, the student. In addition to reorienting the focus of information integration, a student-centered approach recognizes that learning is best accomplished when intrinsically directed and when new information is made available in ways that reflect the unique experience, background and learning style of each student (Jone, 2007)

### Construction of Learning

Constructivism is a philosophy of learning found on the premise that, by reflecting on our experiences, we construct our own understanding of the world we live in. The result according to Brooks and Brooks (1993), is a deep understanding. Problems are structured around the big ideas to provide a framework which to gather information and build knowledge. Within a student-centered framework, teachers develop relevance by deliberately designing classroom activities with the student's need in mind and are able to guide the differentiation of individual learning.

### Authentic Assessment

Assessment for learning is one process that identifies the differentiation of individual learning as a central component of student learning. The process entails that teachers establish learning progression, identify the gap between student's current knowledge and the learning progression and utilize various assessments to provide individual feedback (Heritage, 2008). In other words, a continuous cycle of student feedback through various forms of assessment enables teachers to tailor instruction to individual needs, which are often designed by the teacher in collaboration with the student. A growing body of research literature suggests that the significant student learning progress can be made when teachers engage in this process. Since the late 1980s, review articles (Crooks, 1988; Natriello, 1987), theoretical work (Sadler, 1989), and meta-analyses (Black & William, 1998; Fuch, 1986) all indicate that teachers who adhere to the assessment for learning process improve student achievement substantially.

*Based on the Literature Reviews and Student-centered Theory teacher construct the following frameworks and hypotheses.*

*Firstly, Tests can be a tool to tailor the students' learning achievement (Heritage, 2008), (OECD Policy Brief, 2005).*

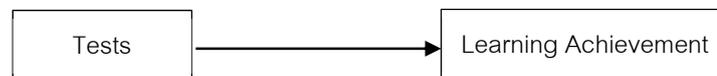


Figure 1 show the Theoretical Framework

H1 : Tests significantly affect on the students' learning achievement.

Secondly, Chapter Quizzes, a formative assessment can improve students' memory. Chapter Quizzes is a better tool to tailor the students' learning achievement than No test (Black, et al., 2004).

H2 : The learning achievement of the class which teacher applied Chapter Quizzes is greater than the learning achievement of the class which teacher applied No test.

Thirdly, Pre-exam, a summative assessment makes the students construct their knowledge and re-practice before they are tailor all their learning achievement (Chinnawong.S,1974).

H3 : The learning achievement of the class which teacher applied Pre-Exams is greater than the learning achievement of the class which teacher applied No test.

Chapter Quizzes can better improve students' memory while Pre-examination can better students' critical thinking and re-practice before being tailored (Chinnawong, 1974; Niempub,1975; Pajit, 1978; Pinittai, 2001). For the nature of Principles of Accounting, students need to pay attention, understand accounting concept, analyze the business transactions, record the transactions and also be able to prepare financial statement for a small business. The knowledge students gain from the prior chapter will help students better understanding in the next chapter. The instructor expected Pre-exam is better tool for subject Principles of Accounting than Chapter Quizzes.

H4 : The learning achievement of the class which teacher applied Pre-Exams is greater than the learning achievement of the class which teacher applied Chapter Quizzes.

## RESEARCH METHOD

This experiment selects students in Block A which is the students who work for 3 months and then back to study for 3 month. Panyapiwat Institute of Management is a corporate university which is an affiliated company of CPall. The institute aim the students be able to learn, think, work, understand cultures and live with integrity. All the bachelor degree students need to both study and work for all 4 years. There are two blocks of students 1) Block A-students work at 7-11 for 3 months before and then back to study for 3 months 2) Block B-students study for 3 months before and then work at 7-11 for 3 months. The students registered in Block A by internet and then the registration office of Panyapiwat Institute of Management randomly assigned the classrooms for each teacher. Mostly full-time teacher were assigned more than one classrooms. The researcher are randomly assigned to teach 3 classes A1,A3 and A8 from all 12 classes A-W-1,A-w-2, A1, A2, A3, A4, A5, A6, A7 ,A8, A9,A10. The instructor lectures the background knowledge ,Introductory to Accounting and Business for this subject before assigned students to the experiment. Each class are taught by the same teacher, instruments and materials. To study the effect of treatment on the experiment the study control the background, materials, and instructor. Furthermore all are assessed by the same midterm and final paper.

**Method;** The experimental design was conducted in this study. **Population and Samples;** The first year Bachelor degree, semester 1/ academic year 2012 in Faculty of Business Administration students at Panyapiwat Institute of Management were assigned

randomly to three classrooms (Population = 400 persons and Samples = 121 persons) in Subject Principles of Accounting. Treatments were tests, 1) no test (n = 44 persons) 2) chapter quizzes (n = 38 persons) 3) pre-examination (n = 39 person). The students did not test and the students who dropped out were deleted from the samples. Finally the number of students in the experiment are shown in Figure 2. The researcher randomly assigned group A1 as a control group with no test, group A3 as an experiment group which was treated chapter quizzes and group A8 as an experiment group which was treated pre-examination. The experiment groups were shown in figure 2 below.

Control Group	Experimental	Experimental
Group A1	Group A3	Group A8
No Test	Chapter Quizzes	Pre-Examination
43 persons	35 persons	38 persons

**Figure 2** Summary of Control Group and Experimental Groups

All classes were taught by the same teacher and same materials. The teacher provided all Introduction to Accounting and Business and then evaluated the students' achievement before assigned the students to each classes. **Instruments;** The instruments were 1) The teaching materials, Introductory to Accounting and Business and the others are 1.1) Journal, Ledger and Trial Balance 1.2) Working Paper, Closing Entry and Financial Statement 1.3) Adjusting the entries 1.4) Accounting of Merchandise Business 1.5) Accounting for Valued Added Tax. All students in each group need to do and present each group's case study in the last week. Chapter 1.1) and 1.2) were before Midterm Examination and Chapter 1.3) to Chapter 1.5) were before Final Exams 2) The 5 sets of Chapter Quizzes 3) The 2 sets of Pre-Exams 4) Mid-term paper and Final paper 5) Panyapiwat Grading Program 6) Statistical Program.

Chapter	Materials	Period(3 months)
0	Introductory to Accounting and Business	1 week
1	Journal, Ledger and Trial Balance	2 week
2	Working Paper, Closing Entry and Financial Statement	1 week
3	Adjusting the entries	1 week
Midterm Exam		

4	Accounting for Merchandise Business	2 week
5	Accounting for Valued Tax	1 week
Case Study Financial Statement and Analysis for Small Business Enterprise		1 week
Final Exam		

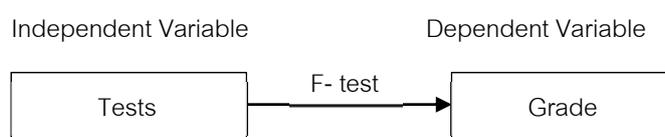
Figure 3 Summary of Materials in Principles of Accounting

**Data Collection;** The independent variables were Tests. The three groups were treated different kinds of tests, No test, Chapter Quizzes and Pre-Examination. Tests were defined as category data as following; No test = 0, Chapter Quizzes = 1 and Pre-Examination = 2. The dependent variable was Learning Achievement which is measured by grade. The instructor collected the following data in each class 1) Class Participation (score 10) 2) Assignment (score 10) 3) Tests (score 10) 4) Case Study (score 10). All Students got score 10 for tests because each group was treated differently. The data collected from the Exams were 1) Midterm Score (30) 2) Final Score (30). Then total scores (100) both in the classrooms and in the examination classes were recorded in the registration office grading database and then graded by grading program. The grades of all the students in all classes were changed to be interval ratios as following;

Grade Points	The Dependent Variable
A	4
B+	3.5
B	3
C+	2.5
C	2
D+	1.5
D	1
F	0

**Data Analysis;** The following constructs were designed to answer the teacher expectations.

**Construct 1** To test the hypothesis, tests were significantly effect on the students' Learning Achievement One Way ANOVA was used.



$$H_0: \mu_0 = \mu_1 = \mu_2$$

$$H_1: \mu_i \neq \mu_j \text{ at least 1 pair, } i \text{ not equal } j$$

at the significant level  $\alpha = 0.05$

statistic used was F-test, d.f. = (k-1), (n-k), k = number of treatment group  
and n was number of all subjects.

**Construct 2** To test the hypothesis the learning achievement of the class which teacher applied Chapter Quizzes is greater than the learning achievement of the class which teacher applied No test. Independent Sample t-test was used.

$$H_0: \mu_1 \leq \mu_0$$

$$H_1: \mu_1 > \mu_0$$

at the significant level  $\alpha = 0.05$

statistic used was t-test, d.f. =  $n_1 + n_0 - 2$ ,  $n_1$  = number of subjects in group 1  
and  $n_0$  = number of subjects in group 0

**Construct 3** To test the hypothesis the learning achievement of the class which teacher applied Pre-Exams is greater than the learning achievement of the class which teacher applied No test.

$$H_0: \mu_2 \leq \mu_0$$

$$H_1: \mu_2 > \mu_0$$

at the significant level  $\alpha = 0.05$

statistic used was t-test, d.f. =  $n_2 + n_0 - 2$ ,  $n_2$  = number of subjects in group 2  
and  $n_0$  = number of subjects in group 0.

**Construct 4** To test the hypothesis the learning achievement of the class which teacher applied Pre-Exams is greater than the learning achievement of the class which teacher applied Chapter Quizzes.

$$H_0: \mu_2 \leq \mu_1$$

$$H_1: \mu_2 > \mu_1$$

at the significant level  $\alpha = 0.05$

statistic used was t-test, d.f. =  $n_2 + n_1 - 2$ ,  $n_2$  = number of subjects in group 2  
and  $n_1$  = number of subjects in group 1

## RESULTS

The results were summarized in two parts as shown below.

**Part 1** Descriptive statistics of the number of students and means ,standard deviation, skewness and kurtosis of grades in each group (shown in Table 1)

**Table 1** Present descriptive statistics of the number of students and the grade in each groups.

Group	No.of Students (persons)	Means of students' grade	S.D.	Skewness	Kurtosis
No test(0)	43	1.74	1.32	-0.25	-1.39
Chapter Quizzes(1)	35	2.09	1.01	-0.75	0.67
Pre-Exams(2)	38	2.57	0.94	-0.97	1.54
Total	114	2.11	1.16		

**Part 2** Results and Conclusions from Testing the Hypothesis (shown in Table 2)

## CONCLUSIONS/ AND RESEARCH IMPLICATIONS

Conclusions; 1) Tests affect the Students' learning achievement but only the learning achievement between Pre-exams and No test is significantly different. This result supports the first Hypothesis. 2) The learning achievement of the group treated Chapter Quizzes is not greater than that of the group treated no test. This result does not supports the 2<sup>nd</sup> hypothesis. 3) The learning achievement of the group treated Pre-exams is greater than that of the group treated no test. This result supports 3<sup>rd</sup> hypotheses. 4) The learning achievement of the group treated Pre-exams is greater than that of the group treated chapter quizzes. This result supports 4<sup>th</sup> hypotheses. Implications; It can be implied that test a

kind of assessment affects on this subject's learning achievement and summative assessment is superior than formative assessment in this subject.

## DISCUSSION

The reason to explain the results and implications is ; as the nature of this subject the students need time to study, practice ,critically and logically understand each chapter before study in the next chapter. Chapter Quizzes help student better memory the materials but do not help students critically and logically understanding this kind of subject. On the other hand the results found that the learning achievement of the students who no test is greater than that of the students who were treated Chapter Quizzes. Formative assessment is not increase students' learning achievement.

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**Table 2 Summary of the Research Objectives, Statistical Hypothesis, Results and Conclusions.**

Research Objectives	Statistical Hypothesis	Results	Conclusions
1. To study the effects of tests on Principles of Accounting's Learning Achievement 0 - No test 1 - Chapter Quizzes 2 - Pre-Examination	$H_0 : \mu_0 = \mu_1 = \mu_2$ $H_0$ : at least one pair of $\mu_i$ and $\mu_j$ , $i \neq j$ Statistic Used: F-test Significant Level : $\alpha = 0.05$	-Reject $H_0$ -Only one pair, $\mu_2$ and $\mu_0$ , is significantly different $(\mu_2 - \mu_0 = +0.8253)$	- Tests significantly affect on Principles of Accounting's Learning Achievement ( $\alpha = 0.05$ ) - The Learning Achievement of the Group treated Pre-Exams is significantly different from that of the group treated No test. $(\mu_2 - \mu_0 = +0.8253, \alpha = 0.05)$ - The Learning Achievement of the group treated Chapter Quizzes is not significantly greater than that of the group treated No test ( $\alpha = 0.05$ )
2. To compare Principles of Accounting's Learning Achievement of two teaching methods firstly Chapter Quizzes (1) and secondly No test(0)	$H_0 : \mu_1 \leq \mu_0$ $H_0 : \mu_1 > \mu_0$ Statistic Used: t-test Significant Level : $\alpha = 0.05$	Cannot Reject $H_0$	

**Table 2** Summary of the Research Objectives, Statistical Hypothesis, Results and Conclusions.

Research Objectives	Statistical Hypothesis	Results	Conclusions
3. To compare Principles of Accounting's Learning Achievement of two teaching methods firstly Pre-Examination (2) and secondly No test (0)	$H_0 : \mu_2 \leq \mu_0$ $H_1 : \mu_2 > \mu_0$ Statistic Used : t-test Significant Level : $\alpha = 0.05$	Reject $H_0$ and $\mu_2 - \mu_0 = +0.8253$ at $\alpha = 0.05$	- The Learning Achievement of the group treated Pre-Examination (2) is significantly greater than that of the group treated No test (0). $(\mu_2 - \mu_0 = +0.8253, \text{ at } \alpha = 0.05)$
4. To compare Principles of Accounting's Learning Achievement of two teaching methods firstly Pre-Examination (2) and secondly Chapter Quizzes(1).	$H_0 : \mu_2 \leq \mu_1$ $H_1 : \mu_2 > \mu_1$ Statistic Used : t-test Significant Level : $\alpha = 0.05$	Reject $H_0$ and $\mu_2 - \mu_1 = +0.4837$ at $\alpha = 0.05$	- The Learning Achievement of the group treated Pre-Examination (2) is significantly greater than that of the group treated Chapter Quizzes (1). $(\mu_2 - \mu_1 = +0.4837, \text{ at } \alpha = 0.05)$

## INSTITUTIONAL INVESTOR RECOGNITION ON FINANCIAL ASSET TRANCHES: A STUDY OF THE THAI PROPERTY SECTOR

Pattaragit Netiniyom<sup>\*</sup>

### ABSTRACT

This study explores the investment behavior of Thailand's institutional investors. A comparison is made between property development shares and property funds. An experiment was conducted on the Stock Exchange of Thailand (SET) from June 2008 to June 2012. However, the findings of this study are expected to be generalized across other emerging markets that are mostly dominated by retail investors. The Generalized Least Square regression method is applied to limit the threat from small market capitalization characteristics of the sample. The study finds that: (1) trading volume of property funds leads to the market price premium of their net asset values (NAVs); (2) institutional investors' holding of property development shares encourages the market price of these stocks to be higher; (3) institutional investors prefer to make their investment decisions based on the discounted market price of property funds rather than the net asset value of the property funds. The results imply that higher liquidity yields a higher premium price on book value or net asset value. Another implication is that projected cash flows of financial assets that represent their current price are more important than their present net asset value. Finally, free float and the existence of institutional investors positively affect financial asset prices.

**Keywords:** Institutional investor / financial assets / property development / property funds

### INTRODUCTION

The paper is separated into 5 sections. The first section explains research issues, the Stock Exchange of Thailand, institutional investors, and the property development sector. The second section discusses other related previous studies. The third part concentrates on data, the definition of variables, and the research methodology. The fourth section shows results and discussions. The last section summarizes the research outcomes and the limitations.

#### 1. Research Issues

Since the 1980s, the proportion of institutional investor trading on NYSE has been greater than 70% (NYSE, 2013). The increasingly important role of institutional investors on capital markets is due to a significant expansion of institutional investors worldwide, including endowment funds, hedge funds,

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insurance companies, investment banking institutions, investment trusts, mutual funds, pension funds, sovereign wealth funds, unit trusts, unit investment trusts, and so on.

In the past decade, a number of emerging capital markets have grown quickly in terms of market capitalization and security types. The growing number of middle-class in developing countries has induced more fund flows to these nations. Several governments in South East Asia have established a variety of instruments to encourage investment in securities. These incentive instruments are particularly tax privilege schemes, such as Long Term Equity Funds (LTFs) or Retirement Mutual Funds (RMFs). The establishment of these incentive schemes has strengthened the role of institutional investors. To date however, there have only been a few studies on the behavior of institutional investors in emerging markets. There are also many issues pertaining to the corporate governance of institutional investors' investment decisions. This study aims to explore the behavior of Thailand's institutional investors via the investment of two asset classes, namely property development shares and property funds. The study confirms whether or not institutional investors are rational passive investors who invest in underpriced assets.

## 2. Overview of the Stock Exchange of Thailand

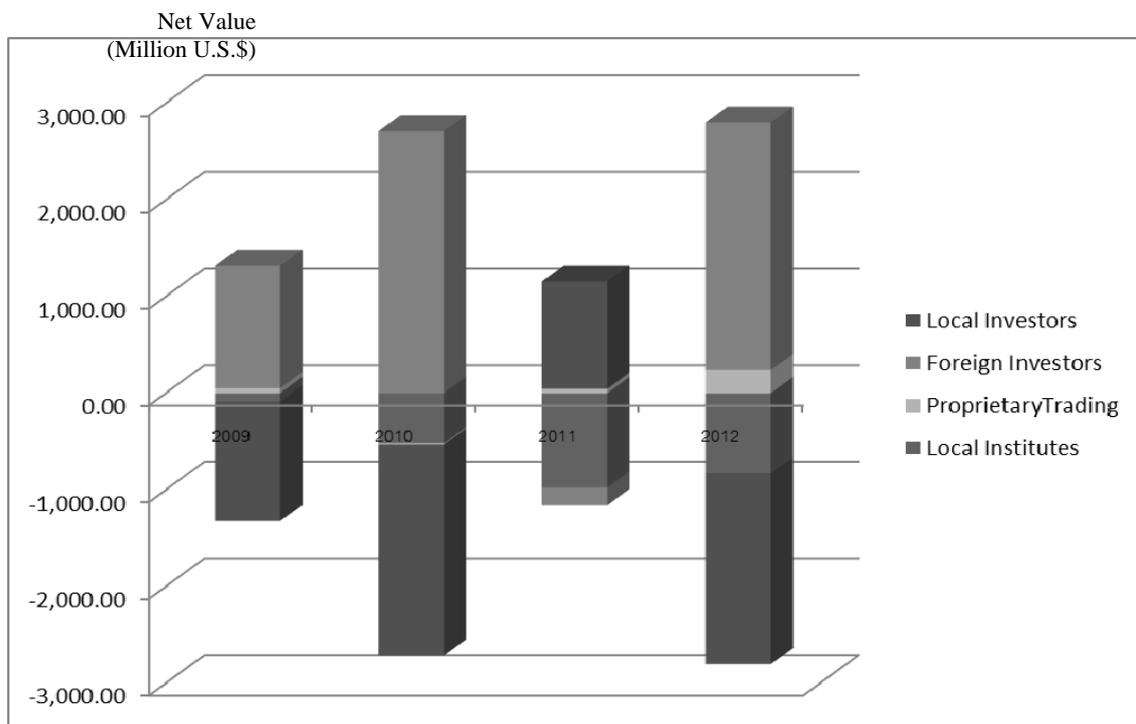
Thailand is recognized as one of the leading emerging markets by the International Monetary Fund (IMF). An emerging market is classified by its economic growth rate, i.e. GDP growth rate and fundamental macro economic factors that are rapidly improving (IMF, 2012). Since the 1990s, the Stock Exchange of Thailand (SET) has also allowed the international diversification of financial instruments e.g. American Depositor Receipts (ADRs) or the stocks of SET companies that are traded on US stock exchanges. In 2012, the market return from the Stock Exchange of Thailand (SET) was 35.76% p.a. compared with the Dow Jones Index's rate of return and the FTSE index's rate of return of 5.90% and 6.34% respectively.

The listed securities of the SET are divided into 9 sectors. The property sector consists of construction materials, property development and property funds. Their market capitalization is shown in Figure 1.



**Figure 1** Market capitalization of SET property development shares and property funds

One of the specific characteristics of the Stock Exchange of Thailand is that retail investors exhibit high proportional trading volumes. This characteristic is the same as in other Asian emerging markets (Wei, Rhee and Wang, 2011). The role of institutional investors is expected to increase while retail investors are believed to gain more experience. From 2009 to 2012, retail investors played the opposite role in trading from institutional investors that comprise foreign investors, proprietary trading and local institutional investors. This observation can be clearly seen in Figure 2, which shows the net trading (buy or sell) value of each investor group on the SET.



**Figure 2:** Trading volumes by different types of investors

### 3. Institutional investors and property development

Institutional investors generally have to deal with asset allocation, given that their managed funds are large and have long maturity. Because of these restrictions, property assets normally become part of institutional investors' basic investment. Property assets offer high risk-adjusted returns, partly due to their liquidity premium. The predictability of income streams from property assets also offers attractive opportunities for investors to accept gearing. In the past few years, the money supply easing by major developed countries (also known as quantitative easing or QE) has resulted in a low interest rate environment. Nevertheless, investors can still protect their investment value through property investments since the value of property assets will be higher from lower discount rate (gearing ratio). There are also drawbacks to investing in property assets, such as the lumpiness of assets, information asymmetries, and

barriers to entry. Possible reasons are as follows: (1) building values tend to be large; (2) properties are basically indivisible; (3) sellers of an asset generally have an informational advantage over buyers and; (4) substantial capital is needed to invest in properties. Moreover, managing these assets requires professional managerial knowledge, especially with regard to technical management of the assets, leasing activities, refurbishments, transactions, and strategic dimensions of the assets. In the final case, investors will act like the manager of an operating property.

Since the 1970s, property investments have shifted dimensionally from direct investments or investments in real assets to indirect investments or investments in financial assets. The traditional method of real estate investments has benefits of full control management and more tax transparency. However, from the financial point of view, a large lot size and the heterogeneity of real estate can result in a high degree of unsystematic risk (Miller and Geltner, 2005). The development of financial assets such as property funds and Real Estate Investment Trusts (REITs) are aimed at dealing with liquidity constraints. Property funds increase the liquidity of property assets through valuation and separation in fund units. Fund investment also lessens the total risk by reducing its unsystematic risk portion. Unit holders can benefit from a small lot size, low transaction costs, and regular report of the unit's NAV (Net Asset Value). For all these apparent benefits of investing in property funds, it can be said that investors have the ability to switch between property funds and other asset classes. Figure 3 shows the classification of financial asset classes from low to high risk.

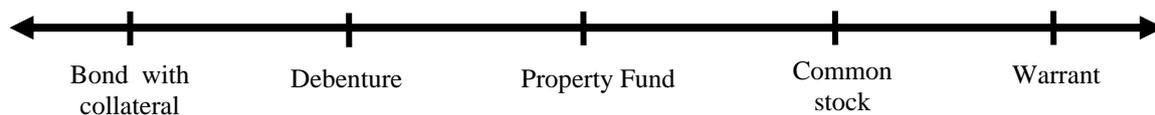


Figure 3: Financial asset risk classification

In Thai capital markets, major financial assets relating to properties can be categorized by their degree of risk, from bonds to warrants. The transition of asset types, from real assets to financial assets, is associated with liquidity constraints. The property business has a long cash conversion cycle because the average inventory period is long. The mortgage process also results in properties being sensitive to interest rate changes. Properties may behave the same way as bonds when interest rates increase, i.e. the property price tends to decrease when the interest rate rises, holding other factors constant. In real life, however, when other factors are not held constant, this phenomenon might not always be the case. Hoesli et al. (2004) find that property returns are weakly correlated with stock returns. The diversification benefits of property investment largely stems from properties' low (often negative) correlation with bonds.

The risk of common stocks comes from business risk and financial risk. Property funds in Thailand need to have a specific purpose of asset allocation, normally closed-end funds with an option to be listed on the SET. The risk of property fund investments stems from the risk of investing in real estate. Generally, major concerns in real estate investments are: (1) adverse changes in political or economic conditions; (2) adverse local market conditions; (3) financial conditions of property buyers and sellers; (4) changes in availability of debt or equity financing; (5) changes in interest rates and other operating expenses; and (6) changes in environmental laws and regulations, zoning laws and other governmental rules, and fiscal policies. Property fund investments thus are exposed to the same group of risk factors, and as a result their value is volatile. The capital value of the assets in property funds may significantly diminish in the event of a sudden downturn in real estate market prices or an instant decline in the economies in Bangkok and other provinces in Thailand where such a portfolio of properties in the fund are located. Property funds may also be adversely affected by the illiquidity of real estate investments and the lack of alternative uses for properties. Moreover, concentration of investments in retail properties exposes property funds to the risk of downturns in the retail market of Thailand. Such downturns may lead to a decline in the occupancy of the properties or real estate-related assets in the portfolio of property funds. This decline will negatively affect the income of the property fund from the premises, and/or result in a decline of the NAV, which will have an adverse impact on dividends paid to unit holders and/or on operations and financial conditions of the property fund. Table 1 summarizes the differences between property shares and property funds in some important respects.

**Table 1:** Differences between property asset types

Investor preferences	Property development shares	Property fund	
		Lease hold	Free hold
Investment period	Could be short term investment to long term period	Medium to long term	
Availability of capital employed	Market daily	Reference to the price on secondary market	
Minimum lot size	100 shares each	100 units each	
Foreign limitation	Normally the direct holding does not exceed 49% according to National Commercial Act	No limitation	

Risk preference	High	Less than freehold	More than leasehold
Tax consideration	No capital gain taxes if sold on SET		
	Withholding tax of 10% for dividends if listed on SET but the holding period before and after dividend paid must be longer than 3 months		
Investor preferences	Property development shares	Property fund	
		Lease hold	Free hold
Valuation	Very complicated depending on company capital and business structure	Cash flows expected from the asset or cash flows expected from a closely-related asset	
Control	By board of directors through the annual shareholder meeting.	By appointment of the mutual fund company; usually there are no annual unit holder meetings except for non-ordinary transaction, e.g. asset sale, contract changes	
Pre emptive right	YES	NO	
Leverage Ability	YES without legal limit	Normally not allowed or very limited (presently the Commercial Laws allow no more than 10%)	

## THEORETICAL FRAMEWORK

### 1. Literature review

This section consists of three parts. The first part reviews the literature on investment in property. The second part explores institutional investors' behaviors. The third part summarizes previous studies pertaining to variable development.

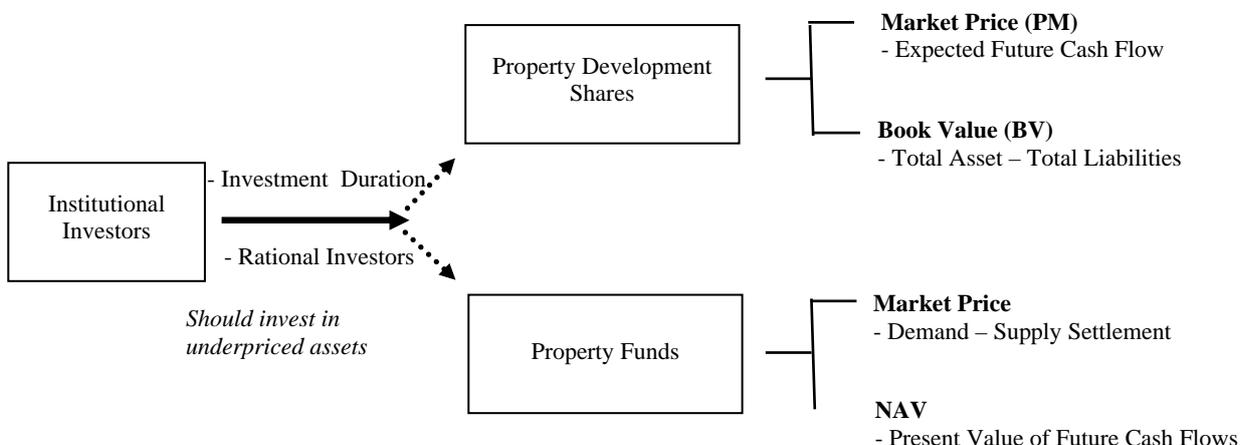
Property investment decisions depend on many factors. Some of the important ones are the period of investment; cash inflow stability and the potential to increase revenue; appreciation potential; nature of contracts; location; and utilization. The return on property investment comes from income received (current yield) and asset price appreciation (capital gains yield), while sources of risk are the security of the investment and liquidity (Berry et al., 1999). Property development usually requires significant investment. Thus, property development companies usually have a high debt ratio. The study of Thao, Joseph and Ooi (2012) confirms that the maturity of the debt capital market has a significant and positive

influence on firms' capital structure while developments in the equity capital market have an inverse impact on the debt ratio of property companies.

Institutional investors are major players not only in developed markets but their role is also rapidly growing in emerging market countries (Khorana, et al., 2005). Institutional investors can encourage short-term managerial behaviors (Bhide, 1993). Chen et al. (2007) divide institutions into two groups; these are independent institutions (e.g. mutual fund managers and investment advisers) and grey institutions (e.g. bank trusts, insurance companies, and other institutions). Independent institutions tend to be a pressure-resistant investor while grey institutions tend to be a pressure-sensitive type that is loyal to corporate management. Brickley et al. (1988) argue that banks and insurance companies are more supportive of management actions than other types of institutional investors in anti-takeover amendment proposals. Their investigation of investment preferences has results consistent with what usually happens in the U.S. market, in that institutional investors generally prefer large, widely held, and visible stocks. In contrast, Bennett et al. (2003) observe that independent managers invest more in firms with liquid stocks and firms in countries with strong legal environments, in comparison to grey managers (especially the bank-controlled ones). In the study of Bushee (2001), transient institutional investors are found to be concentrating on near-term earnings, but passive on long-run value. This behavior consequently induces myopic stock mispricing. Nagel (2005) provides evidence that mispricing is at the greatest degree for stocks with the lowest degree of institutional ownership. Here, institutional ownership is a proxy for the extent to which short-selling constraints bind (the assumption is that short-selling is cheaper for institutions). Recent institutional investor involvement in corporate governance has been seen as a natural response to the decline in the takeover market and the rise of informed institutional investors (Pound, 1987). Gompers and Metrick (2001) indicate that institutional ownership (the fraction of a firm's shares held by all institutions) can predict returns cross-sectionally given that firm characteristics are similar, while Cohen et al. (2002) show that institutions, as a group, exploit price momentum at the expense of individuals. Amir (2007), on the other hand, argues that the liquidity-ownership relationship is mostly driven by institutional ownership rather than insider ownership. In addition, liquidity is positively related to total institutional holdings but negatively related to institutional blockholdings. Most institutional blockholders are permitted to trade on information as they are not classified as insiders even if they hold more than 10% of a stock's outstanding shares. Amir's study also reports that while institutional holdings are positively correlated with liquidity, institutional concentration is observed to be negatively correlated with liquidity. From the perspective of institutional investors, property assets have a long duration with a combined aspect in which contractual rents are tied to the rate of inflation. This feature calls for a mixed investment strategy (Chun et al., 2000; and Craft, 2001).

Gillan and Starks (2003) speculate that the rise of professional money managers as a large shareholder group in corporations worldwide offers the potential for increased monitoring of firm management. Institutions' involvement can range from threatening a stock sale to actively using corporate voting rights or meetings with management. Furthermore, several empirical studies suggest that independent investment advisers and mutual funds are active monitors. Daniel et al. (1997) show that stocks held by mutual funds outperform a variety of benchmarks. Stock-holdings data suggest that institutions in general and mutual funds in particular have stock-picking skills even though their returns after costs and fees seem to be poor. Since investment decisions directly relate to the consideration of expected returns, non-rational behaviors among investors need explanation. The theoretical framework underpinning these phenomena is behavioral finance. Zhang (2006) finds that stocks with greater informational uncertainty (e.g., small business entities that have very few analysts following) exhibit stronger statistical evidence of mispricing in terms of return predictability from book/market and momentum within cross-sectional regressions.

Under the regime of capitalism, land rights, especially freehold<sup>1</sup>, encourages property investment to be an interesting alternative choice for institutional investors. Their investment decisions are much related to the balance of risk and return. While financial assets increase the liquidity of properties, investors lose some control. Thus, rational institutional investors often seek to invest in asset types that generate strong and regular cash inflows. As the book value of property development shares comes from the balance sheet, while the NAV comes from the forecast of the net present value of cash flows throughout the asset life, institutional investors tend to invest in assets with lower unit market price to NAV. In contrast, institutional investors prefer a higher market price to book value of property development shares since normally there is a strong positive correlation between market price and P/E ratio (Ramcharran, 2002). Figure 4 summarizes the theoretical development of the study.



<sup>1</sup> Freehold refers to ownership of land and the buildings on such land. The opposite is leasehold estate where property reverts to the owner when the lease expires.

Figure 4: Conceptual framework

## RESEARCH METHOD

### 1. Data and variables definition

The property sector in the Stock Exchange of Thailand (SET) consists of three groups: (1) construction materials, e.g. cement, steel and decoration materials; (2) property development and construction companies; and (3) property funds. Sample data in this paper includes only property development companies and the property fund sector. There are, in total, 43 listed property development companies and 17 property funds in the sample. The daily observation period lasts from June 1, 2008 to June 30, 2012 or four consecutive years. The small market capitalization leads to no trading volume for some observed days. These observations are deleted from the final list in order to limit the autocorrelation and heteroscedasticity that may arise later on. The descriptive statistics of each sample group are shown in Appendices 1 and 2. Although some control variables are not reported daily, i.e. Book Value (BV) is reported quarterly, and Net Asset Value (NAV) and Coincident Economic Index (CEI) are reported monthly, the standard deviation of these variables is very small (less than 1 for BV and NAV and less than 4 for CEI). When small standard deviation of economic variables exists through the study period, the threat from misinterpretation is limited (Prayaratch, 2010).

The model specification has two variable groups i.e. control variables and observed variables. The variables' symbols, definitions and expectation signs are explained in the following table.

Table 2: Variable development summary

Variable	Definition	Expected Sign
Control variable		
I	<ul style="list-style-type: none"> <li>• The inter-bank overnight rate, which directly reflects the yield to maturity (YTM). The data come from the Bank of Thailand through its website: <a href="http://www.bot.or.th">www.bot.or.th</a>.</li> <li>• For the property development sector, a higher interest rate will push down the equity as the net tangible asset does not change. In other words, a higher interest rate would lower the book value of the stock.</li> <li>• For property funds, their illiquidity characteristic in the SET results in no correlation between their market price and short-term interest rate.</li> </ul>	<p style="text-align: center;">+</p> <p style="text-align: center;">Chiou and Su, (2007)</p>

Variable	Definition	Expected Sign
	The flat yield curve during the study period implies that the NAV is unchanged.	
CEI	<ul style="list-style-type: none"> <li>● Coincident Economic Index (CEI) is the indicator of business cycles, intended as a complementary tool in the assessment of economic trends and short-term economic forecasting. The CEI is useful in the determination of the turning points or the peaks and troughs of business cycles as well as a short term (3-4 months) forecast of the economy. The data come from the Bank of Thailand through its website: <a href="http://www.bot.or.th">www.bot.or.th</a>.</li> <li>● The CEI is constructed from 5 components, including real imports, manufacturing production index, real gross value added tax, volume sales of automobiles, and real debit to demand deposit (<i>withdrawals of demand deposit account</i>). During the study period, the interest is capped at a low point in Thailand so that the discounted rate does not significantly change.</li> <li>● As CEI represents the economic conditions, an increase of CEI would lead to the expectation of good economic conditions which determines higher prices of financial asset. Thus, <math>P_m/BV</math> or <math>P_m/NAV</math> ratios would increase.</li> </ul>	<p style="text-align: center;">+</p> <p style="text-align: center;">Ibrahim and Said, (2012)</p>

Oil	<ul style="list-style-type: none"> <li>● The diesel premium grade is announced daily by Petroleum Thai (PTT), which has more than 90% of the oil supply in Thailand. The data come from Petroleum Authority of Thailand through its website: <a href="http://www.pttplc.com/th/getoilprice.aspx">www.pttplc.com/th/getoilprice.aspx</a>.</li> <li>● Property development companies and property funds require revaluation of their NAV regularly. Diesel price movements significantly affect construction costs. A lower price of oil would decrease the replacement cost of property assets. Thus, the NAV or BV should be lower. The lower values of the denominators would increase the market price to BV or the market price to NAV ratios.</li> </ul>	<p style="text-align: center;">-</p> <p style="text-align: center;">Miles (1996)</p>
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Variable	Definition	Expected Sign
InSET	<ul style="list-style-type: none"> <li>The SET Index is a composite economic indicator which is calculated from the prices of all common stocks (including unit trusts of property funds) on the main board of the Stock Exchange of Thailand (SET), except for stocks that have been suspended for more than one year. It is a market capitalization-weighted price index which compares the current market value of all listed common shares, with its value on the base date of April 30, 1975, which was when the Index was established and set at 100 points. The index is calculated as follows:   <math display="block">\text{SET Index} = \frac{\text{Current Market Value} \times 100}{\text{Base Market Value}}</math> </li> <li>The data come from the Stock Exchange of Thailand through its website: <a href="http://www.setsmart.com">www.setsmart.com</a>.</li> <li>Since the SET index is positively correlated with the market price of securities, a higher index should lead to higher <math>P_m/BV</math> or <math>P_m/NAV</math> ratios.</li> </ul>	+
Observed variables		
InVol	<ul style="list-style-type: none"> <li>For property shares, the daily trading volume is directly related to their free float. Liquidity has a positive effect on the market price. Thus an increase of trading volume should also increase market price and accordingly <math>P_m/BV</math> ratio.</li> <li>The data come from the Stock Exchange of Thailand through its website: <a href="http://www.setsmart.com">www.setsmart.com</a>.</li> </ul>	+
InAvgVol	<ul style="list-style-type: none"> <li>The trading volume on property funds is slim, thus the average of monthly trading volume is used as a proxy for the whole month's observation. Since liquidity positively affects the market price, an increase in the average daily trading volume should increase market price and accordingly the <math>P_m/NAV</math> ratio.</li> <li>The data come from the Stock Exchange of Thailand through its website: <a href="http://www.setsmart.com">www.setsmart.com</a>.</li> </ul>	+
linv	<ul style="list-style-type: none"> <li>linv is a dummy variable. linv is defined to be 1 if institutional investor holding in property assets is greater than a specified</li> </ul>	+ for property shares

Variable	Definition	Expected Sign
	<p>percentage point, or 0 otherwise.</p> <ul style="list-style-type: none"> <li>● The holding of institutional investors is assumed to be significant if institutional investors own more than 5% of property shares and 30% of property funds.</li> <li>● The reason why different criteria is used to define <math>linv</math> is that more than 95% of listed property development companies have less than 30% institutional holders.</li> <li>● Institutional investors in this study are classified into the following groups: (1) commercial banks; (2) security companies investing in own assets; (3) insurance companies; (4) government units and state enterprises under the law on budgetary procedures, or other legal entities established under a specific law; (5) the Government Pension Fund; (6) Provident Funds; (7) Social Security Funds; (8) mutual funds under the Security Law; (9) the Thai Red Cross Society; (10) public benefit foundations; (11) savings and credit; (12) international financial institutions in which Thailand is a member; (13) mutual funds under foreign laws which publicly offer investment units for sale to investors; (14) foreign investors that can be classified under categories (1) to (7) above; and (15) other investors approved by the SEC.</li> <li>● The data come from the Stock Exchange of Thailand through its website: <a href="http://www.setsmart.com">www.setsmart.com</a></li> <li>● Since rational institutional investors tend to behave like value investors (VI), who evaluate their investment from cash flow expectation (market price) rather than the book value, the expectation of <math>linv</math> coefficient for property shares sector is positive or the investors prefer growth stocks to low PE stocks. The NAV is the present value of future cash flows for property funds. As a consequence, the <math>linv</math> coefficient for property funds should have a negative sign; that is, institutional investors would prefer underpriced assets.</li> </ul>	<p>— for property funds</p>

### 3.2 Methodology

General Least Square (GLS) regression is applied in this study to limit the problems of heterosecdasticity and autocorrelation from the sample characteristics, i.e. small market capitalization

and government policy control affecting economic variables (e.g. oil price movement is substantially intervened in by the government). After re-estimating the model with weighted least squares techniques (WLS), the p-value of F-statistic is less than 0.05. The Breusch Godfrey (BG) autocorrelation test is significant at the 5% level. The Augmented Dickey Fuller test (ADF) on each variable is shown in Tables 3 and 4. Thus, the analysis complies with basic assumptions of econometrics.

**Table 3: Unit root test at level of property shares sample**

Variable	ADF Test at Level (Test of I(0))				Remark
	Lag	ADF Test	Critical Value	Prob.	
		Statistic	5%		
P/NAV	0	-8.717336	-3.40991	0.0000	Stationary
OIL	0	-15.33775	-3.40991	0.0000	Stationary
I	0	-7.217130	-3.40991	0.0000	Stationary
CEI	0	-18.03311	-3.40991	0.0000	Stationary
lnVol	0	-50.78728	-3.40991	0.0000	Stationary
lnSET	0	-11.94179	-3.40991	0.0000	Stationary

**Table 4: Unit root test at level of property fund sample**

Variable	ADF Test at Level (Test of I(0))				Remark
	Lag	ADF Test	Critical Value	Prob.	
		Statistic	5%		
P/NAV	0	-4.370776	-3.40991	0.0000	Stationary
OIL	0	-7.318802	-3.40991	0.0000	Stationary
I	0	-3.376668	-3.40991	0.0000	Stationary
CEI	0	-9.268673	-3.40991	0.0000	Stationary
lnAvgVol	0	-19.13372	-3.40991	0.0000	Stationary
lnSET	0	-4.324496	-3.40991	0.0000	Stationary

The results shown in Tables 3 and 4 imply that all variables of both sectors are stationary at level since the absolute value of ADF statistics is higher than the absolute value of the MacKinnon Critical Value at 10% significance level.

The multicollinearity test of each variable is performed by calculating the Variance Inflation Factors (VIF) and the results are shown in Tables 5 and 6. Three variables have their VIF ratio greater than 5 but still less than 10, while the correlation (shown in Appendix 2) between (1) I and lnSET is 0.60, and (2) Oil and lnSET is 0.5. Referring to the study of Gordon R.A. (1968), economic variables having a VIF ratio of less than 10 are acceptable for multiple regression analysis.

**Table 5:** Multicollinearity test of property development shares sample

Variable	R-square	VIF
OIL	0.6049	2.5309
linv	0.0087	1.0087
I	0.8669	6.5111
CEI	0.5583	2.2639
lnVol	0.0486	1.0511
lnSET	0.8245	5.6988

**Table 6:** Multicollinearity test of property fund sample

Variable	R-square	VIF
Oil	0.8652	6.4192
linv	0.0000	1.0000
I	0.7509	4.0146
CEI	0.6452	2.8186
lnAvgVol	0.0539	1.0570
lnSET	0.6376	2.7597

Since all variables have a VIF ratio of less than 10, and the theoretical definition of the dependent variable (Market Price to Book Value or NAV) is not similar to all the independent variables, therefore, the model specification can be written as follows:

$$P_m/BV = b_0 + b_1(Oil) + b_2(I) + b_3(CEI) + b_4(lnSET) + b_5(lnVol) + b_6(linv) \dots \dots \text{Equation (1)}$$

$$P_m/NAV = b_0 + b_1(Oil) + b_2(I) + b_3(CEI) + b_4(lnSET) + b_5(lnAVG.Vol) + b_6(linv) \dots \dots \text{Equation (2)}$$

Equation (1) is applied to the property development shares sample while Equation (2) is applied to the property fund sample.

## RESULTS

## 1. Empirical Results

Empirical results of Equations (1) and (2) are shown in Tables 7 and 8. At the 95% confidence level, variables I and OIL are significant and are consistent with their expected sign. The variable CEI is significant with a positive sign at the confidence level of 95% only for the property fund group. In contrast, variable lnSET is significant with a positive sign at the confidence level of 95% for property development shares, but at the confidence level of 90% for property funds.

Results regarding the trading volume variables (lnVol and AvgVol) are different between the property development shares and property fund group. This observed variable turns out to be significant only for the property fund case, but not for the other one. The slim trading volume of property funds leads to the premium of its liquidity. The second observed variable for property development shares, lnv, shows that the presence of institutional investors can lead to an increase in the market price of property development shares. In the property fund sector, institutional investors prefer to invest when they see that the market price of the funds is too cheap rather than when they consider the net asset value of the funds is too low.

**Table 7:** General least squares of property development shares group.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.163459	3.443004	-2.080584	0.0375
I	0.419382	0.096402	4.350332	0.0000*
CEI	0.037640	0.034764	1.082732	0.2789
OIL	-0.259779	0.057400	-4.525764	0.0000*
lnSET	1.305022	0.471293	2.769027	0.0056*
lnVol	0.036328	0.039069	0.929843	0.3525
lnv	2.298496	0.102935	22.32952	0.0000*

Weighted Statistics			
R-squared	0.663599	Mean dependent var	1.281232
Adjusted R-squared	0.663554	S.D. dependent var	6.874649
S.E. of regression	3.295814	Akaike info criterion	5.223340
Sum squared resid	483952.0	Schwarz criterion	5.224708
Log likelihood	163693.0	F-statistic	14647.87
Durbin-Watson stat	2.087662	Prob(F-statistic)	0.000000

**Table 8:** General least squares of property fund group.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-23.04940	1.072928	-21.48271	0.0000
I	0.174379	0.010540	16.54453	0.0000 <sup>*</sup>
CEI	5.378494	0.247949	21.69195	0.0000 <sup>*</sup>
OIL	-0.506528	0.050653	-9.999931	0.0000 <sup>*</sup>
lnSET	-0.054031	0.028823	-1.874617	0.0609 <sup>**</sup>
lnVol	0.022727	0.003367	6.750034	0.0000 <sup>*</sup>
linv	-0.233913	0.006118	-38.23192	0.0000 <sup>*</sup>

Weighted Statistics			
R-squared	0.744962	Mean dependent var	0.872014
Adjusted R-squared	0.744895	S.D. dependent var	3.182791
S.E. of regression	0.313005	Akaike info criterion	0.515114
Sum squared resid	2221.910	Schwarz criterion	0.517591
Log likelihood	5835.933	F-statistic	11040.85
Durbin-Watson stat	2.152624	Prob(F-statistic)	0.000000

## 2. Discussion

As shown in figure 3, investing in property development shares is riskier than investing in property funds. The reason is that property funds must meet the diversification standard as specified by their investment policies. This study confirms that when financial assets are riskier, there are premiums on their net tangible assets. In other words, the financial transformation process results in the risk of property development shares being higher than that of property funds. As a consequence, rational investors are willing to pay higher premiums for the process. The valuation of property development shares depends on future cash flow expectations because property companies set their investment policy to be consistent with the economic conditions. Thus, institutional investors will pay a higher price if there are positive net cash flows from future investments. The finding of this study is consistent with that of Ramcharran (2002). In the property fund sector, the existence of institutional investors with a negative coefficient implies that

institutional investors prefer the underpriced assets. For example, institutional investors are more likely to invest in property funds if the ratio of  $P_m$  to NAV of the fund decreases, i.e. when the market price of the property fund decreases and the NAV of the property fund increases.

The outcome of this study implies: (1) financial process makes a clearer picture of its valuation, i.e. a property fund legally defines its investment so that institutional investors will not be willing to pay premiums, unlike in the case of property shares; and (2) institutional investors prefer liquidity and accept a higher price.

The empirical findings of this paper suggest that institutional investors make their investment decisions based on the future status of financial assets. The current value of net assets is less important than the expectation of future cash flows. Institutional investors may refer to the Thai accounting standard on how much assets are actually worth. The trading volume confirms that investors will demand liquidity premium, thereby, increasing the financial asset price. Thus, the listed SET companies should pay more attention to the free float in order to avoid the underpriced financial assets.

## CONCLUSION AND RESEARCH IMPLICATIONS

The study of institutional investor recognition on financial asset tranches: A case study of the Thai property sector aims to explore the behavior of institutional investors on different types of financial assets, i.e. property development shares and the property fund sector. The results of this study show that institutional investors tend to make their investment decisions based on their valuation of financial assets and pay less premium for assets that closely resemble real assets, e.g. property funds. This study also indicates that the free float, which is derived from trading volumes, increases the financial asset price. Thus, the concentration of shareholders may lessen the valuation of the financial assets.

The policy implication of this study is that a higher proportion of institutional investors in the Stock Exchange of Thailand (as shown in Figure 2) could decrease the market volatility, thereby leading to lower periods of underpriced assets. Initial Public Offerings (IPOs) normally transform family-controlled firms into public firms. Thus, if the capital received from the IPO is lower than its intrinsic value, family-controlled companies are discouraged from going public. This is clearly evident from the past five years when Thailand has shown the lowest figure of Initial Public Offerings (IPOs) in South East Asia. The average IPO valuation in Thailand is only US\$38 million compared with US\$139 million in Malaysia, US\$129 million in Singapore, US\$97 million in Indonesia and US\$112 million in the Philippines (Bloomberg, 2012).

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## APPENDIX 1

### Appendix A: Descriptive statistics of property development shares sample group

	PM_BV	OIL	I	CEI	SET	Vol	linv
Mean	1.143108	29.17355	2.181437	120.1444	937.9150	18435332	0.437886
Median	0.820000	29.39000	2.000000	120.5400	985.9100	1985200.	0.000000
Maximum	9.780000	32.33000	3.940000	127.2200	1240.030	3.30E+09	1.000000
Minimum	0.000000	25.79000	1.250000	109.9800	624.0000	0.000000	0.000000
Std. Dev.	0.904813	1.365924	0.868066	3.406564	165.0664	84567390	0.496132
Skewness	2.311609	0.184950	0.154655	-0.597241	-0.254726	19.71706	0.250395
Kurtosis	12.94493	2.931108	1.371091	3.817086	1.759077	574.3803	1.062698
Observations	45795	45795	45795	45795	45795	45795	45795

### Appendix B: Descriptive statistics of property fund sample group

	P_NAV	OIL	I	CEI	SET	AvgVol	linv
Mean	0.770998	28.53479	2.339339	118.7242	825.4999	248562.2	0.705613
Median	0.803873	28.79000	2.500000	118.9300	801.3200	23588.04	1.000000
Maximum	1.405118	44.24000	3.940000	127.2200	1240.030	21365220	1.000000
Minimum	0.000000	18.34000	1.250000	109.9800	384.1500	0.000000	0.000000
Std. Dev.	0.258562	4.301172	0.811606	3.864699	234.2661	977636.0	0.455776
Skewness	-1.263223	0.461906	-0.216689	-0.160811	-0.209515	16.22779	-0.902273
Kurtosis	5.483451	5.926210	1.502565	2.457849	1.873491	320.0014	1.814097
Observations	25334	25334	25334	25334	25334	25334	25334

## APPENDIX 2

Appendix A: Correlation matrix of property development shares sample group

	PM_BV	I	CEI	OIL	lnSET	lnVol	linv
PM_BV	1.000000	0.132999	0.120189	0.116950	0.180468	0.213990	0.391291
I	0.132999	1.000000	0.282657	0.508935	0.601792	0.043851	-0.069717
CEI	0.120189	0.282657	1.000000	0.616913	0.622742	0.027923	-0.039621
OIL	0.116950	0.508935	0.616913	1.000000	0.635042	-0.005218	-0.055747
lnSET	0.180468	0.601792	0.622742	0.635042	1.000000	0.044052	-0.079222
lnVol	0.213990	0.043851	0.027923	-0.005218	0.044052	1.000000	0.204899
linv	0.391291	-0.069717	-0.039621	-0.055747	-0.079222	0.204899	1.000000

Appendix B: Correlation matrix of property fund sample group

	P_NAV	I	CEI	OIL	lnSET	lnVol	linv
P_NAV	1.000000	0.008760	0.183801	0.190872	0.185670	0.151875	0.204456
I	0.008760	1.000000	0.062115	0.166318	0.128274	-0.075735	-0.020723
CEI	0.183801	0.062115	1.000000	0.512748	0.643440	0.159715	-0.001329
OIL	0.190872	0.166318	0.512748	1.000000	0.526930	0.120794	0.004506
lnSET	0.185670	0.128274	0.643440	0.526930	1.000000	0.162200	-0.013134
lnVol	0.151875	-0.075735	0.159715	0.120794	0.162200	1.000000	0.103535
linv	0.204456	-0.020723	-0.001329	0.004506	-0.013134	0.103535	1.000000

## DEVELOPING A KNOWLEDGE SHARING BEHAVIOR WITHIN COOPERATIVE EDUCATION STUDENTS: A KNOWLEDGE AUDIT EVALUATION

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### ABSTRACT

A cooperative education program that is operated with the intention of attaining success should be focused on how well-equipped the students are with the body of knowledge for completing the program. To help students make the transition from the classroom and into the workplace with ease, the idea of sharing knowledge with each other can provide a sense of security and confidence by learning the methods of others who have demonstrated the ability to accomplish things better, swiftly and efficiently. This study takes the information from an educational institution that is operating a cooperative education program and applies a knowledge audit for the aim of developing a knowledge sharing behavior among students who are participating in a cooperative education program.

**Keywords:** Cooperative Education / Cultural Norms / Knowledge Sharing / Organization / Systems / Trust / Value.

### INTRODUCTION

#### Background and Significance

If a cooperative education program was to be operated with the intention of attaining success then the decisive factor should be on how well-equipped the undergraduate students are with the body of knowledge for completing the program. Since these students are considered as the key players involved in the cooperative education program, the program administrators have to do their best to ensure that the students are aligned to meet with the needs and expectations of the curriculum (Bass, 2012; Elmuti, Abebe, and Nicolosi, 2005). Such an alignment is the idea where students are not only using their knowledge to help themselves overcome any unforeseen difficulties or obstacles but also utilizing what they know to share the achieving encounters to help their fellow classmates leverage the time, energy, and resources as a strategic advantage; thus installing a sense of focus and commitment to the objectives of the cooperative education program so that no issues are deemed as a threat to their performance (Travers, 2012).

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### **Knowledge sharing among students within a cooperative education program**

The process of knowledge sharing is highly deemed as a group activity (Cockrell and Stone, 2010) which is beneficial for students who are experiencing a situation that raises a lot of questions and seeking for the best possible information to take the next step of action. To assuage the pressure of transitioning from the classroom and into the workplace sharing knowledge can provide a sense of security and confidence by learning the methods of others who have demonstrated the ability to get something done better, more quickly, or more efficiently (Lin, 2007).

### **Challenges of initiating the behavior for students to share knowledge**

A well structured order that acts as the proponent of the cooperative education program's aims and objectives doesn't always accurately guarantee that the results will occur. Therefore, the idea of getting students to adopt a knowledge sharing behavior calls for the processing administrators to configure the conditions that will enable these students to do so with ease and confidence (Hurmelinna-Laukkanen, 2011). First, there is the issue of timing. In this situation, students need to be mentally prepared from making a transition from the classroom and into the workplace with ease. However, if these students are not fully prepared then it can become a disruption in the course as students will have a hard time coping with some of the shocks that can be unexpectedly presented in the working environment (Acevedo and Yancey, 2011). The second issue is about the resources. With resources, it is very important that the bureaucracy does not interfere with the learning performance of the students. The students should not have to worry about the available budget that finances the program, nor the managing of transportation cost, and not being exposed to office utilities that are not aligned with the intentions of enabling to share knowledge with their colleagues (Sturre, et. al., 2012). Lastly, the issue that needs a lot of attention is the energy that goes into making the cooperative education program function on a consistent basis. Energy that is unleashed must be concocted with a big frame in the mind. The pieces and roles of all partners involved in the cooperative education program has to be performed on in a collaborative manner, otherwise the administrators of the cooperative program can create a burden of confusion and derision to the students' focus; thus emotionally crippling them from being able to be engaged in knowledge sharing sessions (Rowe, Mackaway, and Winchester-Seeto, 2012).

### **Knowledge management**

With relevance to knowledge management in the workplace such a process cannot be fully performed if the workers' attitude of has not been taught about the benefits of being engaged in a knowledge sharing activity (Hooff, Schouten, and Simonovski, 2011). The educational institution has an advantage to cultivate the behaviors, attitudes, and values that can support the practice of knowledge management and make use of its resources to lay the grounds for student to become knowledge workers

(Ranjan, 2011). The basis of knowledge management can only become conducive when the workplace environment has been arranged in a system that makes knowledge flow through from individuals and groups (Teh and Sun, 2011), the idea is to have the system for knowledge management to regenerate itself. Also, it is highly important that there is a discipline in setting the provisions for knowledge management so the organization is perceived by employees as supporting the objectives of knowledge management and stimulating the workers' morale to take an initiative in sharing knowledge with their fellow colleagues (Tohidinia and Mosakhani, 2010) Therefore, students should also be provided the infrastructure in performing without being set up for failure while at the same time having the ability to reflect on what they can do better and being capable of analyzing for solutions; just as if learning is a metaphor for being engaged in knowledge work (Christensen, 2007).

#### **Research Question(s)/Problem**

The study attempts to address the following questions for developing a knowledge sharing behavior within cooperative education students:

- "How are the systems utilized in making students foster the behavior of knowledge sharing?"
- "How are the organizational factors applied in making students foster the behavior of knowledge sharing?"
- "How are the cultural norms and values employed in making students foster the behavior of knowledge sharing?"

#### **Research Objective**

The aim of this research is to provide a course for developing a knowledge sharing behavior among students who are participating in a cooperative education program. The method is through a knowledge audit of a higher educational institute that had learned from its shortcomings on implementing a cooperative education program for the first time. As one of the organizational tools for strategy development, the 'knowledge audit' provides a perspective on the extent of how that institution is effectively applying its knowledge and learning in a strategic method. The idea of doing a 'knowledge audit' is to examine the realities of existing culture and practice which define the starting point for practical action. The application addresses the systems through which knowledge is perceived, used and valued, as well as with the organizational and cultural factors which are taken into consideration on how they influence knowledge activities (Bartholomew, 2005).

## **LITERATURE REVIEW**

### **Trusting the system**

A system that installs the mindset in lowering perceived uncertainty, adopting a risk-taking behavior, and promoting collaboration would bring about a high degree of trust; henceforth facilitating a flow of communication, social networking, and cross-functional interactions (Casimir, Lee, and Loon, 2012). Whether mistakes and errors are often made they can be taken to examined upon collectively to see what is happening and why did it occur so that there is trust that everyone is eager to see how the issue can be solved (Mueller, 2012).

#### **Organizing for value**

People are the organization's lifeline, therefore a knowledge sharing moment should be welcomed in any type of ad hoc situations (Taminiau, Smit and de Lange, 2009) as long as individuals are gaining a better sense of understanding on how to solve problems or search for better means for personal development. Although the aims and objectives are clear, all activities and events that are in the context of knowledge sharing has to be congruent with what the individuals are trying to attain (Kim, Newby-Bennet and Song, 2012) so that they can do better than what had already been done.

#### **Beyond the process itself**

Members are rewarding themselves by providing valuable information to fellow colleagues; thus the quality of information provided induces the willingness to share more knowledge because it fulfills the need to achieve personal goals (Barachini, 2009). The whole process works through a cycle of interaction and exchange of information, ideas as well as expertise, which facilitates knowledge sharing as a mutual collective process (Fong, et.al 2011). Knowledge sharing can evolve on a consistent basis when colleagues sense a working environment that aims toward the values in developing the skills and abilities of others (McDermott and O'Dell, 2001) while discarding the notion that it's about competing against one another or other negative issues that may quell the willingness towards sharing knowledge (Guzman, 2008).

### **RESEARCH METHODOLOGY**

The research application for this study is the "Knowledge Audit". This methodology is depicted as a snapshot of the situation with a knowledge flow that is intertwined in an organization or outside it, and the goal of knowledge audit is to gain insight into an organization's knowledge in order to create a strategy for managing knowledge (Jurinjak and Kliček, 2008). For this work, the knowledge audit method is geared towards constructing a knowledge sharing behavior within cooperative education students by reflecting over a case where an educational institution had revamped its program in order to ensure that their cooperative learners will be able to succeed the course. This part of the study will provide a

conceptual framework and a result analysis framework of the “Knowledge Audit”. The frameworks are depicted as followed:

The Solicit Inquiries for Knowledge Auditing
<p>“How are the systems utilized in making students foster the behavior of knowledge sharing?”</p> <p><i>*Address the issue on students being free of stress, having convenience to learn, meeting the objectives, and managing their time.</i></p>
<p>“How are the organizational factors applied in making students foster the behavior of knowledge sharing?”</p> <p><i>*Address the issue on the students’ personal development with regards to being able to reflect on the working experience gained, solving problems, and obtaining feedback for action.</i></p>
<p>“How are the cultural norms and values employed in making students foster the behavior of knowledge sharing?”</p> <p><i>*Address the issue on installing the students’ attitude to develop the necessary characteristics for work, as well as becoming motivated and analyzing for accurate performance.</i></p>

Fig. 1 Conceptual framework of questions to be asked for doing a knowledge audit.

According to this figure above the concept is to ask each questions dealing with the approach toward making the students foster the behavior of knowledge sharing. Each of the questions that examine the case also addresses its own issues to obtain in-depth information of the study.

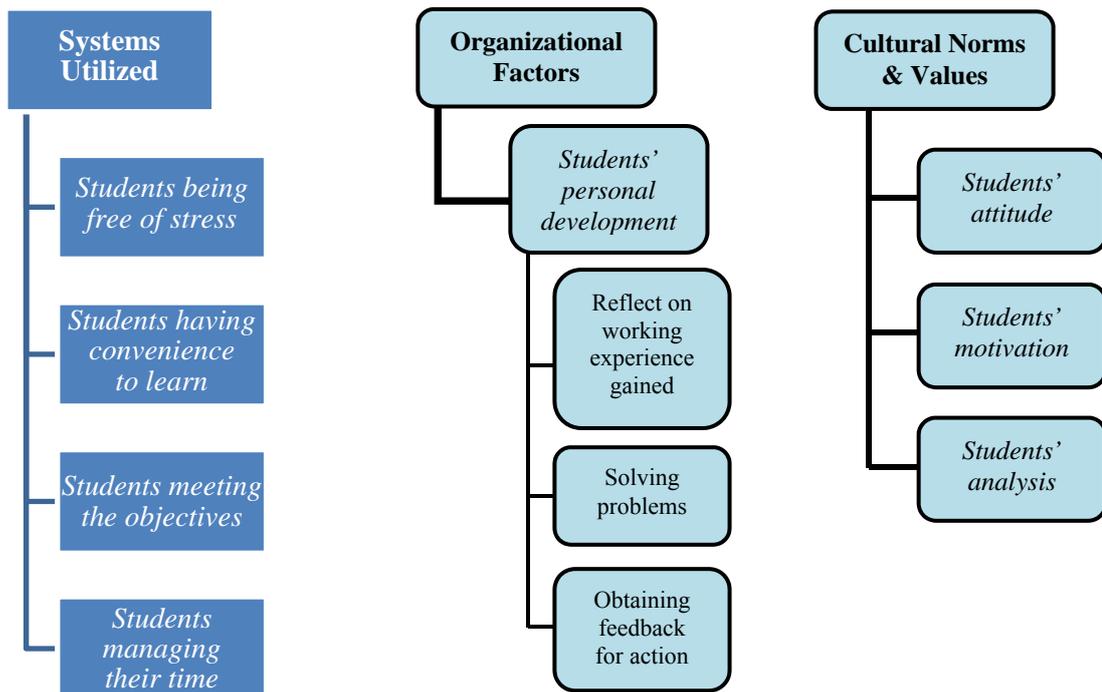


Fig. 2 Result analysis framework from questions asked with issues to be addressed.

The second figure above demonstrates the source of action taken for analyzing the results. The contents for each case, in the results analysis framework, will be focused upon to obtain the findings as well as to give an overall descriptive answer for the main questions being asked. The authors of this study assert that the conceptual framework and the result analysis framework would both be able to bring about a better understanding in making students adopt a knowledge sharing behavior through the system, organizational factors, and cultural norms and values.

#### The case of an educational institution revamping its cooperative education program

With regards to professional and private matters, the institution used in this study shall only be known as the College of Technology Management or “CTM”. The authors of this study conducted interviews, observations, and reviewed documents with 10 administrative staff, 23 first batch of students and 23 second batch of students, and 15 company mentors to make a narrative analysis on the events that have occurred within the framework of the cooperative education program. The program went through some growing pains as it tried to learn the lesson from its first experience in procuring the course where some of the first batch of students left in the middle of the program.

Upon conducting an interview with the six (first batch) students who had left the cooperative program one of the strongest reasons mentioned in leaving was that they “*couldn't adjust on taking the role as a student-worker*”. Despite being encouraged by their advisors to complete the program, their experiences of feeling discomfort and awkwardness in the workplace overwhelmed their ability to overcome this psychological phenomenon. Another solid reason on why these students left the program

was in their lack of ability to finish their work. When the researchers conducted an interview with the mentors, the mentors viewed these students as *"being under qualified to do some tasks that were assigned"*. Also, the mentors truly believed that *"their mentees did not have the adequate skills and knowledge to carry out a specific job"*. As the researchers put the pieces of information together, it was revealed that there was friction that eroded the working relations between these six students and their mentor; students and their mentors cited that there were some differences of opinions and advice being received and given. In a feedback given from the interview, the mentors stated their *"students were highly afraid of asking too much questions"*. Therefore, this outcome brought about an image on part of the mentors that their *"students are relatively embarrassed and bashful to take on any real responsibilities"*. This leads to the mentors losing their patience with their students as *"they were under pressure to deliver other work assignments that was demanded by the company's top management"*. Although it was a severe blow to CTM's academic reputation the administrators of the cooperative program took this first time lesson as a challenge to make the concept of the course much better when the researchers had a discussion about the unexpected setback of the program. Upon analysis from the first case, they hypothetically felt that *"the approach in revising some of the activities would assist in accelerating the competency of the next batch of co-op students to adapt themselves better in the working environment, make them know their responsibility with greater awareness, and be able to understand the work system with confidence"*. The attempt was to minimize any uncertain type of shocks for them to manage while focusing on completing the program. Upon observation of the revised program, the second batch of students did much better than the first. Out of 23 students, only one resigned from the program due to a personal preference for doing an independent study. Nevertheless, the administrators were able to maintain the health of the co-operative program vital for the next generation of students who are highly interested in taking part in the study.

With the lessons learned from the shortcoming of the first batch, the program administrators revised the approach with the second batch of cooperative students by configuring the time, resources, and energy toward developing a fortified support for the students to accomplish the program with ease. The administrators worked with the students and company mentors to maximize the outcome of the cooperative program. The administrators arranged a workshop between the original mentors and the new mentors so that the latter can benefit from what was successful based on best practice and what to be more cautious of when being engaged in a working relationship with the students. Upon arranging a matching process between students and the companies, both sides were able to obtain intelligence about each other's aims, strengths/opportunities, and working expectations; thus enabling the two to learn about each other better and making the matching process much more effective. The process encouraged a flow of dialogue between the students and the companies to offer their opinions and

thoughts without being subjected to being inconsiderate towards each other so they can develop a working relationship in the future. The administrators provided assistance to the students in helping them to become aware of their real needs and in developing a plan for their future. The support allowed the students to become more focused on their work and career.

**The revised cooperative education framework**

For this part in the study, the authors explain the revised cooperative education program in detail by discussing about its weekly teaching plan, assignments, and grading condition. An illustration is provided on the background of perspective students and criterion to recruit students into the program.

*Weekly teaching plan*

In the first year, students take the compulsory courses at the campus of Chiang Mai University. By the second year and coming towards the first semester of the third year students have to take part in conducting research and undergo training activities to enhance the knowledge and skills (management, information technology, English language communication, and personality development) that would enable them to be prepared in functioning in the workplace. From the second term of the third year and onwards to the fourth year the students go through the practical application of the cooperative education program in the workplace.

Grade Level	Term 1 (Jun – Sept)	Term2 (Oct – Feb)	Summer term (Mar – May)
Year 1	CMU	CMU	OFF
Year 2	CMU	CMU & Preparation	Preparation
Year 3	CMU & Preparation	Enterprise & CMU	Enterprise & CMU
Year 4	Enterprise & CMU	Enterprise & CMU Cooperative training at the end of December.	OFF

Fig. 3 Learning and practice scheme of the cooperative education program.

*Assignments*

The students are given a timely assignment that is thoroughly evaluated. Participants in the evaluation process are the students, teachers and company mentors. Details of the assignment are provided in the figure below:

Time period	Submitting reports	Evaluation	Participants
On a daily basis	Reporting of the daily activities		Students

	done in the workplace		
On a weekly basis	Reporting of the weekly activities done in the workplace	Students' reflection on their individual work performance	Students and teachers
On a monthly basis	Reporting of the monthly activities done in the workplace	Students' reflection on their individual work performance	Students and teachers
Every 2-3 months		Evaluating students' performance	Students, teachers, and mentors of the company
By the end of the third month	Professional Development Project	Examination	Students, teachers, and mentors of the company
By the end of the first term in the fourth year	Reporting on the progress	Evaluation on students' progress	Students, teachers, and mentors of the company
By the end of the second term in the fourth year	Organizing all recorded work into a document	Final exams	Students, teachers, and mentors of the company

Fig. 4 Schedule for reporting and making evaluation on students of the cooperative education program.

Based on the figure above, students are required to submit a report on a daily, weekly, and monthly basis. They have to hand in a report that outlines the activities done in the workplace. With regards to the weekly and monthly basis of submitting the reports, they students are given an evaluation on reflecting their own working performance. Also, there is a workshop for students and teachers to participate in exchanging ideas and knowledge to help with the work performance. By the second and third month, the evaluation of students' performance is done in a collective setting. This is done by having students gathering feedback with their teachers and company mentors. By the end of the third month the students are expected to submit a report on their professional development project and are given a written test on their findings from doing the project. The teachers and company mentors take part in the evaluation by reviewing their professional development project. By the end of the first term in the fourth year the students have to present a report on their progress and are evaluated from the perspectives of the teacher and company mentors with regards to the extent of their progress. By the end of the second term in the fourth year the students have to put forward an organized document of the work that they have

done in the program and let the teachers and company mentors examine their overall work. The students are also given consideration to be prepared in taking their final exams from other courses learned in the term.

#### *Grading condition*

On a weekly basis, the students have to be at the workplace for 3 to 4 days and attend classes at the college campus for two days. The students have to take part in a reflection program and meet with their advisors on a weekly basis. An evaluation of the students' performance is done every two months. The aim is to see how much progress has been made with their competencies which are used as a measurement in the student ratings of four performance levels:

1 = Unsatisfactory

2 = Need for improvement

3 = Good

4 = Excellence

Students who have been receiving unsatisfactory grades will need to be evaluated four times by the establishment in order to ensure that they are not in the danger of being listed for academic probation. Students who have been performing at a satisfactory level will be deemed as making progress in the cooperative education program.

#### *Background of perspective students*

The students that took part in the cooperative program had a strong desire to succeed. They worked with the co-operative program administrators in developing their knowledge and learning skills and searching for effective methods to develop their personalities. With a high interest to become a top candidate for the working position, the students and administrators joined forces to assist the former in focusing on obtaining high marks and building a portfolio of their capabilities to make a first impression with the company interviewers when the recruiting process commences. During the recruiting event, the students were gathering intelligence in the interviewing process to see whether they were compatible with the company's needs and interests, as well as seeing if the company was good enough for them to do their co-operative studies or keep on searching for a much better one. The students focused on gathering intelligence about the objectives, strengths/ opportunities, and expectations to perform in the workplace. The more that the students learned about the companies that they were interested to work in the more it made them confident to work with such an organization. For the ones that did manage to finish the program they felt a sense of self-esteem and actualization in taking on the dual role of a student-worker. They felt that the program had truly prepared for their career and life in the future.

*Criterion for recruiting*

The selection criteria for the cooperative education program have to be met with following conditions:

- Students must be in the third year to enroll in the program.
- Students have to complete all compulsory courses by the end of the second year.
- Students must have a grade point average of 2.0 or above
- Students must not have been charged with any serious offence.
- Students have to maintain a good conduct from the previous academic year.

**First and second batch of students' feedback – impression and suggestions**

The first batch of students' impression was being exposed to the real life situation of the workplace and having to adjust their behavior to comply with the workplace. It also brought about awareness on their part to see how the importance of studying and learning all links to what is being done in the workplace. This experience brought about knowing what their future is going to be like and how to set the course for it. The suggestions made were in the area of getting the students to be better prepared mentally to assume the role as a student-worker. They felt that the college should also have provided a great deal of assistance in transportation to work and development to enhance their skills to do the work. The students stressed that the program's objective and job level should be more clarified. A figure demonstrating the first batch of students' positive side of the program and their suggestions for improving the program is presented below.

Positive side of the program	Suggestions for improving the program
<ul style="list-style-type: none"> <li>- Being exposed to the reality of the working life, such as waking up early, demonstrating patience, working under pressure (especially with their mentors)</li> <li>- Gaining real work experience from workplace via cooperative program</li> </ul>	<ul style="list-style-type: none"> <li>- Industrial knowledge should be increased before carrying out the process of the program.</li> <li>- Job plan needs to be clarified by the mentors.</li> </ul>
Positive side of the program	Suggestions for improving the program
<ul style="list-style-type: none"> <li>- Upon being exposed to the work in the company, it brought about an increase in awareness on the importance of studying and learning about the subjects taught at the university.</li> </ul>	<ul style="list-style-type: none"> <li>- Since the time-frame of the program is quite long, the college should have a plan/activity that motivates the learners on a continuous basis.</li> <li>- The program should provide some extra</li> </ul>

<ul style="list-style-type: none"> <li>- Seeing the future beforehand or knowing which direction to take after graduating.</li> <li>- Knowing in-depth about the job tasks, and how the whole work is especially related to the working system</li> </ul>	<p>assistance for the coop students such as free transportation, a study room devoted to coop students, and some free English language course.</p> <ul style="list-style-type: none"> <li>- Improve the communication between the college and company, such as clarifying the objective of cooperative program.</li> <li>- The college should clarify the scope, detail, and level of the job for the student.</li> </ul>
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Fig. 5 First batch of students' positive side of the program and suggestions for improving the program.

The second batch of students asked about the pros and cons of the program and also whether they would encourage their friends to join the cooperative program or not and on the reasons for doing so. These students felt that the pros were in the area of getting an opportunity to know and understand the working systems, being equipped for immediate employment after graduation, developing the working characters deemed essential to the workplace, being exposed to new experiences, and getting a better understanding of the theories taught in the classroom. However, the students felt that the drawbacks of the program were the issue of experiencing difficulty in adjusting from the classroom and into the workplace, causing a concern about obtaining good marks, lacking the resources in making students becoming more proficient in information technology, not reducing the study plan, and not communicating effectively with the hosting companies. A figure of the pros and cons of the program based on the second batch of students' perspectives is presented below.

Pros of the program	Cons of the program
<ul style="list-style-type: none"> <li>- <i>Knowing and understanding the working systems, obtaining an overview of the company system and how each department functions; this brought an advantage in applying for a job and being able to adapt into other companies after graduating</i></li> <li>- <i>The long working period provided support in having enough time to learn and obtaining a lot of knowledge in the workplace. This allowed students to ask such questions as "What are the problems to be handled? How can we solve them?" etc. It also gave the preparation to be ready to work after graduating.</i></li> <li>- <i>Allowing students the opportunity to practice the behavior of having patience.</i></li> <li>- <i>The coop program provided an in-depth knowledge about using IT software and brought a better understanding about theories learned in the classroom</i></li> <li>- <i>The program trained how to find some best practice used in finishing job tasks, such as doing research for information, experimenting with many methods over time to see which practice brings about good results.</i></li> <li>- <i>Stimulates more diligence in being committed to the studying and working at the same time.</i></li> <li>- <i>Creates an attitude of being honest, learning on your own, adapting into the working community, and being able to solve problems.</i></li> <li>- <i>Having a chance to learn new things that have never been experienced before, as well as being able to increase knowledge and gaining expertise.</i> <i>Develops the character and personality of the students to be more punctual and taking responsibility.</i></li> </ul>	<ul style="list-style-type: none"> <li>- <i>It can create some difficulty in maintaining a balanced life between studying and working at the same time; this would lead to fatigue and confusion when switching between the mode of working and studying.</i></li> <li>- <i>The program can sometimes cause a concern about keeping up with the studies and getting a good score on the test.</i></li> <li>- <i>The program needs to teach students in acquiring an in-depth knowledge of the industrial, especially in the area of the system, tools, and IT software.</i></li> <li>- <i>The program should reduce subjects in the study plan for the sake of convenience.</i></li> <li>- <i>The program still needs to have more effective communication with the hosting companies.</i></li> </ul>

Fig. 6 Second batch of students' perception of the pros and cons of the program.

While the second batch of students' perception of the pros and cons of the program were provide in a reasonable amount they have encouraged their friends to join based on the reason of being prepared to enter the workforce with some experienced qualifications. Simply put, they were telling their

fellow students that it was important not just to graduate but to also have a qualification that complements your degree.

#### **The mentor's opinion of the program**

The authors of the study asked the opinion of the mentors towards the cooperative program in order to obtain a 360 degree perspective. The authors of this study have divided the mentors' opinions into two parts. The first part will be on the benefits that see on the program and the second part will be on where they see the needs for improvement.

##### *A) Benefits of the program*

In their opinion they felt that the cooperative program enabled them to get some new ideas in helping the students to perform much better in the workplace. They thought that there was a great deal of learning experience between the students and themselves in terms of exchanging ideas, discussing for solutions, and meeting with the objectives in the project assignment. The mentors believed that these students have gained the ability to function in the workplace and that their working experience will be a useful practical application in the future. Overall, the mentor's perceive the cooperative program as a development for students in being prepared to enter the labor market with a bright future ahead. Also, they would recommend the cooperative program for future students because it has some practical educational content that could help develop their career.

##### *B) Needs for improvement*

Although the mentors felt that the students have provided a great deal of assistance to the department, there was not enough time or having the ability on their part to complete all of their assigned tasks. Therefore, the mentors suggest that a workshop be arranged for them to be proficient in keeping students motivated and assisting them in applying what they learned in the classroom into the workplace. They believe that students should go through an orientation that lets them understand why the outcome of the company's production system is highly important. Also, they would like the college to make an effort in lightening the study load of the students so that it would make it more convenient for them to perform much better. In addition, the mentors proposed that there should be a time period for students to be fully devoted to the project assignment and not having to be burdened by class tests or handing in reports. Furthermore, the mentors asserted that there needs to be more time with the students in order to develop a firm working relationship and to build the students' confidence in carrying out an assigned task. On an interesting note, the mentors felt that there should be an expert assigned within the college to focus on training and developing the students to become quickly acclimated in the workplace.

#### **The application of the knowledge audit – analytical results**

*A) Utilizing the system.*

Instead of creating a rank and file procedure, the cooperative education program administrators liaised with the students to ensure that they would be fully supported throughout the learning course. By working as a team, they were aligned to ensure that the objectives of each seminar arranged did its best in resources and time for preparing the students to cope with the workplace challenges in real life; with this approach it ensures that no one falls into an erratic state of anxiety in the workplace. In this workshop, the contents and activities ranged from developing a positive work attitude, building a sound plan, learning how to communicate with workers, functioning as part of a team, setting target goals, and being aware of the labor law. When the students completed the two seminars, they agreed to attend a three hour co-operative education orientation which explained the program's process activities, its rules and regulations, doing the professional project, and how to conduct reports with their assessment book. Also, the administrators teamed up with the students in constructing a systematic mental thought for applying in the workplace and having a personal vision.

Upon having discovered that the company's work requirements made it difficult to arrange meetings due to emergency situations and increasing business matters, the administrators kindly asked the company mentors to cooperate in ensuring that the students were able to attend the assessment sessions. To obtain more time in discussing about the facts and finding solutions, the co-operative program administrators and students collaborated to agree on reducing the amount of student assessments to only five times; decreasing from eight times. The assessments gave students a precise job plan and evaluated on how much advancement that they made in their competencies. The assessment enabled them to see whether they were gaining or needed to improve upon the working behaviors of responsibility, patience, leadership, and communication, as well as discussing about the issues on ways to develop their working performance in the areas of creativity, problem solving, planning and managing, and applying knowledge. With time being properly managed to gather the necessary information for assessment it allowed the students the time to reflect on their experience and what had been learned to provide a unique knowledge sharing occurrence with their fellow colleagues.

*B) Implementing the organizational factors.*

The students were asked to attend a conference to reflect on their work experience and give some explicit evidence from the workplace by recording their performance in their self-assessment book on a daily, weekly, and monthly basis. By reporting the details that comprised of activities descriptions, problems, and difficulties in a daily manner, the students were able to see how their skills and knowledge could contribute to their assigned tasks. The weekly reports done enabled them to reflect and observe their own activities on a consistent basis. The students reflected on the following guideline questions:

- What did you learn and get from the workplace?

- What are your problems and difficulties?
- What have you already solved and how?
- What are the problems which are not resolved and why?

Upon reflection, it provided them a better sense of where their capabilities can be incorporated with the aims of their job. By writing the reports in a monthly manner and then presenting them to their mentors and college advisors, the students were able to obtain some useful feedback. The procedure assisted the students to become more consciences of going about with the next plan for action. The students had to reflect on their monthly experiences and draw some conclusions for improvement until they completed the co-operative program.

*C) Employing the cultural norms and values.*

The co-operative program administrators went with the notion that if the students displayed the characteristics of having patience, and demonstrating responsibility that are consistent with the company's requirements then the whole plan would be more successful in the long run. The administrators worked alongside with the second batch and utilized the long period of preparation for the students to be introduced to a variety of work positions in the company, seeing how the work of an industrial organizational environment is in real life, and acquiring the industrial know-how from specialized course lessons. Under the leadership of the administrators, who utilized research work on behavior cases for the purpose of making decisions to handle the situation, it developed the students' motivation to stay focused on completing the cooperative education program. Also, those within the second batch who assumed leadership roles in university activities or worked at a part time job were asked by the administrators to reflect on those experiences to see what theories that they believed would help them become productive in the workplace. Furthermore, the administrators took on an advocating role to challenge the thinking of the students' mock experimentation based on their theoretical cases so that they don't succumb to hubris which could create a fallacy in their confidence in obtaining the result. Other students were asked to review their colleagues' theoretical experimentation and to evaluate whether they agreed or make some adjustments to the implementation.

**DISCUSSION - developing a knowledge sharing behavior**

Creating an ideal behavior where knowledge is shared among students cannot be fully relied on the mechanistic procedures. First and foremost is that the act of sharing knowledge from one person to another is a human activity which is aligned with the value of assisting each other. While the structures can be arranged in its proper place the most important issue is on developing a learning environment that is conducive to the concept of knowledge sharing. In other words, the system for knowledge sharing has to have the pillars for making the knowledge sharer perform.

The work refers to trust as a value that should be incorporated into a scheme. Here is the case where the students were asked to be part of a learning course, which is a cooperative education program, and where the administrators concentrated their efforts to ensure that these students would succeed. Trust was earned by the students when the administrators started with a system that provided them the tools and techniques to make progress in the program. The seminars and workshops arranged by the administrators brought out the message that they weren't just talking about helping the students but they are doing something about it; in other words they were saying what they wanted to do with action to back it up. With training geared towards developing a positive work attitude, building a sound plan, learning how to communicate with workers, functioning as part of a team, setting target goals, and being aware of the labor law the administrators were equipping the students in being capable to take on an initiative approach to any particular situations. The administrators fostered not only a sense of trust on part of the students in believing that the program was designed to help them but also enabling these students to believe in themselves that they could perform in a working environment that is full of unexpected surprises. To prevent any working shock that could have an impact on their performance, the administrators took the initiative to ask for the company to rearrange the working matters so that it becomes conducive for the students in being prepared for the assessment session. This action by the administrators demonstrated that they were working in the best interest of the students. The administrators demonstrated to the students that they are still considered as undergraduate learners with a future and not a piece of cog to make the cooperative education program operate as a bureaucratic machine. With a keen on the academic welfare of the students, the administrators were able to obtain the full collaboration of these students to share their knowledge with others during the assessment session.

It was mentioned in the literature under the basis of organizing for values, that in order for people to share knowledge it has to be in line with what they are trying to achieve. The key term was congruency. To obtain a behavior in knowledge sharing with others, it's imperative that the performance also reinforces their capability in meeting with their aims. By letting the students present activities, descriptions, problems, and difficulties in a daily manner, they simultaneously helped other students to learn how to succeed in the program and expand their own skills and knowledge, thus making them confident in handling their future assigned tasks. Such a behavior becomes reinforcing when there are experts, such as the administrators and the company mentors, available to help them meditate on the questions that they are trying to answer. Receiving feedback from the experts for progress bestows a value that makes the students become more mature in what they are trying to accomplish.

Culture is not only the beliefs and values that are held by people it is also the blueprint for how one wants a cooperative education program to evolve in the future. The norms and values of a culture have to be recognized by the students from the very beginning and to have them experience these

virtues throughout the stages. Whatever the means that are used they have to be implemented towards the desired aim. It's not about competing against one another, instead it's all about complementing each other. In order for the students to acquire a knowledge sharing behavior there was the necessity of an advocating role to challenge the thinking of the students' mock experimentation based on their theoretical cases to prevent hubris that could cause a sense of false confidence in their working performance. To further challenge the students' thinking, the application of inquiry was utilized for students to review their colleagues' theoretical experimentation and to help them to make the necessary calculations with their current plan. This approach prevented the idea of knowledge sharing from becoming redundant.

## CONCLUSION

The act of knowledge sharing among students depends on the blueprint or design that fosters this concept. The systems, organizational factors, and the cultural norms have to be in unison for the purpose of making the behavior of knowledge sharing within the students to occur. However, the authors of this research feel that it is in the concerted effort of building the rhythm of trusting the system, organizing for value, and going beyond the process would truly enable the deeds of the students to actually share knowledge with each other when the time calls for it. Therefore, it is up to the administrators of the program to set the path by coordinating with all partners involved so that their actions and performances are orientated towards sustaining the morale for students to be knowledge sharers.

In the researchers' view the method applied in this study was quite fulfilling in extracting the information to support our work. The knowledge audit offered a precise assessment approach that allowed us to obtain a better understanding of the process in knowledge sharing in general. However, the idea of developing a knowledge sharing behavior among students is quite dynamic as there are other theoretical perceptions that can provide a much stronger argument for this concept. In the discipline of procuring a cooperative education it is best to always see things from the big picture otherwise it would be too late to correct the errors which can have a negative impact on others. Nevertheless, knowledge sharing is a mental activity that is done by people, therefore the system has to support the intentions and objectives of people's performance as well as their aims.

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## A CASE STUDY ON BUILDING TRUST AS A COLLECTIVE UNIT FOR KNOWLEDGE SHARING

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### ABSTRACT

The practice of building trust as a collective unit is one of the most important issues in knowledge sharing. The study gathers the insight from an experienced artist in the music industry to see what points can be learned in getting people to be fully aligned to achieve the results. The study aims at providing a precept guide for maintaining trust as a conceptual value flow for knowledge sharing among team members. The purpose is for understanding the means of upholding trust so that the cohesiveness in a team allows members to focus towards the desired outcome. The method is given in a peer narrative form with analysis highlighting the importance of a two way communication flow, providing reasons, and experimenting with decisions as a team.

**Keywords:** Alignment / Communication / Experimenting / Knowledge Sharing / Peer Assist / Reasoning / Trust.

### INTRODUCTION

#### Background and Significance

As team members come and go, the challenge of knowledge sharing among each other is in gaining and maintaining trust. As trust enables team members to go through the process of knowledge sharing, it also allows other workers to perform better, collaborate more effectively, and become focused on finding solutions to the problems (Werner & DeSimone, 2009). Learning how to trust others is one of the critical components in developing a rapid relationship with other colleagues who we are unfamiliar with (Sewell, 2011). Teams dealing with a business/market environment that calls for adhering to the deadlines or being faced with seldom opportunities to achieve their objectives often find themselves handling emotions that may disrupt the harmony of trust among their colleagues. Unless there is an ability to learn in developing trust there won't be any success in gaining full cooperation from others to share knowledge and information; especially when crisis erupts and threatens to destroy teamwork (Thomas, Kellog, and Erickson, 2007). Working with colleagues, especially with the ones that are hardly known, requires a high level of trust to ensure an effective outcome (Renzl, Matzler, and Mader, 2005) as well as in ensuring that the knowledge sharing process is constantly occurring (Cheng, Yeh, and Tu,

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2008). Keeping the cycle of knowledge sharing that is based on trust requires a focus on breaking down the structural barriers that disrupt the flow of knowledge between individuals that have it and those who require it (O'Dell and Hubert p. 52, 2011). With trust, it enables people to obtain the concept of knowing how to come together and work effectively with each other rather than rely on a structural format of the hierarchy (Edmondson, 2011).

To get a grasp of developing trust as a collective unit for knowledge sharing, this case study only focuses on gathering the insight from Mr. Roddy Lorimer, who is a professional musician, to see what precepts can be learned in getting people to be highly aligned as a team so that they have the ability to truly focus on achieving their desired outcome. The group that Mr. Lorimer has been a part of in his long career is known as "The Kick Horns". They are a London-based group of session brass instrument players who have been playing since the early 1980s. They have toured and recorded with artists such as Pete Townshend, Eric Clapton, David Gilmour, The Verve, Blur, The Spice Girls, Spiritualized, Jane Wiedlin, Supergrass, The Rolling Stones, Fish, Samuel Purdey and Shed Seven. The members and the instruments that they play are as followed:

- Simon Clarke: alto and baritone saxophone, and flute.
- Roddy Lorimer: trumpet and flugelhorn.
- Tim Saunders: tenor and soprano saxophones

With Mr. Lorimer's decade of experience in being part of an industry that demands perfection and commitment, the author of this work felt that his perspective could assist team management practitioners and scholars who want to obtain a deeper understanding of how trust can be constructed for knowledge sharing.

Before the research was to be conducted the author of the study had the chance to be engaged in a casual conversation with Mr. Lorimer's life-long experience in the music industry. During the conversation there were some interesting points learned from him on why some people can work and perform together effectively while some can't even function together at all. Mr. Lorimer stated that it all boiled down to trust. His basis on trust describes it as the intangible glue that keeps fellow colleagues operating as a cohesive unit and to be self-inspired to share knowledge with each other, even in the times of adversity which have made it quite challenging for his band members to fulfill a commitment to performing. In Mr. Lorimer's view developing trust so that it motivates knowledge sharing among your partners is what kept his group in a prolonged state to keep on performing with other groups. With this intriguing information at hand, the author of the study felt that Mr. Lorimer's experience would be a great contribution in learning how to build trust as a collective unit for knowledge sharing.

### Trust enables members to work as a collective unit

Studies that have encompassed music groups demonstrate that trust is one of the key components in building teamwork. Upon comparing the symphony orchestra to a consulting firm and a hospital, Mintzberg (1998) viewed the task being structured around the work of highly trained individuals acting as a unit who understand what needs do be done and execute it with profession. According to Mintzberg, one of the important key, in this type of industry, is to treat others as a respected member of a cohesive social system thus enabling trust to be fostered within the team. Barrett (1998) points out how jazz musicians collectively arrive towards a successful music score by constantly being engaged in a flow of dialogue and exchange with each other's ideas. This form of action leads to a mutual orientation that facilitates member's input to shape the outcome of the music, thus allowing for a trusting engagement to collaborate on the issues that maintains team coherence in the project. Maintaining such cohesiveness revolves around being not only physically present for rehearsal (team practice) but also going through the shared grind of putting quality hours so that the outcome is a hit song. Sobel (2006) analyzed one of the success that the early 1960's rock group "The Beatles" had as *investing in and building face time between team members long before they are required to appear together*. This is to ensure that members truly understand what needs to be done rather than straying from the purpose of meeting with each other. Sobel deems that such an action taken will become a catalyst for overcoming pressure for teams to perform with group perfection while simultaneously building mutual trust with each other. However, being able to perform at a standard level is always a challenge when longevity becomes the question that band members have to ask about themselves. A business study done by Koehn (Girard, 2011) on the Irish rock band "U2" demonstrates the importance of the mission; as for U2, the band's mission is to make fulfilling music that comes from the four members' heads, hearts, and souls, thus making a connection with their audiences. With this direction, the band also needs to make decisions to ensure that the mission is being highly supported. Therefore to see if the decisions are compatible with the mission they have to re-evaluate some of them after testing it from live performance or feedback from their followers. She also stated that the band would not have been highly successful if its members had not remained true to themselves and not being aligned with a united purpose. But by doing so, this eventually fortified the trust that they had with one another.

### Research Question(s)/Problem

With regards to the findings on trust being utilized in the music industry from the topic above, the work extrapolates the information in the content of dialogue, purpose, and decision making to formulate

questions that would serve as guidelines for building trust as a collective unit for knowledge sharing. The following questions are as followed:

- "How does one maintain a two way communication flow?"
- "How does one make an effort in providing reason?"
- "How does one experiment with the decisions made?"

### **Research Objective**

The aim of this research is to provide a precept guide for building trust as a collective unit for knowledge sharing. The purpose is for understanding the means of upholding trust so that the cohesiveness in a team allows members to focus towards the desired outcome. The results are provided in the form of a peer narrative.

## **LITERATURE REVIEW**

### **Establishing a two-way communication flow**

According to Covey (2006), when individuals are trusted it means that they make others confident of their integrity and abilities, thus fostering collaboration through a dialogue within the existing working system while preventing conflict from occurring. Trust is most effective when it is being displayed in a resonance form of competence and benevolence. In a knowledge sharing event, competence provides a sense of assurance on part of the receiver that the sender is highly knowledgeable about a given subject area thus igniting an interest of exchanging information and insights among members. As for benevolence, a sense of security conditions the mind of the receiver that the sender is helping to attain benefits rather than losses; this keeps the communication channel open for seeking other opportunities to obtain a highest gain (Levin, Cross, Abrams, and Lesser, 2002)

### **Providing reasons**

People are not assets that deplete over time. As fellow team members, they need to work together with the facts and the truth so that there is a feeling of trust that initiates them to make an effort in finding other methods for knowledge sharing even in difficult situations (Helgesen, 2008). While each individual team members are diverse in talent and skills they need to work in an environment that encourages mutual dependence on each other's analysis. This is to allow the activities of brainstorming for better ideas and decision making that leads to positive results; thus allowing knowledge sharing of the team to be intact (Adler, Heckscher, and Prusak, 2011).

### **Experimenting on the decisions made**

Team members should be allowed to examine upon matters to see if they are highly capable, competent, committed, and assured of achieving the outcome with positive support from fellow colleagues. Marquardt (2011) points out to the need for individuals within their team have a collective insight about complex issues based on the results from an assessment. Such an idea is to avoid being dominated by the pressure to perform or the fear of being chastised by fellow team members for shirking contributions to the team (Prokesch, 2009). While fear may be one of the primary concerns among team members to become silent, people remain quiet due to the assumption that others with expertise should have the final say over the decisions of other. However, this could lead to a behavior that refrains from providing hidden details that may be crucial for the right action to execute (Barton & Sutcliffe, 2010). He sees team learning as a method for tapping the potential of many minds as they move through an innovative and coordinated action.

## RESEARCH METHODOLOGY

In this case study, a “Peer Assist” has been applied as the concept for gathering information. The idea of a “Peer Assist” operates under the premise that, for any given activity, someone else has done something that is at least broadly similar (Ramilgam, 2006). The means function as a facilitated work-session where peers from different teams and organizations share their experiences and knowledge, face-to-face or virtually, with a team that has requested help in meeting an upcoming challenge. The peer assist provides knowledge in the form of good practices, lessons learned, and insights that are typically shared through relevant stories told by the people who experienced them (Greenes, 2010).

The author of this study arranged an interview with Mr. Lorimer to gain his insight by reflecting back on his working experiences with his group members and to answer the following questions:

- “How does one maintain a two way communication flow?”
- “How does one make an effort in providing reason?”
- “How does one experiment with the decisions made?”

### Results & analysis from the peer assist approach

Each of the questions that was responded by Mr. Lorimer had been italicized.

**Author’s Question:** *How does one maintain a two way communication flow?*

**Mr. Lorimer’s Reply:** *We all had a classical background but developed our own musical tastes as we grew. These influences were invaluable in creating diversity in our arranging approaches. The music business is in many ways a very informal business. Friendliness and humor are a big part of the essentials of recording someone’s song.....I don’t mean this to be rude, but if I made an abrupt remark to an artist or producer in my street wise Scottish accent and the same words came out of the mouth of*

*an Oxford graduate, the effect would be marked in a different manner. The former, is part of the camaraderie of the street and the latter would be deemed more as an insult. No matter what the intentions were behind the words, always be aware of 'who you are' when trying to be funny and making the work a fun thing to do: offences can be taken so I knew my role in the horn section was to be the cheeky, funny guy. This role helped the group to foster good relations. The sessions were done efficiently with a lightness of contact that left all parties feeling like friends by the end of the job.*

*We were a 3 piece and as such there was always a casting vote if any decisions were not arrived at mutually. Once it was decided we just got on with the work.*

*I'm afraid there can be no equal allocation of work. Some of the things are more time consuming than others but appreciating your partners' efforts and hard work helped. Playing their arrangements to the best of your ability and contributing any advice that you may think helpful bolstered morale. Also, unlike most session musicians, we wrote around 95% of what we played. The hard work you may have put in was rewarded with your work on record for history to judge. Tim was an English language graduate and any letters or legal/publicity matters, in that field, fell into his remit in a very natural way. Simon was probably the most professional among us when it came to arranging. My instrument, the trumpet, was by far the most physically demanding and I, as trumpet players do, had to lead the section. You can't divide the work equally, so just try to do your best and trust your partners' best intentions and endeavors.*

*Later I had to have some serious dental work done; that meant I didn't get back to my full ability for 3 years. In that time Simon and Tim decided we would hire another trumpet player to play first trumpet and I would play second trumpet until I felt physically able to take on the role again. When it comes to dealing with the business side of the music performance, we couldn't charge more for the service that we were offering. Instead, we stayed competitive and divided the fees in four 4 ways rather than 3 ways. It was simply about commitment, trust and backing each other to the hilt.*

*I would add that I was also a Musicians' Union approved contractor. This meant, in effect, that I was hiring the "Kick Horns" for every job and it was my responsibility to see that everyone got paid. In practice we were very informal about that side of things, but if a video was made using our recorded work, which was very often, I received an extra contractor's fee. I would then pay Simon and Tim each 33% of that fee.*

*Decisions were made mainly on a majority basis but if someone had very strong objections to something we would normally agree to this for the sake of harmony. Once again trusting that if one of us had strong objections then they probably had good reasons to feel these things and that was respected.*

**Author's Question:** How does one make an effort in providing reason?

**Mr. Lorimer's Reply:** *The most important thing, and this is obvious, is the music. In this issue, I mean we were always aware that this was someone, or a group of people's dream. We were entrusted with their baby to help it grow into something of beauty. Never let ego get in the way of making the song better. Remember that yours is a supporting role and you are there to make the song better and not to make yourself the focus unless that's completely appropriate.*

*'The sum of the whole is greater than the parts': this is very appropriate where the Kick Horns were concerned. My two partners, Simon and Tim, though very different as people came through the two best universities in England and as such were very analytical in their thinking process. I was better at 'thinking on my feet'. If the artist or producer didn't think our approach to arranging of their song was right, it becomes very legitimate where the arts are concerned, I was very good at coming up with ideas on the spot. Give me a band playing the blues and I'll get up on stage and sing lyrics while making them up as I go. It's a skill and it should be utilized.*

*After working for so many years it was obvious to us who should do which job. I am a good talker with a quick wit and I did almost all of the negotiating for fees for recordings and tours. We all had individual skills and they were utilized whenever the need arose.*

*I was very aware, in one instance, that no one was paying me high fees for standing in a studio yawning because I had been up all night with a new born baby. In this business, you're being hired to assist with the musical project and not expecting others to solve your personal problems. So I had to wake up to look after my baby when she's crying; in fact my hours of sleep would normally be from 2 am till 10 am. We often worked till 5 or 6 o'clock in the morning but no one asked us to turn up at 9 am to do a session. So adjust your body clock to compensate for this. That, along with long tours away from home for months on end, is one reason why divorce rates are so high among musicians. It's a professional choice you have to make. The choices on a musical level vary. A one off session for a band whose music you don't like is very different from touring for months with them. There was an instance where we were offered a 4/5 month tour with a German artist. The pay and conditions were very good but Tim felt that he couldn't do it on a musical taste level. Now that is difficult. We all need to make a living after all and in a business like ours you need to take many chances that come your way even if it's not to your musical liking.*

*No formal rules or agreements were ever entered into. We worked for 25 years as a partnership on trust alone. We were all aware of our responsibilities to each other and trusted the others to act as best for each situation as it arose. For instance, if I negotiated a fee, that was the end of the matter. My best judgment was used and no one would say something like "don't you think you could have pushed harder for more money?" We all had the belief that any of us could do the best.*

**Author's Question:** How does one experiment with the decisions made?

**Mr. Lorimer's Reply:** *Leave nothing to chance. If you feel that you have not got a handle on a particular piece of music you are arranging, call your partners and ask for help. This isn't music by numbers, it's also an art form in itself and like all people in the 'Arts' you are fallible and have highs and lows in your life which will affect your emotions and your emotions should affect your writing.*

*As musicians we would all naturally come up with different musical solutions to any arranging of problems. In music, unlike more technology based businesses, there is no 'one correct answer'. It's all about opinion and musical taste and that differs from one person to another. Often, in the early days of our partnership two of us would take on the task of arranging the same piece. A practice we stopped after about seven years. We would meet before and have a 'musical beauty contest' to see which arrangement was best, often taking sections from both arrangements to complete the work. This arrangement was efficient. It also raised the confidence in our abilities, thus allowing the work to be divided between us and trusted who ever was given a particular piece to do the best job they could.*

*We worked for artists from all over the world and couldn't be expected to know all the genres of music in the world, but what we did was meet regularly and play recorded music from around the world and make up riffs (short musical phrases) and play them along with the record on our instruments. This filled a gap in our knowledge, gave us the chance to improvise as a section rather than the traditional improvisation which is normally done by a solo instrumentalist and get a feel for playing together without any written music at all. This was a discipline that stood in good stead for the rest of our partnership on so many occasions.*

#### **Researcher's analysis of the results**

##### *1. On maintaining a two way communication flow.*

- There is a need to recognize that the people who work as part of the team have different educational and working backgrounds. With such a diverse set of ideas and interests being intertwined in the working process team members have to find a way of converting this diversity as the team's strength. It has to be an advantage for the team otherwise it could derail the behaviors required for the exchange of information. Although there are policies and procedures entrenched in workplaces they should never be the obstacles that inhibit members of the team from displaying friendliness and humor with each other (Querubin, 2011). Displaying this personality is a form of relieving tension and putting colleagues at ease. Team members need to feel comfortable with assurance that they are free from being mentally chained to their task assignments. Not only can being friendly and showing humor be used as a technique for breaking the ice in working relations but it also forms a psychological atmosphere that makes members feel that this is how working with others can be when there's no pressure. Nevertheless, obtaining trust so that team members can

communicate with each other does require a self-code of conduct that one should be aware of when having been perceived in the role from the start of the work. Therefore, any verbal or non-verbal form of gesture would either be evaluated by colleagues as promoting amity or provoking hostility among team members. Knowing who you are as well as allowing partners to understand you will enable communication to flow freely: you know the right words to choose from in getting the message across and your team members know what to say to you in a certain situation. When team mates are constantly communicating with each other it generates future occasion for them to gain a sense of trust with each other.

- Not all decisions can be agreed mutually among members of the team. There should be awareness that someone is not completely satisfied with the circumstances due to the values or principles not being met in the decision process (Goleman, 2000). But members must understand to be professionals on the matter and become a bit more compromising as time goes along. Therefore, a vote is often a method for taking the necessary action to a decision that was derived upon. When the votes are casted in the members have to carry out the process to make it work.
- Not all tasks can be distributed on an equal basis. In order to obtain the desired objectives, some work may require a lot of time and energy from team members who have the knowledge and expertise that others may be lacking. Such a situation is not meant to make colleagues feel slighted but calls for their gratitude towards making a successful outcome. In addition, members who are assuming the least critical role in the operation can play a complementary role by offering ideas or advice to help make the process flow smoothly. Most importantly, trust is gained when you have been committed in honing your vocation that makes you recognized in the area of expertise which helps your team accomplishes its goals. When other members know that you have a special set of skills it can lead to a discussion of how to improve the team's performance or looking for ways to help each other build on their strengths (Clarke, 2010).
- Sometimes there can be some unexpected changes to the team, such as a member having to undergo some treatment that slows down the progress of the work. In such a dire situation, decisions have to be made among members in deciding what is best for the team. Team members communicate in a form that radiates a sense of an obligation, reliance, and full support of each other no matter what the situation is (Ghosh, Shuck, and Petrosko, 2012). The team's credibility and integrity has to be assured so that its competitive performance remains in the long term.
- Being part of the team means doing your utmost best that nobody is being exploited to the point where it antagonizes the working relations. Every member has their responsibility and has to carry it out. Decisions are done for the sake of the team. However, if a member has a strong argument against a particular issue in the decision made, then the team would allow for open communication to

point out any areas of concern. This action stimulates a sense of being psychologically safe in providing a voice of reason. It also assures trust within fellow members that they are anticipating for unforeseen matters that might be a detriment to the team's performance in achieving the objectives (Pellerin, 2009). In addition, it's about preserving team harmony.

*II. Making an effort in providing reason.*

- Without the mission the team cannot exist. Whether it's delivering customer satisfaction, upholding administrative quality, preventing loss of lives, or composing a hit song, the team has to be guided by the mission that it takes. The reason is about being entrusted by others who want you to be a true partner in helping them to achieve their goal (Crow, 2001). Being a part of the big picture means not letting egos or other selfish behavior ruin the process towards the outcome. All thoughts and energy are translated as an array of commitment into making the goal become possible for the team.
- The team does its best in a collective effort. A team contribution to providing reason is dependent on how each member utilized their talent and skills. Members apply reasons that are based from the experiences that they have gone through and on what they were taught from their educational institution. But more importantly, team members should go with what they know that would work best for themselves and helping their team. It's about using with what you know best and sharing it with fellow colleagues to see if they agree or may want to add on the piece to make it even better as it is (Olmedo, 2010).
- As teams encounter situations that become more routine that requires a specialized knowledge to rectify the matter, members should discuss among each other in deciding who has the authority to represent the team. In cases dealing with negotiation, a member's ability in handling such a delicate matter can provide grounds for assuming the role (Raspin, 2011). The reasons that allow this member to represent the team in this situation propagate trust with each other.
- Reasons are the conscience of members that entrenches them to take action in preventing the team from drifting into a state of flux. Therefore, there must be a strict rule that applies to members in making them realize that their personal lives must not interfere with the team's performance. Life is not perfect for all but individual team members need to find a way of getting close to perfection so that working as a collective unit does not become destroyed (Aviega, et. al., 2011). One has to be able to understand that the problem being experienced, which is non-work related, must be taken care of and prevented from destroying the team's objectives. In a business situation, such as entertainment, opportunities rarely come around. Whatever opportunities are presented or occurring should be focused on strongly obtaining them. The matter of the situation is enough to understand and

explains why professional courtesy must be demonstrated for those who choose to be a part of this line of work. This ideal courtesy is the currency that upholds trust among members within the team.

- The only way a team can truly work together without having to rely on formal rules or agreements is when they have a wealth of trust embedded into their working relations (Casimir, Lee, and Loon, 2012). When trust becomes the reason for working with each other as a team, members perform their roles that benefit the team as a whole. Everyone becomes aligned and sees the intention of fellow members doing what is best for the team without having to raise a question of suspicion or doubting the abilities of others.

### *III. Experimenting with the decisions made.*

- If the decisions made suddenly become unsure of when to implement, then team members should obtain assistance to measure the details. The aim is to see if the decisions are producing the right results and to see if any adjustments can be made to make sure that it will lead to the desired results (Connell and Voola, 2007). In this way, it would also make the team trust the process with each other. The experiment is a rational tool for team members to use in evaluating the quality of the outcome rather than just seeing it as a method for saving time and resources.

- In finding approaches to solution for a problem there is never any one correct answer. The team should allow for its members to offer their views or insights in helping to achieve the outcome. By allowing this process to occur the team will be able to go beyond the mundane approach of simply arriving to an agreement and discovering new possibilities to be chosen as the overall solution (Patrick and Dotsika, 2007). The team can arrange a contest to see whose idea would work or arrange the contest to get a combination of ideas that would foster creativity in the work. Such an experimental process reinforces the confidence of team members' abilities and trust in each other's competency to execute the work.

- It's not possible for the team to be a master of all trades. The only guarantee is being a craft master that improvises in helping other members achieve their defined objectives. To be able to reach this type of level requires members to hone the craft as a complete unit. This means testing and examining to see where each of the team members' strength lies and to see what situation they can accomplish together if they encounter such an event (Yang, 2007). The team can reflect on areas where they need to improve upon. The more that the team experiments together the more synergy that it creates in being prepared to handle projects or task assignments that they take on in the future. When teams are capable to handle the situation the trust among each other in performing collectively becomes truly reinforced.

## DISCUSSION

The act of knowledge sharing has been and will always be a human activity. Sharing knowledge means that one is willing to provide the crucial know-how for others to understand the right ledge to grasp upon thus leading to a strong focus towards obtaining the desired outcome (Mueller, 2012). To be at the point of this process requires the virtue of trust which enables people to feel that there is no absolute threat nor unwanted consequences from being engaged (Barachini, 2007). Knowledge sharing cannot just be forced upon to make it happen (Cyr and Choo, 2010), colleagues should take the initiative in seeking for other methods to foster trust with each other so that the working relationship will be firmly sustained. When a team engages in an experiment individual partners will bring their own beliefs, values, and opinions into the process (Kamaşak and Bulutlar, 2010), thus the key is to harness everyone's contribution and transform it into an agreement that would keep the team moving in unison. From the viewpoint of an experienced musician who had been accustomed to sustaining trust with his music partners, the analysis demonstrates the precepts of maintaining trust among team members which would carry them towards achieving the objectives. Also, the analysis can be applied as a method in building morale for being aligned and learning as a team so that members become enthusiastic in sharing knowledge with each other. The study breakdowns the learning points for the application of maintaining trust among team members so that it leads to a continuous basis of knowledge sharing.

## CONCLUSION

The act of knowledge sharing among team members depends on the effort of building trust with each other. As teams are working interdependently to achieve their objectives members must be able to learn how to master the intangible techniques of developing trust that gives their partners a sense of being confident of each others' integrity and abilities, taking an initiative in searching for several methods in knowledge sharing during crisis, becoming fully aligned, and gaining a sense of encouragement in providing views and ideas to help the team. Before the desired results can become knowledge sharing among colleagues, team members should constantly learn how to hone their competencies of being able to devise a two way communication flow, being diligent in providing reason and experimenting with decisions as a collective unit. Although there are practical limits in this study, the author feels that the music artist's cooperation with the work offers some intriguing insights on getting members to be heavily aligned and learn as a team so that they can achieve their objectives as well as being engaged in the process of knowledge sharing. The author of this study would like to point out that the major limitation of this work was that it was carried out with only one selected informant.

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## RETHINKING SUSTAINABILITY ISSUE: ENTREPRENEUR'S POINT OF VIEW

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### ABSTRACT

Sustainability has long been an issue since 1972. Many initiatives and programs have been made to achieve sustainability vision of a better living condition for humanity through managing social and ecosystem. Sustainability, however, could be seen from a different point of view by entrepreneurs, since they have their own definition. This essay is a literature review that discusses entrepreneur behavior towards sustainability issue. Characteristics of entrepreneurs together with their ethical decision and prisoner's dilemma theory were applied to explain the behaviour. In the long run, working together to achieve sustainability vision is the best solution. In the short run, however, defect sustainability issue has better profit that can maximize share holder's value. Management of ethical capital is important to accelerate the number of active intended moral agencies. Sustainability vision, therefore, can be achieved more easily.

**Keywords:** Sustainability definition / entrepreneur character / ethical capital / prisoner's dilemma

### INTRODUCTION

Since Stockholm Conference in 1972, sustainability has become an issue (Hall, 2010; Parish, 2010; de Paula & Cavalcanti, 2000) stressing on natural resources scarcity and the need of better resources management for social benefits. The issue has heightened during these last two decades with the increase of global warming and environmental issues. Some initiatives, such as voluntary reduction of waste and pollution, Corporate Social Responsibility (CSR) programs, sustainability education programs, government and business policies, green cities programs, ISO 14000, Kyoto Protocols, Global Reporting Initiatives (GRI), have been developed on local, national and international level by concerned individuals, social organizations, business entities, local and national governments through their policies and incentives, inter-governmental and international organizations. Objectives of the initiatives vary but they sum up to sustainability of resources in sustaining people living in the earth (Van Weenen, 1998). In business setting, Fry et.al. (2007) summarize it in triple bottom line concept that is Profit, People and Planet; Profit for how company leverages business profitability, People for how company cares for its

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customers, social impact, human rights, employee engagement, and company social responsibility, and Planet for how company manages resources, waste and pollutions.

McKinsey global survey in 2005 and 2007 showed that CEOs in many countries are deeply concerned with environmental issues. The environmental issues have been shifted significantly from the third place issue in 2005 to the first in 2007. Environmental issues create sociopolitical issues for companies' contribution in society (Bonini et.al, 2008) and build more expectation from consumers regarding healthier products and services, retirements and benefits for employees, affordable products for poorer consumers, human rights standards, workplace conditions, and more ethical products demand. Society as consumers are now more concerned with social responsibility of companies in broader term related with sustainability of the environment, role of companies in public service, and how company behaves (Bonini et.al,2008; Seelos and Mair, 2005). Some course of actions that companies have done to integrate the issues in their business processes are including the issues in their mission and values, external communications, corporate culture, internal communications and operations, strategic planning, marketing, employee engagement, supply chain, and budgeting (McKinsey on-line survey in 2011, Bonini, 2012). The objective of the actions is to gain a better position in the market and competition that leads to higher profitability and shareholders' value. The survey, however, has found no clear evidence between sustainability actions and quantification of shareholders' value (Bonini, 2012).

Concern on sustainability in business setting has its own tradeoff in the triple bottom-line, between profit and people and planet (in Fry et.al. terms), especially in time of economic crisis. Starbucks, Google, and Apple, which are highly credible companies, turn out to be involved in tax payment scandals with some European Governments (Kompas, 2013 May 27). Some corporate scandals also happened during global financial crisis as noted in GRI report (2012). As leaders in those companies, entrepreneurs must take a great part in making decisions related to those scandals. It is clear that, for those entrepreneurs, profit precedes people and planet.

Behavior of entrepreneurs toward sustainability is the central issue in this essay. Two concepts are being discussed as alternative answers for the issue; entrepreneurs' characteristics and their ethical decisions and prisoners' dilemma matrix in game theory. Objective of the essay is to explain how entrepreneurs behave toward sustainability issue - that is concern on profit, people, and planet - in their decisions, as entrepreneur is the key role in sustainability initiative success (WCSBD publication, 2010). The essay is literature research on journals and publications regarding sustainability and entrepreneurship.

## SUSTAINABILITY

Sustainability has various meanings and definitions. In this essay, general definition and business term of sustainability will be discussed. In general, sustainability derives from *to sustain*;

according to de Paula and Calvacanti (2000), “to sustain is to prolong the productive use of our natural resources over time, while at the same time retaining the integrity of their bases, thereby enabling their continuity”. They further define sustainability as “the constant process of obtaining the same or better living conditions, for a group of people and their successors in a given ecosystem”. The definition presents some important points: (1) that sustainability is a lifelong productive process of using and managing natural resources, (2) that objective of sustainability is to continuously provide all people with a better life through the maintenance of ecosystem, (3) that sustainability is inheriting the sources in their good conditions to the next generation, (4) that sustainability has three distinct areas, economic-social-and ecological.

As natural resources are scarce and limited, productive process of managing natural resources is definitely essential. The managing process requires managing of natural capital, managing of human or social capital (e.g. labour, skill, knowledge, motivation, culture) , and managing of institutional capital (e.g. structure, network, culture, rules, standards) (de Paula & Calvacanti, 2000) to be a whole/interrelated system in order to result in productive process that provides a better life without damaging the ecosystem and hence threatening human life. However, this is not a simple work since the system has its own problems such as different perception in managing the system, different cultures, different motives among groups of people.

Sustainability in general has three distinct areas; economic-social-and ecological. It delivers three objectives in management process; economic efficiency, social equity, and ecological prudence (de Paula & Calvacanti, 2000). Achieving these objectives also has its own problems since subjects who work in the system have, among others, different views, motivation, ambition, and intention. Subjects therefore have to work together, showing wisdom and ethics in managing their differences in order to have better management process.

In business, sustainability term is first mentioned in Porter’s work (1996, in Mintzberg et.al, 2003). The term refers to to prolong business life through positioning of companies in business/industrial competition by fitting business competitive advantage into business opportunities. The definition presents some important points: (1) that position of companies in business competition is highly significant in order to maintain business existence, (2) that sustainability can be achieved through value creation in the business processes of creating competitive advantage - value created, rareness of the value, and imitability of the value are important factors to establish sustainability of the competitive advantage, (3) that objective of sustainability is to maintain adaptability of competitive advantage with changes in business opportunities and increasing value of share holders.

When general sustainability has become a global issue, in business setting the issue is then treated as both opportunities and threats. A new concept on sustainability called triple bottom line is

similar to the one in general setting. This concept concerns profit (economic and share holders' value concern), planet (ecological and environmental concern), and people (social and organizational concern) (Fry et al., 2007).

Sustainability has become the primary concern for many companies – from big multinational companies to small medium local companies. McKinsey survey in 2007 showed how this issue had shifted from the third place in 2005 to the first (Bonini et al., 2008). Business practices adapting the issue vary; some place it in strategic planning, vision and values, internal and external communication, saving energy, while some in research and development for new products. The practices, however, fail to give clear explanation to the share holders' value creation. Still, some business leaders believe that the practice will give impact on business sustainability mentioned in Porter's work (Bonini, 2012).

Not only in general setting, sustainability in business setting also faces its own problems. Lack of incentives, different view of short term earnings and long term sustainability, insufficient resources, are some of the problems (Bonini, 2012). Ideally, subjects in business setting such as entrepreneurs, labours, suppliers, consumers, governments, societies should work together to solve the problems. They, however, have different views, motivation, intention and ambition. This ironic situation is what World Business Council for Sustainability Development (WBCSD) call dilemma for success of vision 2050 for sustainability, "Who should be the first mover?" and "How can business, governments and society work together to encourage the desired value shifts and behavior changes?" (WBCSD publication, 2010).

#### ENTREPRENEUR AND ETHICAL DECISIONS

Entrepreneurship has been continuously defined and developed. Early definition of entrepreneurship states that the "center" of entrepreneurship is to build a new business (Chandler, 1990; Gartner, 1990, 1989, 1985; Low and MacMillan, 1988; McClelland, 1961; Schumpeter, 1934; Vesper, 1980 dalam Verheul et al., 2005). Then some models are developed to explain entrepreneurship, such as psychology, sociology, and economics which are the popular ones (Douglas & Shepherd, 1999). Psychology and sociology see entrepreneurship as self concept, attitude, and motivation of entrepreneurs like innovative (Schumpeter, 1934), achievement motivation (McClelland, 1976), calculated risk attitude (Knight, 1921), high needs of autonomy and freedom (Hornday & Aboud, 1971) and high response on opportunity (Kirzner, 1973). This model, however, does not show the external sides of entrepreneur such as family, gender, economic situation, and culture. Then demographic/sociology definition is developed (Douglas & Shepherd, 1999). Economic models are focused on motivation and attitude of entrepreneur toward economic values as incentive in economic structures (Boumol, 1990), expectation for high net present values (Campbell, 1992), utility maximization (Eisenhauer, 1995). From the three models, it can be concluded that entrepreneurship is attitude and behavior of someone (called

entrepreneur) to maximize economic utility through his/her capabilities (skill, knowledge, innovation) through opportunities exploration.

Sustainability issues have impacted entrepreneurs as well. Recent development of entrepreneurship studies add some definitions for entrepreneurs who show concern on sustainability and place environmental or social motive before profitability. The term like sustainability entrepreneurship, green entrepreneurship, social entrepreneurship become more popular now. The ideal objective of these entrepreneurs is to serve society (their consumers) with quality products which have value added to society through manageable resources that do not harm ecosystem while having profit (social profit and economic profit) (Choi & Gray, 2008 dalam Harris et al., 2009).

Entrepreneurs experience conflict when they face sustainability issue as they need to maximize profit while serving society through producing goods and services without harming the ecosystem. Some entrepreneurs have converted to sustainable entrepreneurs, while the rest refuse to or in between. Becoming sustainable entrepreneurs is not an easy decision. Events, risks, motivation, moral and values of entrepreneurs greatly influence the decision. To illustrate, when economic condition is neutral or booming, it will be easy to make economic decisions along with sustainability issue because risks are low. Entrepreneurs could easily exercise good intention on sustainability issue. If the economic condition experiences recess, it will become very hard to decide between prioritizing economic profit or give attention to sustainability issue since risks are becoming high and therefore business sustainability will be threatened. Motivation, moral and values of entrepreneur are the keys for decision made during the conflict.

When entrepreneur makes a decision, it involves some resources/capitals being managed for the best outcome. Bull et.al.(2010) divide capitals as physical/natural capital, economic/financial capital, intellectual capital (knowledge, skill, and innovation), human/labour capital, social/civil society capital and ethical/moral values capital. Entrepreneur behavior toward sustainability issue will fall into three categories in ethical capital views (Bull et.al, 2010), those are (1) passive unintended moral agency, entrepreneur's motivation is purely on economic profit and for the sake of profit maximization, (2) passive intended moral agency, entrepreneur follows business rule but is engaged with society in the light of acknowledging business exist in society, (3) active intended moral agency and the creation of ethical capital, entrepreneurs with moral decisions derived from good will that treat people as ends not as means. As "software" in managing capitals, ethical capital is very important to make decision toward sustainability. Whether one of requirements and indicators for sustainability vision can be achieved, it depends on the number of entrepreneurs who are active intended moral agency. If there are just a few, it will be very hard to achieve sustainability vision. On the other hand, if there are many, sustainability vision could be easily achieved.

### PRISONERS' DILEMMA IN GAME THEORY

Strategic behaviour of entrepreneurs can be explained by game theory. In general, game theory is concerned with the choices (decisions) of the best or optimal strategy in conflict situations (Salvatore, 2007). One of the concepts is prisoners' dilemma concept that can explain behavior of entrepreneurs toward sustainability.

Prisoners'dilemma is a situation that shows conflict of self interest between two subjects. Alternative decisions for one subject are either to cooperate or defect with the other subject. The dilemma happens when subjects behave based on their self interest (defect decision) which leads to worse result than when they act on the contrary to their own interest (cooperate decision).

Applying the theory to behavior of entrepreneurs toward sustainability, the pay-off matrix in Picture 1 illustrates the benefit/profit (numbers in the pay-off matrix are just illustration) for the subjects (i.e. Player A and Player B) when taking decision on sustainability. Cooperate (C) decision means positive behavior to sustainability vision and defect (D) decision means the opposite. Profit for cooperate is bigger than defect in the matrix for some reasons: (1) long run support of resources because of sustainability vision, (2) defect action leads to governmental regulation that protects environment and social concern, and (3) positive impact of reputation in the industry and society (Pacheco et.al, 2010). While cooperative action improves industry and social condition in the long run, the individual cost of cooperate will drive subjects away from cooperation (Pacheco et.al, 2010). Then the result for each subject becomes  $P(D,C) > P(C,C) > P(D,D) > P(C,D)$ , (Pacheco et.al, 2010); it means that when one subject defects and the other cooperates, in the short run the subject will gain more benefit/profit than the other. However, it leads to retaliation of the other subject to defect then both of them will suffer in the long run. Therefore, the best result is to cooperate.

		Player B	
		Cooperate (C)	Defect (D)
Player A	Cooperate (C)	5, 5	2, 7
	Defect (D)	7, 2	3, 3

Picture 1 Entrepreneur Prisoners' Dillema Pay-off Matrix

## CONCLUSIONS

Sustainability issue in general definition has different meaning with business sustainability from entrepreneurs' point of view. In a short run, profit and share holders' value sometimes precede society and ecosystem because of some reasons: (1) when there is a cost of sustainability because it has long run industry and social improvement, (2) when events in business environment are becoming riskier. Working together or cooperation among subjects in business, though, is the best solution to achieve sustainability vision.

Managing ethical capital is an important part in business to achieve sustainability vision, as ethical capital will lead entrepreneur to become an active intended moral agency. Education is important to leverage ethical capital in the future as the number of active intended moral agency is a key in sustainability. The more active moral agency entrepreneurs in business, the easier for sustainability vision to be achieved.

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## “MILK LOTTO”: BUSINESS INNOVATION FROM LOTTERY CONCEPT

Pichayalak Pichayakul<sup>\*</sup>

### ABSTRACT

This paper focuses on explaining the concept of “Milk Lotto,” an innovation that was developed from a synergy of market opportunity of Thais behavior of buying lottery and their demand on milk. The main objectives were to study the creation of Milk Lotto, its mechanism, its market feedback, and seller’s perspective towards this business. Diffusion theory and probability theory were applied to explain the result of this study. The researcher conducted in-depth interview with the creator of Milk Lotto and ten of her customers. “Milk Lotto” was an innovation generated from a government lottery concept by a local lady. Regarding the Milk Lotto mechanism, the innovator set a rule that she would sell 100 two-digits number tickets each round of the lottery cycle. The price of ticket was 20 Baht and there would be 8 winning prizes each round based on the government lottery winning numbers. All of the 8 winning prizes would get 20 bottles of milk with market value of 140 Baht while the actual cost was 100 Baht. Therefore, the total cost of each round was 800 Baht. The probability to win was 0.08. If all the tickets were sold out, she would earn 1,200 Baht per round or 2,400 Baht per month. This business tended to be well accepted by the market. The reasons were that people bought it not only because they wanted to win the prize, but they wanted to buy “hope and joy.” This business was unique because of the prize, “milk,” granted to the winner. The seller was satisfied since she could buy the prize at a discounted rate and the winners were contented since they could keep the milk for their own consumption or share to others and received happiness in return. The five stages of innovation diffusion including 1) Knowledge 2) Persuasion 3) Decision 4) Implementation and 5) Confirmation were actively and successfully practiced.

**Keywords:** Milk Lotto / underground lottery / government lottery

### INTRODUCTION

“Ying” (pseudonym) used to work in a pig farm as an unskilled laborer. Her daily routine work was to feed the pigs, clean the pig’s enclosures and other miscellaneous tasks around the farm. No matter how hard she worked and how tired she was, she was paid at a minimum wage rate due to her lack of knowledge and skill. Ying thought to herself that even though she earned a stable income, she could not make enough money for a living. She then resigned from the pig farm and started her new career as a milk retailer. In the morning, she went to the milk distribution center to take the milk and then

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deliver them to the customers. She earned money from the commission depending on the amount she could sell.

Ying realized that although she could make more money by selling more, the customers' demands were uncertain which caused her income to be uncertain as well. Ying, again, quitted her job and returned to work at the pig farm. Ying thought about the opportunity to utilize her connections with the workers at the pig farm along with her knowledge in milk retailing business, she should be able to make a business out of it. To simply sell milk to other people working in the farm would not work since she would have to compete with the current retailers and that she would unnecessary make foes. She pinpointed an outstanding fact that most people around her were waiting for the 2 days of the month, the lottery announcing days (1<sup>st</sup> and 16<sup>th</sup> of the month). Ying then grasped this opportunity to initiate her new business, "Milk Lotto," which works like a lottery-based game and the winner would get milk as a prize.

According to the survey of Center for Gambling Studies, it was found that a significantly high number of Thai people were involved in several types of gambling. The survey indicated that "lottery" was the most popular type among the Thais. In 2011, the purchased value of government lottery was 76,000 million Thai Baht and approximately 102,000 million Thai Baht for underground or illegal lottery. The report also indicated that women tended to buy more lottery than men. The survey of Assumption University in 2010 revealed that around 41 percent or 29 million of Thai population currently purchased or used to purchase lottery within one year. Furthermore, Chulalongkorn's Social Research Institute reported that more than 20 million Thai population purchased lottery either on a routine basis or every once in a while. 14 million of them resided in the rural area while 6 million of them resided in the city (Punnee, A., 2013).

With positive support of internal factors which were the innovator's knowledge, experience, and entrepreneurship characteristics along with external factors which was the customers' behavior, this innovation tended to be a successful business. This study focuses on studying how a Thai local lady created the Milk Lotto business. The researcher gathered data and analyzed the mechanism of this innovation in terms of monetary returns as well as the customers and seller's opinions towards this innovation.

## OBJECTIVE

To study the creation of Milk Lotto, its mechanism, its market feedback, and seller's perspective towards this business.

## THEORETICAL FRAMEWORK

The researcher applied two theories in this study. Diffusion theory was used to explain the creation of Milk Lotto and perspectives of seller and customers in terms of psychology. Furthermore, Probability theory was applied to explain the mechanism of this innovation.

## Diffusion Theory

Everett M. Rogers is a researcher who has done a lot of studies to synthesize significant findings and compelling theories related to diffusion of ideas. According to Rogers, E. (1995), diffusion is defined as “the process by which an innovation is adopted and gains acceptance by members of a certain community.” He pointed out that there is a number of factors interact to influence the diffusion of an innovation. The four major factors that influence diffusion process consist of: 1) the innovation itself 2) how information about the innovation is communicated 3) time and 4) the nature of the social system into which the innovation is being introduced.

Diffusion is a process of five distinct stages that occurs over time. The stages in the process are 1) Knowledge 2) Persuasion 3) Decision 4) Implementation and 5) Confirmation. According to this theory, prospective adopters of an innovation must learn about the innovation, be persuaded as to the intrinsic worth of the innovation, decide to adopt, implement the innovation, and confirm (repeat or reject) the decision to adopt the innovation (Rogers, E., 1995).

The following picture illustrates Rogers' Diffusion Concept.

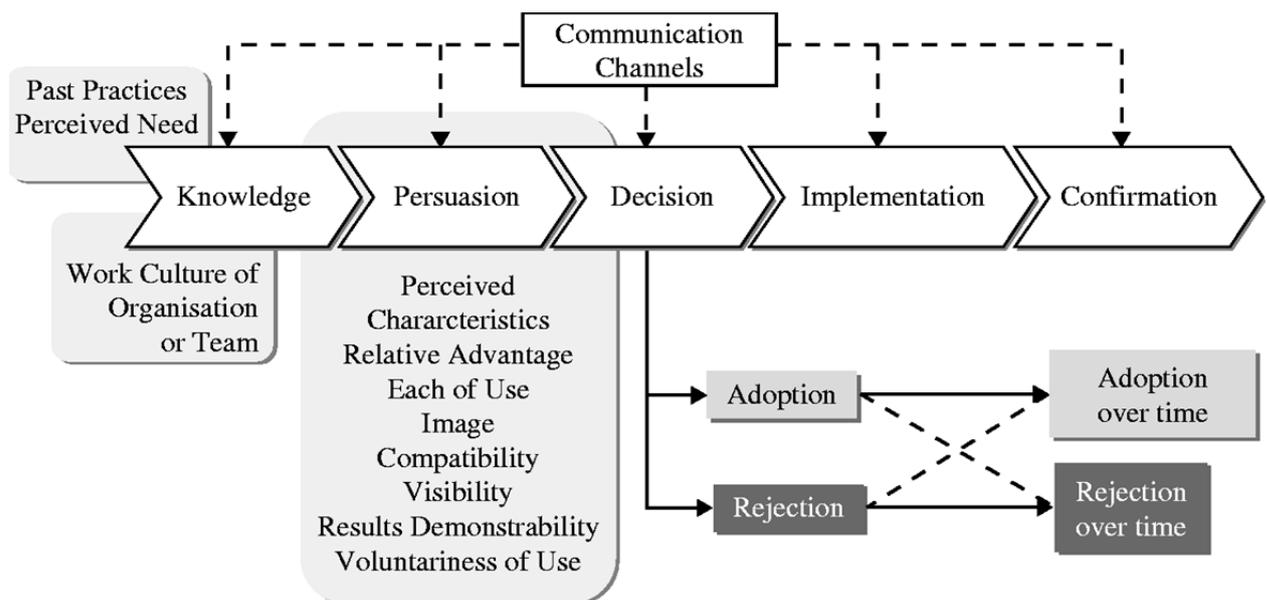


Figure 1: Rogers' Diffusion Concept

Source: Rogers, E.M. (1995). *Diffusion of innovations (4th ed.)*. New York: The Free Press.

## Probability Theory

This research applied Probability theory to explain the mechanism of the research subject “Milk Lotto.” Probability theory is a branch of mathematics concerned with probability, the analysis of random phenomena. This also called “classical interpretation of probability.” The idea arose from a game of

chance. Typical probability statements are, for example, “the probability that a flip of a balanced coin will show ‘heads’ is 1/2:” and “the probability of drawing an ace when a single card is drawn from a standard deck of 52 cards is 4/52.” The numerical values for these probabilities arise from the nature of the games. A coin flip has two possible outcomes (a head or a tail); the probability of a head should then be 1/2 (1 out of 2). Similarly, there are four aces in a standard deck of 52 cards, so the probability of drawing an ace is a single draw is 4/52, or 4 out of 52.

In the classical interpretation of probability, each possible distinct result is called an *outcome*; an *event* is identified as a collection of outcomes. The probability of an event E under the classical interpretation of probability is computed by taking the ratio of the number of outcomes,  $N_e$  favorable to event E to the number N of possible outcomes. The probability formula is shown below (Lyman, R. and Longnecker, M., 2010, p. 140-142).

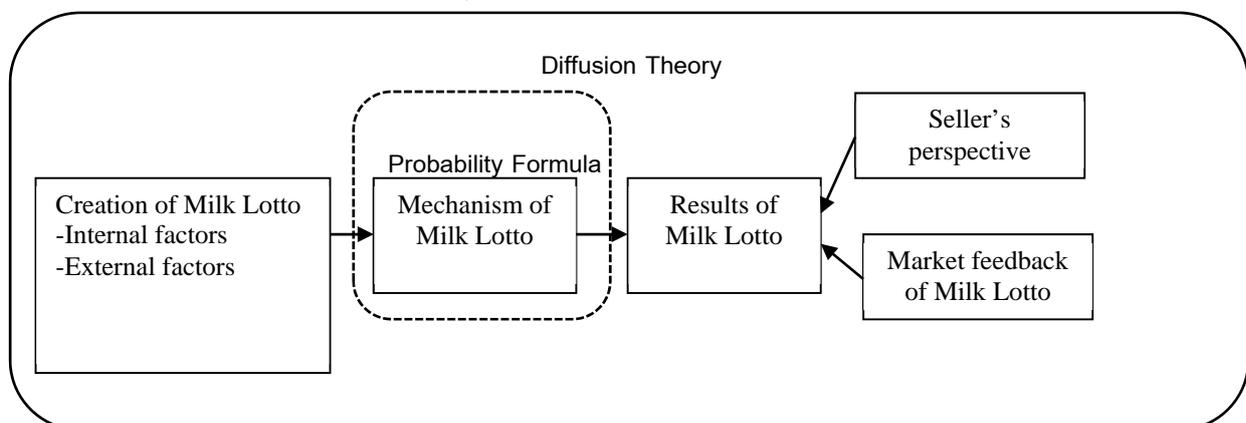
$$P(\text{even } E) = N_e / N$$

The applicability of this interpretation depends on the assumption that all outcomes are equally likely. If this assumption does not hold, the probabilities indicated by the classical interpretation of probability will be in error.

## RESEARCH METHOD

The main research methods applied were in-depth interview, direct observation, and document review. I interviewed “Ying” (pseudonym) who was the initiator of “Milk Lotto” and 10 of her customers. Ying requested that her real name and photo be concealed. As far as her identity information was concealed, she was willing to explain her initiation of the bottled-milk lotto, its mechanism, and the market feedback. Besides interviewing, I also made direct observation on the selling and buying process so that I could talk to the buyers to learn their feedback. The research results were verified and validated through such acts accordingly.

The research framework is displayed as below.



Picture 1: Research framework

## RESULTS

The research results are reported in 4 parts as follows.

### Part 1: Creation of Milk Lotto

Ying, the creative of Milk Lotto, based her innovation idea on the lottery concept. The idea was that she would sell tickets with numbers on (imitation of lottery) to her customers and if the ticket numbers match the winning numbers of the government lottery, the ticket holder would win the prize from her. Instead of paying with cash, Ying offered “milk” as the prize. In such case, her Milk Lotto business would not be illegal. Moreover, her business would be different from the government lottery and underground lottery and that she did not make business foes.

“Why milk?” I asked. Ying answered with confident that milk was a common food that people in general consume. The winner customers could drink it themselves or offer to their peers. Ying explained that most of her winning customers did not keep the milk all to themselves; instead, they shared it to their friends.

*“We are in a culture of sharing. The real prize is not the amount of milk they get for themselves; instead, it’s the happiness they get the opportunity to share.”*

In addition, many of her target customers had children; therefore, winning customers could bring their prize home. Ying added that her business was a win-win business. Her customers did not think that buying the ticket was an investment that they should get optimal return.

*“My customers are buying hope and enjoyment. They don’t feel disappoint if they missed, they think it’s normal and simply laugh at it. But if they win, or even if their friend wins, it’s a good day for them.”*

Regarding the value of the prize, Ying explained that since she used to be a milk retailer before, she now could buy the milk at wholesaling price. Therefore, when she had to pay the prize, she paid at a discounted price while her winning customers perceived it at a full value. She added that this was another win-win perspective of her business.

### Part 2: Mechanism of Milk Lotto

Ying designed that she offered 100 of 2-digit number tickets each round of the lottery cycle (every government lottery announcement day: 1<sup>st</sup> and 16<sup>th</sup> of every month.) The price of the Milk Lotto ticket was 20 Baht a piece. The winning ticket would get 20 bottles of milk as a prize. The market value of each bottled-milk was 7 Thai Baht. The wholesale price that Ying could purchase was 5 Baht a piece. This meant that for one winning prize, Ying would give 20 bottled-milks to the winner. Simultaneously, the winner would perceive that they won the milk with a value of 140 Baht. In fact, the cost that Ying actually

paid was 100 Baht. Ying designed that she would offer 8 winning prizes each round based on the government lottery winning numbers.

Regarding to the government lottery concept, the winning numbers could be classified as follows.

**Table 1:** Government lottery winning number concept

First prize	Last 2 digits prizes	Last 3 digit prize
XX-XX-XX	YY	AAA, BBB, CCC, DDD

Ying modified her Milk Lotto prizes according to the government lottery prizes. It was notable that her modification was somewhat similar to that of the underground lotto. The similarity was that both use the winning numbers from the government lottery winning prizes. The difference was that the winning numbers of underground lotto must be the exact numbers with the government lottery winning numbers. Whereas for Milk Lotto, the winning number can be any of the 8 matching numbers. The concept of Milk Lotto could be illustrated in the table below.

**Table 2:** Milk Lotto winning number concept

Amount of Milk Lotto prizes	Milk Lotto winning numbers	Modified from government lottery winning numbers
3 Prizes	<u>XX-XX-XX</u>	First prize
1 Prize	<u>YY</u>	Last 2 digits prize
1 Prize	<u>AAA</u>	Last 3 digit prize
1 Prize	<u>BBB</u>	Last 3 digit prize
1 Prize	<u>CCC</u>	Last 3 digit prize
1 Prize	<u>DDD</u>	Last 3 digit prize
Total = 8 Prizes		

Based on an assumption that Ying could sell all 100 of her tickets each round, she would earn 2,000 Baht. As she offered 8 winning prizes each round and each prize cost 100 Baht (as calculated earlier), her total cost was 800 Baht. In sum, if she could sell all of her tickets, she would make a profit of 1,200 Baht per round. The risk was that if Ying could not sell all of her tickets each round, the unsold tickets had the possibilities of both winning and losing. This study would only discuss on the case of sold out tickets. The calculation is shown below.

$$\text{Profit per round} = \text{Total sales per round (2,000 Baht)} - \text{Total cost per round (800 Baht)}$$

$$\text{Profit per round} = 1,200 \text{ Baht}$$

$$\text{Profit per month} = 1,200 \text{ Baht} \times 2 \text{ times/month} = 2,400 \text{ Baht}$$

### Part 3: Market feedback of Milk Lotto

In order to learn the actual feedback of the Milk Lotto market, I asked the current customers of Ying. All of them answered that they loved the idea of Milk Lotto and all of them agreed on four main reasons: 1) The selling price was cheap (20 Baht per ticket) 2) The return worth their investment 3) They liked the prize (milk) since it was useful and common enough that they could share to anyone and 4) They would like to support Ying on her business. All of them said that they did not buy Ying's Milk Lotto every round but they buy it frequently. It was notable that all of them said that they also buy underground lotto on a frequent basis as well. For Milk Lotto, they usually buy around 2-5 tickets at a time, while they usually buy underground lotto around 100-400 Baht each time. They said that they rarely bought government lottery since the unit price is much higher than Milk Lotto and underground lottery (120 Baht a ticket).

Par the question of whether they (the Milk Lotto customers) would continue to buy Milk Lotto, they all said "yes."

*"Sure, I will continue buying the Milk Lotto. Why not (laugh)! When we lose, it's just 20 Baht per ticket. But when we win, we get 20 bottles! It's fun and it does not hurt our personal economy."*

I then asked them about their expectation on winning chance. They said that the winning chance of Milk Lotto was much higher than those of other types of lotto and that was one of the major reasons that they enjoyed buying Milk Lotto.

*"If Ying could sell all of her ticket in that round, it's for sure that there will be 8 winning tickets in that round. That's appealing for us (buyers). We think that this (Ying's Milk Lotto) is a fair game to us unlike the underground lotto or government lottery."*

### Part 4: Seller's perspective

Besides from the customers' side, I also interviewed Ying regarding her perception of market feedback from the seller's point of view. Ying said that her business goes well. She had a group of regular customers whom buy her Milk Lotto almost every round. Majority of the customers in this group were people with children. The irregular customers were people in her workplace as well as her friends from outside. The proportion of regular and irregular customers was 70:30. Regarding 24 rounds of lottery a year, the regular customers bought around 20-24 times whereas the irregular customers bought 5-10 times. She expressed that Milk Lotto was her sideline job and she would continue her Milk Lotto business into the future. She expressed that low pricing was the key factor of her business.

*"I am happy that I earn extra income from this Milk Lotto business. The market response is good. Even though I do not make that much money out of this business, but it is ok. I also*

*want to point out that even though this business idea was generated from the lottery concept, I do not view it as a gamble but simply a game. 20 Baht is a proper price for people like us. And using milk as a prize is good for my customers, too (smile)."*

Considering competition in this business, Ying reflected that her Milk Lotto business was unique and there was none direct competitor to this business. From her perspective, underground lotto and government lottery were not her business competitors.

*"Underground lotto and government lottery are not my competitors. The prizes are different. In fact, I think that such businesses even support my business since the customers learned the business concept of lottery from them therefore they easily understand my business idea. The customers tend to be the same group but the customers buy both my Milk Lotto and other types of lotto, they are not substitutions that if they buy this they will not buy that."*

I asked Ying whether her business had been imitated or not. She expressed that the exact imitation had not occurred so far as it was common community etiquette not to steal business idea from the same community. Nevertheless, the similar business mechanism idea had been applied on other types of products but those businesses were not as success as Milk Lotto.

*"My friend applied this idea and offer MLM merchandises (multilevel marketing products such as Amway products: Shampoo, soap, etc.) as prizes. She hoped that she could release her MLM merchandizes through this lotto-ish business. However, people are not interested in her products so they did not buy her lotto."*

## Discussion

In this section, I will discuss the result of this research based on Everett M. Rogers's Innovation Diffusion Model. Roger (1995) stated that prospective adopters judge the innovation based on their perceptions in regard to five attributes of the innovation. The discussion is as follows.

### 1. Trialability

Everett M. Rogers (1995) stated that innovation diffusion would be effective if people can try the new innovation before adoption. In this case, the customers had tried this innovation by purchasing the Milk Lotto starting with a small amount of money. According to Vilasinee, B. (2010), knowing what ones are doing and being sensible and insightful in taking decisions are components of the key success factors of innovation diffusion. Vilasinee's suggestion is align with the concept of Rogers (1995) and the practice of Milk Lotto in the sense that the customers learned about the rule of Milk Lotto and as some had won the prizes, they learned that this innovation actually practical and could generate them benefits.

In addition, the cost of 20 Baht per ticket allowed the customers to try this innovation without much thinking. This is relevant to the Erikson's research which indicated that pricing was an important factor in marketing lotto. (Erikson, O. et al, 1999).

## 2. Observability

The result of this project was tangible; many of the Milk Lotto customers had won the prizes and they were satisfied with their investment. Due to such visible result, the diffusion process was strengthening. This finding supports the study of Prayukwong, W. (2007) that encouraging individuals to directly learn from experiences of economic activity will help individuals to see linkages of their investments to that of others. In addition, the customers' feedback was positive as they expressed that they would continue to buy Milk Lotto in a long run. This result aligned with a prior study conducted by Somwin Munprasert. His research "A Study of Situation, Behavior, and Effects of Gambling in Thailand: A Quantitative Study with Economic Model," reported that gambling was an addictive goods for Thai people. The research reported that most of those gamblers in Thailand were risk-averse person and realized that they were addicted to gambling. Therefore, the researchers concluded that the gamblers in Thailand tended to fall in the category of addict or with rational addiction behavior. This meant that those gamblers made a rational decision to gamble by comparing their "private cost" (eg. money they had to spend to gamble, opportunity cost, and wasted time in gambling process) with their "happiness" from participating in those gambling. In addition, the research reported that peer effects such as effects from family members and friends had significant effect on Thai people's gambling behavior (Munprasert, S., 2011).

## 3. Relative Advantage

This innovation's advantage was adding extra income for the customers. The probability to win Milk Lotto (0.08) was much higher than the underground and government lottery. In addition, it adds excitement and joy to the life of the customers. When they won the prizes, many of them shared the prizes to others and that even expand the happiness to others. Regarding winning concept, the probability to win each round was 0.08. According to the survey of Center for Gambling Studies, the payment rate of the "last 2 digits" prize of underground lotto was around 60 Baht and the probability to win was 0.01 (Punnee, A., 2013). Even though it was obvious that buying lotto prevails existence of 'unfair,' in terms of expected payoff, many people accept a significant unfair bet. According to a study of Jen-Hung Wang et al. (2006), it was reported that gambling provided entertainment large enough to compensate gamblers' expected monetary loss for participation in gambling. This result could support the evidence why Ying's customers kept buying Milk Lotto. Forrest et al. (2002) also supported this result that people buy lottery not only because of its monetary return, but also because they gained the benefit of "buying a dream." The "dream" was rationally counted into the purchasers' decision making process.

#### 4. Complexity

The procedures and rule of Milk Lotto was simple and easy to understand and implement. This rule was much simpler than the underground lotto. In addition, since most of the customers were also customers of underground lotto, it was very easy for them to understand the Milk Lotto very fast. Regarding to Rossi, A. (2012), one of the obstacles of implementing new concept in the local community was the differences in traditional beliefs and cultures. In this case, the lifestyle of the customers and the concept of the innovation aligned. Most of the customers were also customers of underground lotto and government lottery. Therefore, the issue of complexity did not emerge in this case.

#### 5. Compatibility

The result showed that this innovation, when compare with the underground and government lottery, was better in all dimensions. For instance, it provides higher probability to win, it provides "hope and joy," and strengthen the relationship of people within the community. In addition, the seller believed that this business not only met the customers' demand but also good for the society in terms of promoting the community members' health.

### CONCLUSIONS

Milk Lotto idea was generated from lottery concept. The numbers of winning prizes were based on the current government winning numbers but the positions of those numbers were modified. "Milk" was offered as a winning prize due to the fact that the concept creator could purchase it at a wholesale price. In addition, the idea creator believed that using milk as a prize should be an effective motivation to attract customers since it was a common consumer good that the winner could either consume on their own or share with others.

The market feedback of Milk Lotto was positive. The customers expressed that they would continue buying Milk Lotto in a long run because the unit price was cheap, the return was appealing, the prize met their demand, and they would like to support their friend's business. From the seller's perspective, the seller planned to continue this Milk Lotto business in a long run since the market feedback is good and this business generates extra income for her. Set the pricing at 20 Baht per ticket was suitable since the customers could buy it without much concern.

### ACKNOELEDGEMENT

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## IMPACT OF DEMOGRAPHIC DIVIDEND ON EXPANSION OF JAPANESE OVERSEAS SUBSIDIARIES

Yuzuru Utsunomiya\*

### ABSTRACT

The purpose of this study is to investigate the relation between population structure and foreign companies' expansion, particularly focusing on Japanese overseas subsidiaries. Our target countries are ASEAN 5: Indonesia, Malaysia, Philippines, Thailand and Vietnam. Referring to demographic dividend theory, to express the population structure, we use working generation rate. The demographic data used in this study was derived from the database of the United Nations and the number of Japanese overseas subsidiaries by industry were obtained from the database of *Kaigai Shinshutsu Kigyō Youran*. Using these data, we show the annual trend by company while scaling the data.

The results of the study show three facts. First, demographic dividend in the countries began from the midst of the 1960s' to the beginning of the 1970s'. The dividend will end from the midst of the 2010s' to the midst of the 2020s'. These facts imply that the demographic dividend in the country will be finished sooner or later. Second, Japanese overseas subsidiaries began to expand to the countries from the end of the 1980s'. The number of Japanese overseas subsidiaries has increased dramatically until the end of the 1990s'. This implies that the companies begin to expand after the end of Japanese economic boom and stopped expanding round about the Asian financial crisis. Third, among the five ASEAN countries, in the beginning of demographic dividend, the number of companies was relatively less than the working population rate. Then in Indonesia, Malaysia and Philippines, the number of companies became more than the working population rate only to follow a reversed trend thereafter. Vietnam will go in the same path. The case of Thailand is however different from the other countries. The number of Japanese overseas subsidiaries in the country has not been greater than the working generation rate until 2012. These facts imply that use of demographic dividend varies depending on the country.

We conclude that Japanese overseas subsidiaries could use the dividend partly even if the five countries' governments have set up promotion policies since the 1960s'. Second, there has to be a shift in the foreign companies' recognition of ASEAN a production base with cheap labor. The cheap labor is mainly based on demographic dividend around the country. The dividend will expire within ten years except for the Philippines. Especially in Thailand and Vietnam, it will end within a couple of years. The

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company should switch from a labor-intensive production system into a high productivity system that does not use cheap labor. Third, the government prepares other promotion policy for foreign companies. In time, the demographic dividends in the five ASEAN countries will finish and their strong merit will expire. Instead, other factors such as stable political situation will contribute to their economic prosperity.

**Keywords:** demographic dividend / Japanese overseas subsidiaries / working generation / ASEAN

## INTRODUCTION

### Purpose and background

The purpose of this study is to investigate the relationship between demographic structure shift and foreign expansion of Japanese manufactures.

In contemporary Asian countries including ASEAN, Japan, Korea, Taiwan and mainland China, demographic issue is one of the toughest problem (Arai, 2009; Choi, 2009; Dummer & Cook, 2008; Eun, 2007; Gu, 2007; Lin, 2010; Takao, 2009; Yap, 1999). All countries have an aging society. Japan for one is faced with issues related to the aging population such as skill shortage (Utsunomiya, 2011). Sometime in the future, countries and companies in Asian will face a similar problem.

Traditionally, overpopulation is regarded as an obstacle to economic progress and a source of social conflicts (Amalric & Banuri, 1994; Andreas, 1994; Bernard & Thom, 1981; Keyfitz, 1992; Longman, 2004; Merrick, 1986; Patnaik, 1995; Valentine, 2010). From the 1990s', another aspect on population has emerged. The idea regards overpopulation as a dividend and it can contribute to economic progress in some situations. According to the theory, a country can benefit from overpopulation if the government has a good education and promotion policy with regard to population. Profits from a use of the population is called demographic dividend. Many economists focus on the demographic dividend as a source of economic progress (Bloom, Canning, Fink, & Finlay, 2007; Bloom, Canning, Fink, & Finlay, 2009; Brander & Dowrick, 1994; Lee Sang-Hyop & Mason, 2007). In management studies, however, few studies mentioned demographic situation. Looking at overseas subsidiaries located in ASEAN countries, their objectives of expansion are cheap labor and promising market (Japan Bank for International Cooperation, 2012). Demographic situation should be considered more carefully and thoroughly.

By following up on the Thai case, let us look back at the demographic issue in the ASEAN countries (Hewison, 1986).

From the 1930s, Thailand has been faced with the problem of overpopulation. Evidently overpopulation was a cause of the unstable and unsafe society and also served as a burden on economic prosperity. The Thai government wished to create new employment to absorb the overpopulation. In the 1960s', the government decided to implement two policies: promotion of direct

investment by foreign companies and establishment of more companies using Thai capital. To promote foreign companies' expansion, the Thai government implemented various promotion policy and established laws regarding their business activity in Thailand. For example, the Board of Investment (BOI), an affiliated agency of Ministry of Industry Thailand, plays an important role. It plans the promotion policies to entice foreign manufacturers to establish subsidiaries in Thailand especially in rural area, where are regarded as poor regions due to overpopulation. Thailand is separated into three zones depending on their distance from Bangkok. In zone 3, regarded as poor and rural region, foreign company can obtain relatively superior incentives such as tax reduction.

In addition, to use Thai indigenous capital provided by both conventional landlord and modern capitalist, the Thai government encouraged them to establish factories in rural areas. In this process, agro industry such as sugar processing came to make progress and become one of the contemporary export industries.

#### **Object and method**

The object of this study is Japanese overseas subsidiaries (JOS) in ASEAN 5 countries: Indonesia, Malaysia, Philippines, Thailand and Vietnam.

JOS occupy an important place in the countries. For example, as of 2013, 4,621 factories such as automobile assembly, electric instrument and food processing have located and are under operation in Thailand. Different from other countries such as United States, United Kingdom and Korea, the number of JOS and reasons of their expansion to the countries are clear and evident. We can confirm them relatively easier. JOS are good target to estimate the relation between demographic situation and overseas subsidiaries' behavior.

Demographic dividend appears when working generation rate is on the increase. Working generation rate stands for the proportion of the number of working generation, whose age is between 15 and 65, to aggregate population. It is one of the indicators representing the amount of eligible workforce. During the first half of the period, the economy goes well because working generations become consumers as well as workers. They are so young that they consume more than the elderly. Then, during the second half of the period, the economic boom becomes modest. The working generation switches their interest from consumption to saving, since in most emerging countries, social security system is poor. People have to save their income to protect their own lives by themselves.

In sum, to consider the relation between the rate of working generation and the number of foreign subsidiaries expansion, we can discuss and compare the extent how a country uses its population as human resource and the number of foreign companies' expansion into a country.

## Procedure

To know the working generation rate in each of the country and to estimate the period of demographic dividend, we collected population data by age on ASEAN 5 countries from the United Nations website (<http://esa.un.org/wpp/>). We can confirm the data from 1955 to 2100. The data for 2013 is an estimation derived using population prediction model.

To gather the number of Japanese overseas subsidiaries (JOS), we used “Kaigai Shinshutsu Kigyou Nenkan” (Yearbook of Japanese foreign expanding company, published by TOYO KEIZAI Publishing) from 1982 to 2012. Before 1982, we cannot do a comparison due to the unavailability of data. For Vietnam, data is available from 1996.

To compare the working population rate with the number of JOS, we scaled the data. According to the diffusion theory, to compare with data related to diffusion process, it should be scaled (Bloom et al., 2007; Bloom et al., 2009; Brander & Dowrick, 1994; Lee Sang-Hyop & Mason, 2007; Rogers, 1962).

To analyze time-series data with statistical method, especially to data showing unsteady process, we should apply other translation methods such as logarithmic transformation, Box-Cox transformation, square-plot transformation and differential transformation. In this paper, however, we applied standardization to the data. For one thing, in the prior researches above, standardization method are applied. For another reason, we would like to compare the data, the working population rate with the number of JOS. To compare and numbers with different units as dimensionless numbers, standardization method are usually applied. As a result of the standardization, we may not apply Pearson's correlation coefficient. Instead, we applied Spearman's rank correlation coefficient. This is a kind of so-called nonparametric method, which is not dependent on normality, and we can apply the data which does not satisfy the assumption of normality.

For ASEAN countries, expansion of foreign companies is regarded as a diffusion process. We can treat foreign expansion as a diffusion process of new resources, observed in various social phenomena such as technology transfer (Andersen, 1999; Davies, 1979; Devezas, 2005; Dewar & Dutton, 1986; Dhalman, Ross-Larson, & Westphal, 1987; Frank, 2004; Gopalakrishnan & Damanpour, 1997; Herbig & Palumbo, 1994; James, 1993; Kindleberger, 1995; Meyer & Rowan, 1977; Michalakelis, Varoutas, & Spicopoulos, 2008; Nakicenovic, 1986; Rothwell & Wissema, 1986; Russel, 1977; Sundqvist, Frank, & Puumalainen, 2005; Swan & Newell, 1995; Wejnert, 2002).

Combining the data, we plot the numbers and consider the characteristics of the relationship between the working population rate and the number of JOS by country. In addition, we estimated the gap in the two values to consider the difference in the extent of how the countries use their own human resource.

## Results

### Overview of demographic dividend and foreign expansion

First, let us confirm the current demographic situation in the ASEAN countries. Figure 1 shows the proportion of population by age class in each of the countries. In all the countries, the population will decrease and the proportion of aged citizens will increase. The current issue regarding population seems to be demographics transformation from overpopulation to aging.

Demographic dividend starts from similar years. Ending year, however differs depending on the country. It is estimated that Thailand will deplete its demographic dividend in 2015. In Vietnam, it will be depleted in 2014. On the other hand, Indonesia, Malaysia and Philippines face different situations. In these three countries, the demographic dividend will remain at least until the 2020s'. In the Philippines, it will remain until 2053. In sum, Thailand and Vietnam can use their demographic dividends within a shorter period than the rest of the countries.

Table 1 Starting year and ending year of demographic dividend by country

	Indonesia	Malaysia	Philippines	Thailand	Vietnam
Start	1971	1964	1964	1969	1967
End	2024	2020	2053	2015	2014

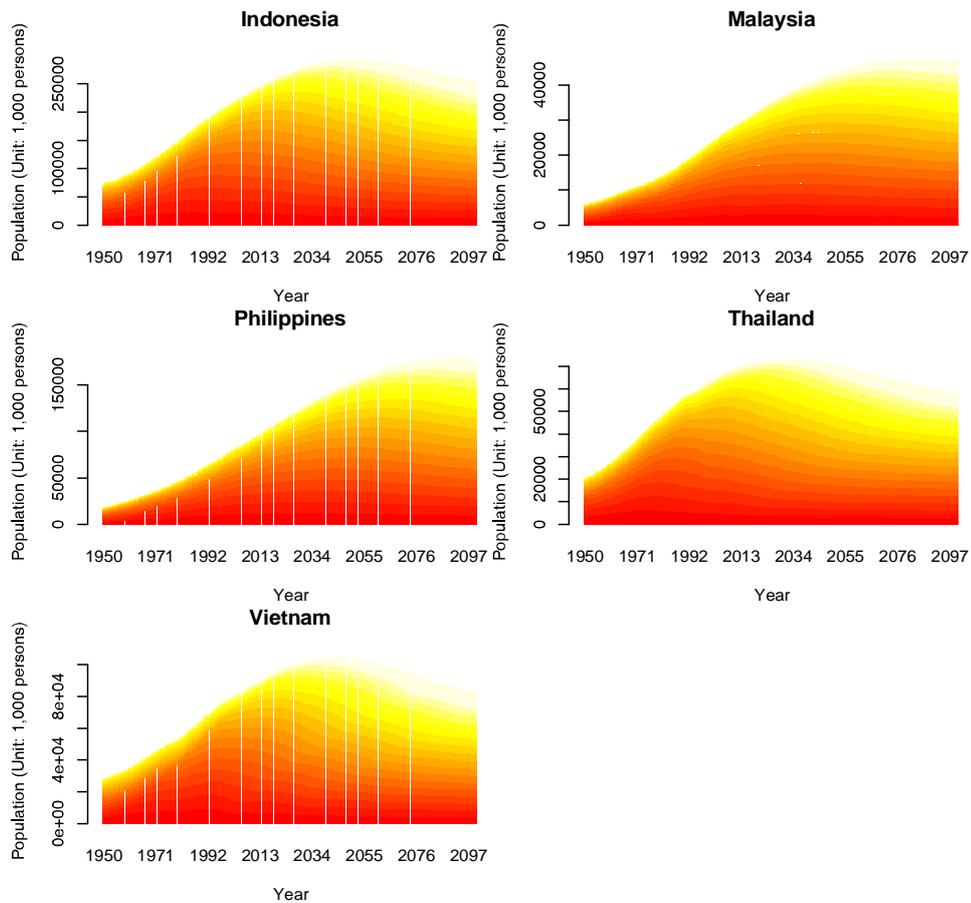


Figure 1 Demographic structure in target countries

It is the beginning of the 1990s' that the number of JOS in the ASEAN countries increased. In the 1980s', the number was relatively smaller. From the end of the 1980s', the number began to increase dramatically until the end of the 1990s'. Then, the number did not increase as before. Different from the governments' intention, JOS did not expand as soon as the promotion policy was implemented. Around the latter half of the 1980s' the Japanese economy was experiencing business boom, so-called "bubble economy". Wage level increased and many manufacturers tried to save on personnel cost. One of the solution was foreign expansion. In fact, interestingly, this trend is similar among the five countries except for Vietnam.

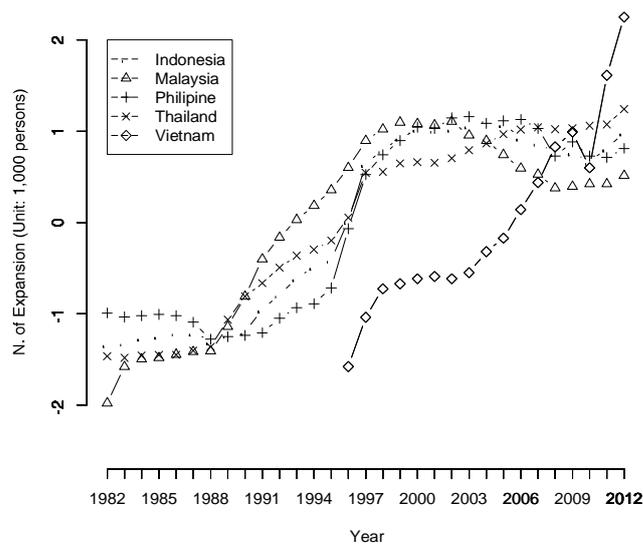


Figure 2 Annual number of JOS by country

*Working generation rate and the number of Japanese overseas subsidiaries*

Next, let us compare the two values by country. It is likely that there is a positive correlation between the working generation rate and the number of JOS (Figure 3, Table 2). In every country, at a glance, it is likely that there is strong and positive correlation between the working generation rate and the number of JOS. We, however, should consider deeper and more thoroughly.

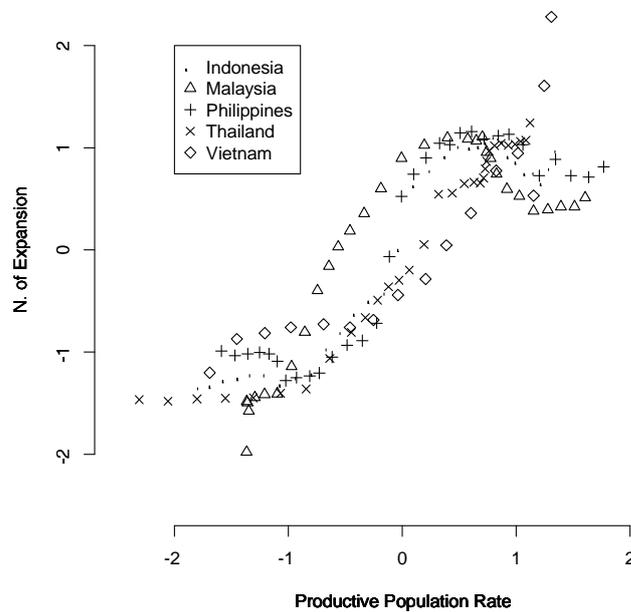


Figure 3 Correlation between the working generation rate and the number of JOS by country

**Table 2** Spearman's rank correlation between working generation rate and the number of JOS by country

	N	S statistics	Spearman's rho	p-value
Indonesia	31	810.7	0.84	4.58E-09
Malaysia	31	1429.3	0.71	7.10E-06
Philippines	31	1176.9	0.76	6.10E-07
Thailand	31	10	0.99	2.20E-16
Vietnam	16	9.5	0.99	2.70E-12

Relation between working generation rate and the number of JOS differs by country (Figure 4, Figure 5, Figure 6, Figure 7 and Figure 8).

In Indonesia, Malaysia and Philippines, a relationship between the number of the JOS and working generation rate shows a similar pattern. From the midst of the 1980s', the number of JOS has increased until the end of the 1990s'. Then, the number is more than working population rate. This means that JOS have faced lack of labor force in the countries during the period. From the beginning of the 2000s', however, the number of JOS has begun to decrease. Currently, in Indonesia, Malaysia and the Philippines, the number of the JOS is less than the working generation rate. This fact means that there is room to accept JOS in these countries from the viewpoint of demographics.

In Thailand, currently the number of JOS is almost the same as working population rate. In the beginning, the number of JOS is less than the working population rate. From the end of the 1980s', the gap has diminished dramatically even if the gap increased due to the Asian financial crisis. In the beginning of the 2000s' they came to be equivalent and the situation still remains.

This fact implies that the Japanese economic crisis might have enhanced the JOS expansion to Thailand after the economic bubble burst. They have expanded due to the economic crisis rather than the use of demographic dividend. To our surprise, currently JOSs are using Thai human resources almost fully. Even if they have expanded to Thailand for other reason such as saving on personnel cost, they might know the Thai demographic situation.

In Vietnam, from the beginning of the so-called Doi Moi policy, the number of JOS has been increasing. Currently, the number is over its working population rate. This means that Vietnamese workers might be short of demand.

In sum, regarding the current use of demographic dividend, by JOS there are difference by country. The trend, however, is similar among the countries.

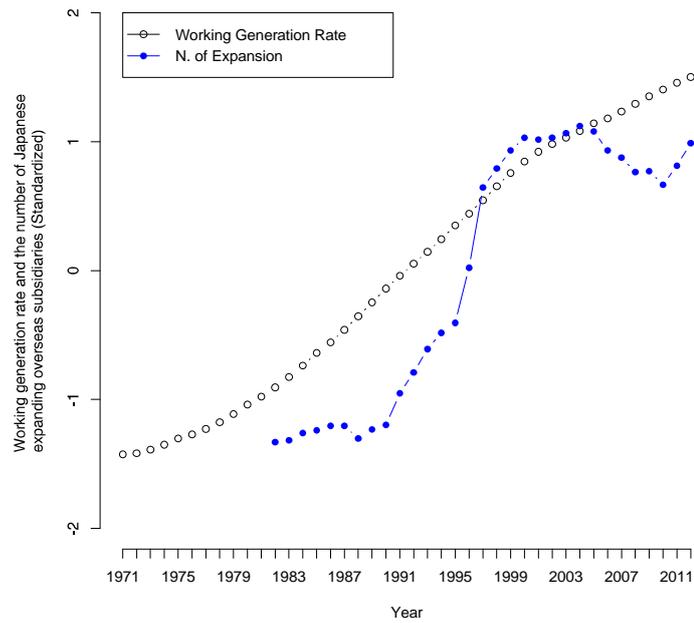


Figure 4 The working generation rate and the number of JOS in Indonesia

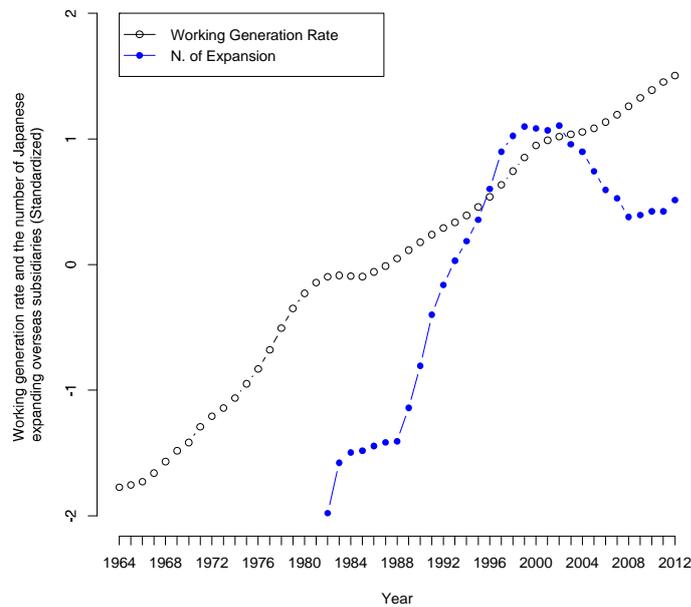


Figure 5 The working generation rate and the number of JOS in Malaysia

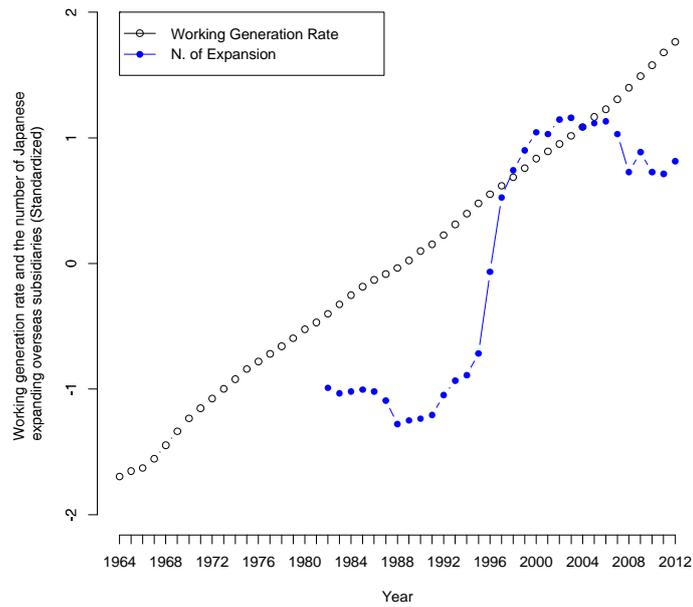


Figure 6 The working generation rate and the number of JOS in the Philippines

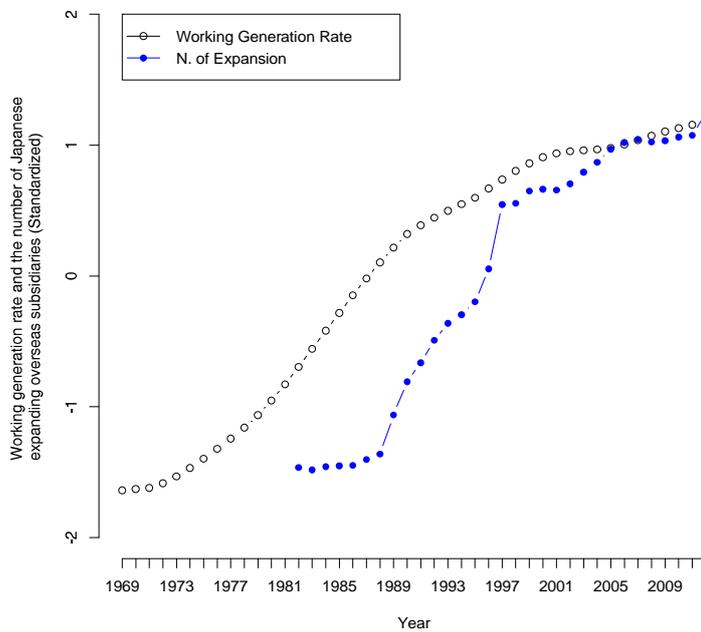


Figure 7 The working generation rate and the number of JOS in Thailand

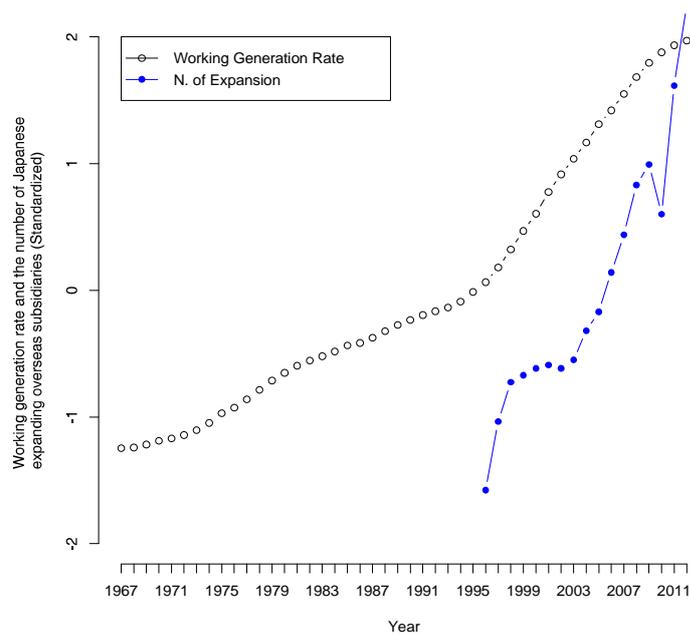


Figure 8 The working generation rate and the number of JOS in Vietnam

## Discussion

The purpose of this study is to investigate companies' foreign expansion from the viewpoint of demographic structure. Demographic structure is one of the key issues for economic development and foreign expansion. When a country invests in its human resource, its citizens and companies could use the resource as a key driver of economic prosperity. Otherwise, due to overpopulation, a country cannot accomplish economic progress. From a viewpoint of economics, many researchers have been applying the concept to understand economic progress in emerging countries. In business studies, however, few researches have not paid attention to the relation between the demographic structure and management practice. This paper considers the relation using working generation rate and the number of Japanese overseas subsidiaries in ASEAN 5 countries while referring to demographic dividend theory.

The results show that JOS in the five countries could use its demographic dividend in part. They could expand to the country when the dividend could be provided. It is likely, however, results of chance event. Originally JOS seemed to have established in the countries to save personnel cost rather than to use the dividend. Approximately 30 years have passed since the governments decided to solve the overpopulation issue by promoting foreign companies' expansion.

Moreover, in the beginning, the number of JOS was less than the working generation rate. Then, except for Thailand, the number became more than the rate. After that, the number came to be less than the rate. In Thailand, the number was almost the same as still remained.

## Conclusion

Regarding the relation between demographic structure shift and expansion by foreign companies, it is concluded that overseas subsidiaries could obtain the benefits of demographic dividend during the period. More importantly, sooner or later, the dividend will finish. Particularly in Thailand and Vietnam, it will end within a few years. In these countries, governments will not be able to depend on their demographic dividends any more for their economic prosperity. Companies will not be able to use the dividend as a source of cheap labor.

We would like to note that companies should not underestimate the effect of demographic shift. In Japan, their mother country, due to the shift, Japanese companies have faced skill shortage and difficulties to retain their skills and skilled workers. If they would underestimate the influence, they might face serious situations again. In addition, they cannot rely on ASEAN as a cheap-labor production base. They should seek to increase their labor productivity while using less workers.

ASEAN 5 governments should consider another policy to retain overseas subsidiaries. Originally, promotion policy for overseas subsidiaries has been implemented to use surplus populations in rural area. As cheap labor, many people came to foreign manufacturers' factory and worked for the companies. Many industries use the labor force as cheap labor. Currently, however, the population has been expired especially in Thailand and Vietnam. In that context, Thailand's experience may contribute to their policy in the future. Different from other countries, Thailand's promotion policy has remained since 1972. This stability must have contributed to promote direct investment in the country and its economic prosperity as well. Also, BOI are supposed to change its policy dramatically within a few years ([http://www.boi.go.th/upload/content/2013-01-16%20seminar%20news\\_FINAL\\_84913.pdf](http://www.boi.go.th/upload/content/2013-01-16%20seminar%20news_FINAL_84913.pdf)). There will be a shift in the objective of the new policy from economic development to enhancing modern and leading industry and sustainable development. We need to focus on the new policy and its outcome.

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## THE EVALUATION OF LEARNING ORGANIZATION OF SMALL AND MEDIUM SIZED ENTERPRISES IN THE UPPER NORTHERN PART OF THAILAND

Kemakorn Chaiprasit\* and Orapin Santidhirakul\*\*

### ABSTRACT

This research purposed on evaluating the learning state of small and medium sized organizations in the upper northern part of Thailand. The sample composed of 381 owners or managers of small and medium sized enterprises (SMEs) in the upper northern part of Thailand. The data collected questionnaires, which consisted of personal demographic information, amplified Dimensions of the Learning Organization Questionnaire (DLOQ), and problems & recommendations, have been developed and moderately modified from the prefabricated Dimensions of the Learning Organization Questionnaire (DLOQ) of Marsick and Watkins. The results showed that the perception of the owners, according to the findings, towards learning state of small and medium- sized organizations in the upper northern part of Thailand, based on learning organization theory by the DLOQ, had an average value 4.12 for all aspects. The results can be ranged from the highest to the lowest means as followed; promoting intra-collaboration and team learning, reinforcing continuous learning opportunities, encouraging inquiries and discussions, sustaining the interaction between organization and its environment, introducing an effective leadership model for enhancing the acquisition of knowledge, delegating individual empowerment that complied with the organization vision, and generating system in obtaining and interchanging learning knowledge.

**Keywords:** Evaluation of Learning Organization / SMEs / Upper Northern Part of Thailand

### INTRODUCTION

Since the economic crisis of 1997, the Thai government has tried to improve the situation, and one of the ways has been to support SMEs. In Thailand, industrial employment takes up 73% of the total employment and product values can be increased up to 47%. Therefore, buildig competitiveness for SMEs has always been an important task for government sectors (Sevilla & Soonthornthada, 2000). However, the small size and some limitations of SMEs are the main factors that prevent SMEs from competing with big businesses (Ha-brookshire, 2009). These competitiveness problems include access to technology and trainings (Prater & Ghosh, 2005) and being handicapped for innovation (Mosey, 2005; Laforet & Tann, 2006; Therrien & Chang, 2003). These problems derive from the lack of financial

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resource, knowledgeable personnel and new technology, which bar SMEs from possible business opportunities (Verhees & Meulenber, 2004).

Due to the above disadvantages of SMEs, the government has been helping them by giving financial support or finding funding sources for SMEs. Despite the government's help, SMEs still have organizational problems namely lack of management skills, planning, and continuing learning from the part of personnel (Freel, 2005; Nooteboom, 1994) as well as lack of expertise, while big organizations can hire experts (Freel, 2000). Therefore, increasing the potential of SMEs for competitiveness means adjusting personnel's behaviors and giving them trainings according to business situations. This process can start with recruiting qualified personnel, offering internal and external trainings and encouraging them to earn work experience. Educating personnel needs efficient human resource management, otherwise it will be a waste of time. One efficient way for personnel education is in the form of learning organization, an integration of learning and working (Braham, 1996) which makes learning easy and personnel can be pushed to their maximum potential.

At present, there are 39,158 SMEs in the northern part of Thailand (Office of SMEs Support, 2013). They face intense competition due to economic, political, social and technological changes. This results in organizations adjusting and improving themselves continuously. Human resource in the form of qualified personnel is a key factor for driving organizations to success (Basim, Sesen & Korkmazurek, 2007). There is a need to improve Thai SMEs with the concept of learning organization so that personnel in every position improve themselves through self-learning. With this, Thailand could become a society of knowledge sharing. There should also be leadership potential development to cope with administrative changes.

Due to the above situation, the researchers were inspired to study the evaluation of learning organization in SMEs in the northern part of Thailand so that the results of the research could be used in human resource management, learning format improvement, as well as used as strategy by the government to improve SMEs in the future.

## THEORETICAL FRAMEWORK

### Concept of Learning Organization

Senge (1990) defines learning organization as an organization in which every member can expand their ability continuously and reach their targeted goals. It is an organization which encourages innovations and expansion of new ideas in different directions. Each member is free to use his/her imagination and inspiration to reach continuous learning of the organization as a whole.

Pedler, Burgoyne & Boydell (1991) define learning organization as an organization which encourages learning and continuing adjustment for everyone in an atmosphere that stimulates cooperative learning.

Watkins & Marsick (1993) defines it as an organization that employs personnel to create excellence for the organization and at the same time uses the organization to create excellence for personnel by using learning as a continuous strategy, integrating learning with work to distribute power to personnel in the organization. It is an organization that supports cooperation and learning together to reach growth at individual, team, organizational, institutional, and community levels.

### Learning Organization Measurement Tools

Watkins & Marsick (as quoted in Jamali, Sidani, & Zouein ,2009) say that the 7 action imperatives of learning organization is the integration of the 3 fundamental perspectives namely boundary, depth, and accuracy. The DLOQ questionnaire is complete in information processing boundary, depth, and accuracy. Moreover, this questionnaire can measure accuracy and information in terms of boundary at team, organizational, and international levels as illustrated in Figure 1.

The aspects of the 7 action imperatives, which lead to the evaluation of learning organization or DLOQ (Marsick & Watkins, 2003 as quoted in Jamali, Sidani, & Zouein, 2009) are as follows:

1. Create continuous learning opportunities; Learning is designed into work so that people can learn on the job: opportunities are provided for ongoing education and growth.

2. Promoting inquiry and dialogue; People gain productive reasoning skills to express their views, and the capacity to listen and inquire into the views of others; the culture supports questioning, feedback and experimentation.

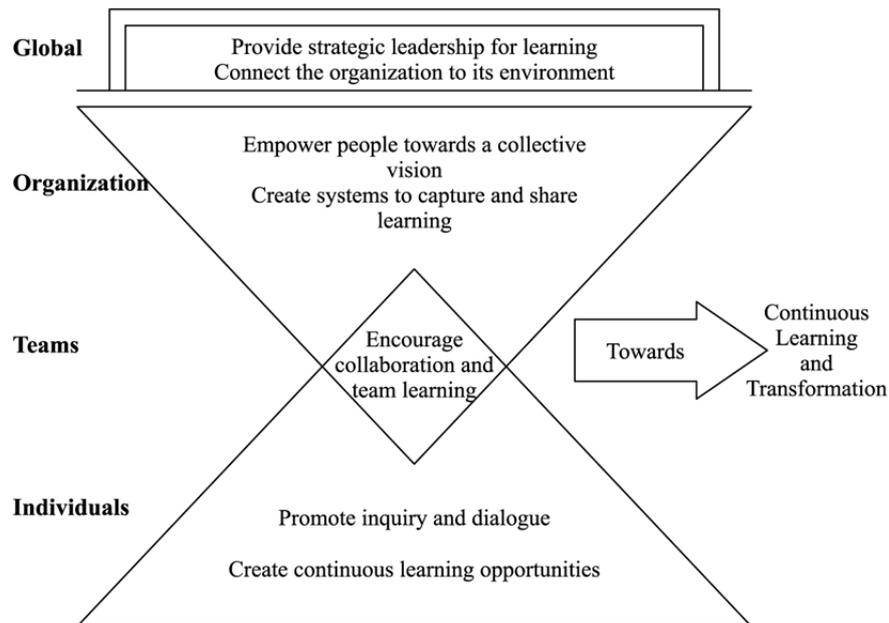
3. Encourage collaboration and team learning; Work is designed to use groups to access different modes of thinking; groups are expected to learn together and work together; collaboration is valued by the culture and rewarded.

4. Establish systems to capture and share learning; Both high and low technology systems to share learning are created and integrated with work; access is provided and systems are maintained.

5. Empower people towards a collective vision; People are involved in setting, owning and implementing a joint vision; responsibility is distributed close to decision making to motivate people to learn that for which they are accountable.

6. Connect the organization to its environment; People are helped to see the impact of their work on the entire enterprise; people scan environment and use information to adjust work practices; organization is linked to community.

7. Provide strategic leadership for learning; Leaders model, champion and support learning; leadership uses learning strategically for business results.



Source: Marsick and Watkins (1999, p. 11)

Figure 1: Learning organization action imperatives

## RESEARCH METHOD

From 39,158 SMEs with a confidence level of 95%, the sample composed of 381 owners or managers (Sekaran, 1992) of small and medium sized enterprises (SMEs) in the upper northern part of Thailand from 8 provinces which were Chiang Mai, Chiang Rai, Lampang, Lamphun, Payao, Prae, Nan, and Mae Hong Son by using quota sampling technique. The survey was conducted by face-to-face interviews. The data collected by questionnaires, which consisted of personal demographic information, amplified Dimensions of the Learning Organization Questionnaire (DLOQ), and problems & recommendations, have been developed and moderately modified from the prefabricated Dimensions of the Learning Organization Questionnaire (DLOQ) of Marsick and Watkins.

The seven dimensions of learning organization were continuous learning, and inquiry and dialogue at the individual level; collaboration and team learning at the group level; systems that capture and share learning and people empowerment at the organizational level; connecting the organization to its environment and strategic leadership for learning at the global level as illustrated in Table 1. A six-point Likert scale was used to rate the 43 statements of the questionnaire and the Cronbach's alpha reliability of 43 questions was 0.976.

**Table 1:** DLOQ Composition in this study

Section	Dimension	Items
Individual level	Continuous learning	7
	Inquiry and dialogue	6
Team or group level	Collaboration and team learning	6
Organizational level	Systems that capture and share learning	6
	People empowerment	6
Global level	Connecting the organizations to its environment	6
	Strategic leadership for learning	6

## RESULTS

Among the respondents who worked as owners or managers in SMEs in the upper northern part of Thailand, the demographic profile are as follows:

**Table 2:** Demographic profile of the respondents

Variable	n	%
<b>Gender (n=381)</b>		
Male	199	52.2
Female	182	47.8
<b>Age (n=381)</b>		
Under 20	5	1.3
21 - 30	91	23.9
31 - 40	144	37.8
41 - 50	108	28.3
51 - 60	29	7.6
More than 60	4	1.1
<b>Education (n=381)</b>		
Less than bachelor	81	21.2
Completed bachelor	233	61.2

Above bachelor	67	17.6
<b>Position (n=381)</b>		
Owner	267	70.1
Variable	n	%
Manager	114	29.9
<b>Age of work (year) (n=381)</b>		
Less than 1	26	6.8
1 – 5	127	33.3
6 - 10	109	28.6
More than 10	119	31.3

**Table 3:** Demographic profile of the organizations

Variable	n	%
<b>Form of business (n=381)</b>		
One-owner	201	52.7
Partnership	11	2.9
Partnership Ltd.	54	14.2
Company Ltd.	115	30.2
<b>Sector (n=381)</b>		
Production	195	51.2
Service	114	29.9
Commercial	72	18.9
<b>Years of operation (year) (n=381)</b>		
1-5	142	37.3
6-10	129	33.8
11-15	53	13.9
16-20	35	9.2

More than 20	22	5.8
<b>Number of Employees (n=381)</b>		
1-10	189	49.6
11-20	83	21.8
21-30	30	7.9
Variable	n	%
31-40	12	3.2
41-50	15	3.9
More than 50	52	13.6
<b>Sales per month: Baht (n=381)</b>		
Less than 50,000	65	17.1
50,001-100,000	86	22.6
100,001-200,000	56	14.7
200,001-300,000	48	12.6
More than 300,000	126	33.0
<b>Received welfare</b>		
Medical	147	38.6
Children's school tuition fee	12	3.1
Transportation	127	33.3
Bonus	190	49.9
Social security	281	73.8
Provident fund	21	5.5
Overtime	263	69.0
Overtime in holiday	182	47.8
Yearly party	198	52.0
Uniform	143	37.5
Food	82	21.5

Table 4: Perceptions towards dimensions of learning organization

Level	Dimensions of learning organization	Mean	
		Dimension	Level
Individual level	Create continuous learning opportunities	4.18	4.16
	Promote inquiry and dialogue	4.15	
Teams or group level	Encourage collaboration and team learning	4.26	4.26
Organization level	Create systems to capture and share learning	3.96	4.00
	Empower people towards a collective vision	4.03	
Global level	Connect the organization to its environment	4.15	4.14
	Provide strategic leadership for learning	4.12	
<b>Total mean</b>		<b>4.12</b>	

The seven dimensions of the DLOQ were measured with 43 questions items on a 6 scale (1= Almost never, 6 = Almost always).

The results can be ranged from the highest to the lowest means as followed; promoting intra-collaboration and team learning (4.26), reinforcing continuous learning opportunities (4.18), encouraging inquiries and discussions (4.15), sustaining the interaction between organization and its environment (4.15), introducing an effective leadership model for enhancing the acquisition of knowledge (4.12), delegating individual empowerment that complied with the organization vision (4.03), and generating system in obtaining and interchanging learning knowledge (3.96)

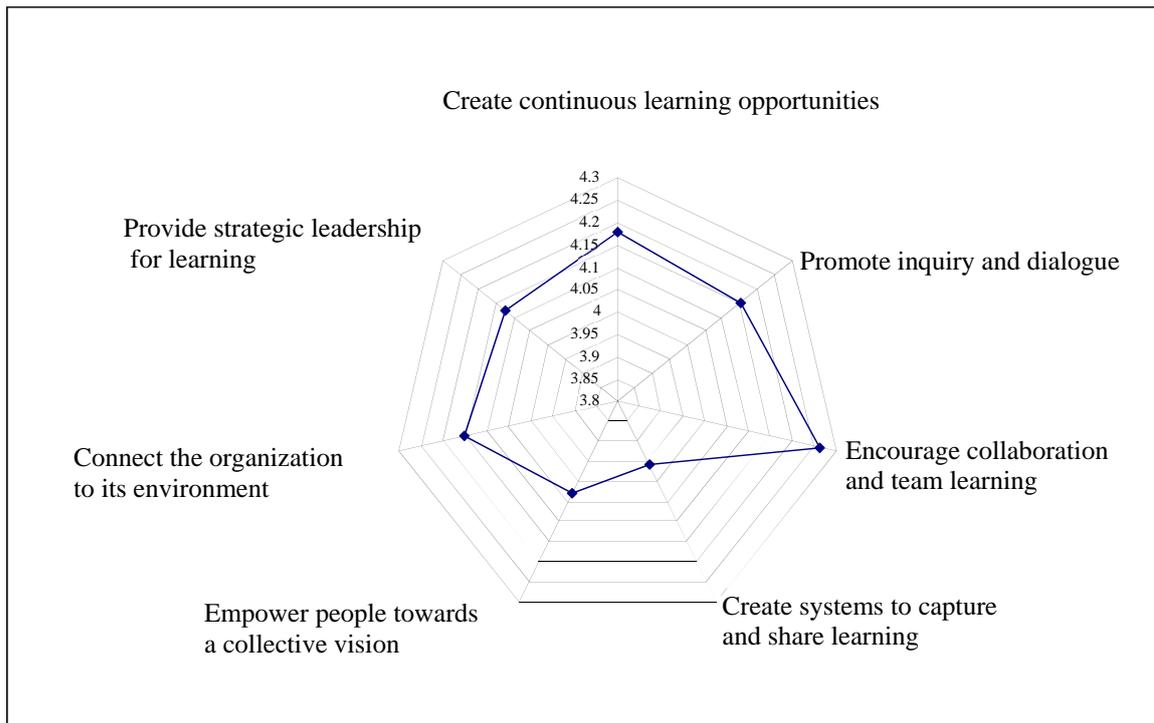


Figure 2: Perceptions towards dimensions of learning organization

## CONCLUSIONS AND RESEARCH IMPLICATIONS

From this research on the evaluation of learning organization of SMEs in the northern part of Thailand, the suggestions for SME entrepreneurs are as follows:

1. **Establishing learning perception and learning exchange:** As this aspect is the least perceived about learning organization, management should establish ability measurement system of each SME in order to compare their past ability and desired ability for the future, especially certifying personnel with innovative abilities for the organization. The communication should be 2-ways, to offer opportunities and different channels for personnel to express their opinions about organizational management. Management should evaluate time and resources used to support personnel in every stage of their career in the form of external trainings, and should create trust between supervisors and subordinates.

2. **Distributing authority to individuals according to organization's vision:** Management should allow personnel to choose the kind of work according to their interest and expertise because the questionnaire respondents have little perception in this issue. Management of SMEs has done a good job in giving personnel opportunities to express their opinions towards the organization's vision, so this should continue. Management should accept creative thinking by personnel, should give opportunity for every employee to take part in organizational vision, should give personnel from every level to take part in

planning strategies, organizational vision, and decision making. This kind of participation will lead to learning culture, which in turn helps organization quickly become learning organization.

**3. Offering model leadership to support learning:** Encouragement should be made for leaders to regularly communicate with employees about the latest information about organization, especially information about competitors, industry trends, and organization's management direction. Results from the questionnaire show that supervisors are determined to create continuing improvement for organization and for constant learning, and that they create trust; these should continue. Management should encourage supervisors to improve themselves and to learn new things on a regular basis, and to establish trust in their boss.

**4. Encouraging personnel to ask questions and engage in conversation:** Learning others' opinions benefits one self. Employees should be encouraged to ask questions and communicate with others to share opinions and knowledge, which will help improve one's potential at work. Management should encourage personnel to be sincere and honest in talking about co-workers' mistakes, to listen to co-workers' opinions, to ask questions on work-related issues, and to express their opinions without being conscious about their position. Employees should treat their co-workers with respect. They can be engaged in small group discussion, so that they feel free to discuss their opinions openly about work operation and mistakes. This will help with future operation.

**5. Linking organization to its environment:** Management should encourage personnel to be service-minded and adhere to the customers' needs. They should also make personnel be aware of organization's goals and vision, instill new and global concepts in the form of seminars and trainings, and publicize new image of SMEs, as well as introducing learning channels from external media.

**6. Creating continuing learning opportunities:** Management should seriously encourage personnel to learn new things in their spare time, provide opportunity for personnel to discuss work-related problems by showing them that problems present opportunities for them to learn from mistakes and to learn to help each other in solving those problems.

**7. Encouraging cooperation and team learning:** Management should reward teamwork by giving a prize to groups that reach their goals. They should give freedom for personnel to adjust or change work goals when necessary and encourage them to treat their co-workers equally. In a working group, personnel should be encouraged to share opinions regardless of their positions. Management should make personnel realized the importance of teamwork, how to allocate work among members of the team, and how the team as a whole can achieve their goals.

The learning organization is a concept that is growing in popularity and use. Additional studies in large sized enterprises should be applied in the future study.

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## SME'S INTERNATIONALIZATION AS A BALANCING ACT BETWEEN RATIONALITY, EMOTION, AND INTUITION

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### ABSTRACT

Nowadays, small and medium-sized enterprises (SMEs) are more and more a growing force in business across borders. Going international (or not) becomes the question which belongs to the daily business decision-making of most SMEs. Compared to large corporations, however, SMEs often lack the resources and the organizational routines and capabilities to collect, produce or evaluate the amount of information required for the internationalization decision, which would help to make their decisions easier.

With their research in the last few decades, neuroscientists, psychologists, and system theorists have come to agree that people cannot make decisions on an exclusively rational basis. They could not and would not do so in leadership situations either. These research revealed that non-rational elements, also the subjective elements of the entrepreneur (the individual person), in which intuition and emotion, besides rational or logical criteria, also play an important role on managerial decisions.

This paper examines closely the role and function of such non-rational and emotional factors in the special case of the internationalization decisions of SMEs. The focus of this paper is to introduce the Emotion-Based Decision Model (EBD-Model) developed by the authors to reflect the specific circumstances faced by decision-makers at SMEs. Furthermore, this model is also introduced to offer these decision-makers another practical and meaningful reflection on issues of internationalization that the limitations of SME do not necessarily lead to restrictions during their internationalization decision-making process and how could SME's internationalization decision-making be a balancing act between rationality, emotion, and intuition.

**Keywords:** Internationalization / small and medium-sized enterprises (SMEs) / decision-making / emotion / intuition / non-rational

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## INTRODUCTION

Business across borders has become the norm for more and more small and medium-sized enterprises (SMEs), especially since the 1980s (Larimo, 2003; Bamberger/Evers, 1997). The still advancing globalization and modern information and communication technology, but also modern forms of transport and production, as well as the reduction of trade barriers and the new opening of formerly protected markets and market niches have created many new and promising prospects for SMEs in international business (Bamberger/Wrona, 1997). The results of Glückler (2006) and Crick/Spences' (2005) empirical research show that the processes of internationalization of SMEs often follow different patterns than those at large companies. Whether, when, and how to internationalize, are among the most crucial questions for decision-makers of SMEs, who intend to go beyond their native borders, to benefit from expanding their business in international markets and thereby safeguard their future growth in a constantly and rapidly changing world.

According to Kahle (1997), a decision is a choice between alternatives, which is made by one or more decision-makers. This act of choosing has a procedural character and can generally be understood as a "process of sourcing and processing information" (Bamberger/Evers, 1997). In comparison to large corporations, SMEs often lack the resources to collect or produce the amount of information (about cultural traits, markets, locations, brokers etc.) required for the internationalization decision. In addition, SMEs also lack the organizational routines and capabilities to evaluate the information systematically, which would help to make their decisions easier. These limitations in turn come to restrict the strategic freedom of SMEs in their internationalization process.

There is a large body of literature that deals with the theoretical basics of such managerial decisions, placing particular emphasis on their rational side, which is grounded in objective criteria and analysis (Pfohl/Braun, 1981; Kirsch, 1988; Bamberg/Coenenberg, 1992; Kahle, 1997). Furthermore, Kirsch (1988) has revealed how decision-makers rely on what he calls subjective reality, in which intuition and emotion, besides rational or logical criteria, also play an important role. Most past research has considered the influence of such non-rational elements on managerial decisions as a negative or even destructive/dysfunctional force (Nippa, 2001). The role of emotions when such decisions are made is a significant new finding in the research of neuroeconomics (Busse, 2012). Neurologists are of the opinion that intuition is the force hiding behind what are commonly called 'gut feeling' decisions. In the last few decades, neuroscientists, psychologists, and system theorists have come to agree that people cannot make decisions on an exclusively rational basis. They could not and would not do so in leadership situations either. Emotion, experience, and intuition often play a crucial role in decision-making (Schmidt,

2009). Ullrich (2011) and Wilz (2010) argue both that the subjective elements of the entrepreneur (the individual person), including gut feeling, emotion, and intuition, are the relevant factors for the decision.

The aim of this paper is to examine more closely the role and function of such emotional factors in the special case of the internationalization decisions of SMEs. The focus of this article is to introduce the Emotion-Based Decision Model (EBD model) developed by the authors to reflect the specific circumstances faced by decision-makers at SMEs. Furthermore, this model is also introduced to offer these decision-makers another practical and meaningful reflection on issues of internationalization. The first part of the paper is about the logic behind such SME-oriented internationalization decisions, whereas the EBD model will be presented and discussed in more detail in the second part of this paper.

#### State of SME internationalization research

Economists have long dealt with businesses operating internationally. Most common theories explain internationalization as a rational decision-making process of enterprises, treated in purely mechanical terms as "analytically independent from its institutional and relational context" (Glückler 2006, 372). The "atomism in conventional theories of internationalization" called by Glückler (2006, 371) is "biased towards internal resources, strategies and competences. The internationalization process of a firm is not analysed with respect to the specific context in which a firm chooses to internationalize." (Glückler 2006, 372). Going against this mainstream, Glückler (2006) states that the international expansion of companies is a highly context-specific/sensitive, conditional and coincidental process, which follows neither certain stages nor rules for cultural distance decay. Furthermore, he also stresses the importance of the context of a firm's internationalization, "defined as the environment of a firm's relationships" (Glückler 2006, 388).

While formerly common theories tend to see the internationalization of companies as rationally and strategically planned process, newer theories declare that "The international expansion of SMEs often follows a different pattern than that described in traditional studies ... SMEs' internationalization strategies often are of a more unplanned and contingent nature" (Carlsson/Dale, 2011, 191, 199). Carlsson and Dale (2011) argue that the internationalization process of SME is not driven by rational motives or clearly planned phases, but rather arises from coincidence and by chances and opportunities. Internationalization decisions are influenced more by serendipity, that is, the ability to make unexpectedly positive and happy discoveries and decisions by chance. In other words, "recognising 'chance' opportunities and being ready to take advantage of them is known as serendipity." (Crick/Spence 2005, 171). The 'right' decision in this sense might simply need the right person to be at the right place and the right time. Regarding decision-making processes from this perspective, it is more essential for companies to act "proactively" by being prepared for recognizing and responding accordingly to any potential "windows of opportunity" (Carlsson/Dale 2011, 194, 199). For the internationalization process, this means

that SMEs do not necessarily have to be rationally oriented or follow a systematic, linear pattern or scheme – an insight that will come as a relief for practitioners. Rodrigues (2007, 305) is of the same opinion: “SMEs do not necessarily follow a pattern of incremental internationalization as they have a wide range of options and many are opportunistic”. Another study by Chapman et al. (2004) has also revealed that internationalization is not necessarily the result of a rational expansion strategy, but rather a reaction to problems in the domestic market. It is, in this sense, more of a reactive action. They found out that the internationalization of enterprises is primarily a response to an actual or expected downturn in their current markets, rather than being a proactive strategic choice.

SMEs usually tend to prefer short-term operational choices to strategic decisions, with their decision-making process being characterized by a low degree of formalization (Bamberger/Evers, 1997). This is due to the probably most essential quality of decision-making behaviour in SMEs, namely its personality-bound nature (Bussiek, 1994). The unity of management and ownership, especially in family enterprises, which is still the case for the great majority of SMEs, has the effect that the number of decision-makers is usually very limited, frequently even limited to one single person (Thelen, 1993). Decisions in this environment call for creativity, extensive knowledge and experience, and, not least, the intuition of the decision-maker and are influenced by situational forces. Such decisions can, for instance, be influenced by the risk attitude, decisiveness, or personal persuasiveness of the decision maker (Hodicová, 2008).

Many researchers have studied the factors influencing internationalization decisions at SMEs. Their findings about these factors can be divided into two basic categories: The company's external and internal factors. These factors are the object of the researchers' attention, which applies in particular to factors concerning the enterprise, like financial or human resources. Factors concerning the entrepreneur, i.e. the individual person, are also addressed, but most often in terms of objective traits like age, education, qualifications, international experience, foreign language skills, and so on. It is very rare to find a more detailed look at the personal attitudes of the managers of SME (Olson/Wiedersheim-Paul, 1978; Thelen, 1993; Bamberger/Evers, 1997; Setzer, 2001). In this respect, it should be noted in particular that the smaller workforces and more limited resources with which SMEs are typically equipped, increase the importance of their leaders/managers' perceptions in decision-making. This minimizes the impact of the organizational system at the same time (Coviello/McAuley, 1999; Lu/Beamish 2001; Eriksson et al. 1997). The subjective influences of leaders/managers on decision-making processes are particularly highlighted in SMEs where the entrepreneur's personality plays a central role (Dichtl et al., 1983; McGaughey/Welch/Welch, 1997). This is the aspect that we want to stress in more detail in the context of SME internationalization.

The role of the person as the decision-maker in the company as an important factor influencing the internationalization decision was already put forward as a point for inquiry by Aharoni's behaviourist theory in the 1960 (Aharoni, 1966). However, there is a lack in the literature on the representation of the person as the decision-making premise, as the key in the 'pre-decision phase' in the context of internationalization decisions that take place before classic (ex post) rational decision models are applied (Hodicovà, 2008; Luhmann 2011). Referring to the rational decision for internationalization, Patterson's (2004) empirical study indicates that the perceptions of the benefits of internationalization are the most powerful key driver of decisions of companies to export/internationalize. Those decision-makers focus strongly on the positive benefits rather than the negative side of costs and risks of internationalization<sup>1</sup>. Carlsson and Dale (2011, 199) argue that social relations / networks are an important theoretical framework for the study of SMEs' internationalization processes. Their study gave rise to the term "preactivity" to contrast with common terms like "reactive" and "proactive" to define and emphasize the capabilities and competences of companies that allow them to recognize, seize and make use of the (unexpected) opportunities that arise in their network. Kühlmann (2005) and Knop (2007) also consider networks to be important success factors for SMEs and valuable assets for internationalization decisions. The study by Aspelund and Butsko (2010, 273) shows that "the selection of host country for offshore production seems to be the result of influence from external parties and business partners, rather than resulting from a systematic objective evaluation process". In one analysed case, the decision for the choice of destination was made quite by accident. According to Aspelund and Butsko (2010) this phenomenon is not surprising and is due to the mentioned limitations of knowledge about foreign markets and the lack of organizational routines to evaluate such information. Moreover, the principle of bounded rationality comes into play here.

Smaller companies usually have much less tangible assets and financial or human resources than multinational corporations, which help them promote their internationalization. Due to the limited resources at their disposal, SMEs mostly use their knowledge of and relationships with independent international brokers. Relatively little is known about how SMEs compensate for the limited tangible resources with their intangible resources to achieve international success. Social capital or "relational assets are a type of intangible asset that contribute to company performance" (Kuhlmeier/Knight 2010, 18), in this case for the internationalization of the company. Kuhlmeier and Knight (2010) have explored

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<sup>1</sup> It is also the question here, how does the perception of the positive effects of internationalization re-present the ex anti-rationalization, which runs along the same lines as ex post rationalization does. In both cases, it would depend on the individual person of the decision maker, for which "rationalization strategy" he would decide. If the benefits of internationalization are decided to put to the forefront and to be treated in the decision-making process almost ontologically, then it is likely to be an associated contribution made to reduce the uncertainty in a first step.

the quality of relationships maintained by SMEs during their internationalization. Their findings underline the importance of four dimensions of relationship quality: Communication, cooperation, trust, and engagement. For them, it is a much more promising choice to invest in building up an experience-based trust than to follow set rules: Trust guides how we process social information and thus reduces the perceived complexity of actions (Luhmann, 2000). When certain points of reference (such as competences gained from experience) are identified and relied upon, one can mentally exclude possible negative implications and get more positive options in the decision-making context. The empirical studies carried out to date agree that business relations are hardly impossible without a basis of trust, because every action is connected to certain upfront actions and expectations about cooperation, mutual goodwill, and competence (Müller 2009). Last but not least, it is characteristic of decisions made in SMEs, that they are influenced by so-called external trusted parties, including in particular the family and friends of the decision-maker (Bussiek, 1994; Hamer, 1988). These mentioned elements provide us, as we will further show in this paper, the basic elements for our Emotion-Based Decision model.

We can state in summary that the named and relevant literature on this subject has tended to see the subjective-personal factors of the SME entrepreneurs and the social factors affecting SMEs and their internationalization decisions more or less in isolation. We intend to close this gap by presenting an integrated model in which all these factors are to be found integrated with each other. The model will be empirically first validated in future by applying to Swiss SMEs.

#### **The decision logic**

Not only large companies, but also small and medium-sized companies in Switzerland are faced with the globalization. While large companies have usually already established themselves on the international scene, many SMEs are still undecided about the question, whether and, if so, how they should internationalize. The strategies and decisions taken by the large companies, who have enough resources and structures that SMEs lack, offer only little in the way of guidance for SMEs. SMEs are often confronted with the scarcity of resources and functional specialists (e.g., marketing, international business, international finance, etc.) in their attempts at taking their business abroad. This does not have to be an automatic disadvantage, as our paper will show. What is relevant for SMEs is that they become aware of their special nature and position, and make their internationalization decisions with that basis in mind. The following part will take a closer look at the logics behind such SME-oriented internationalization decisions.

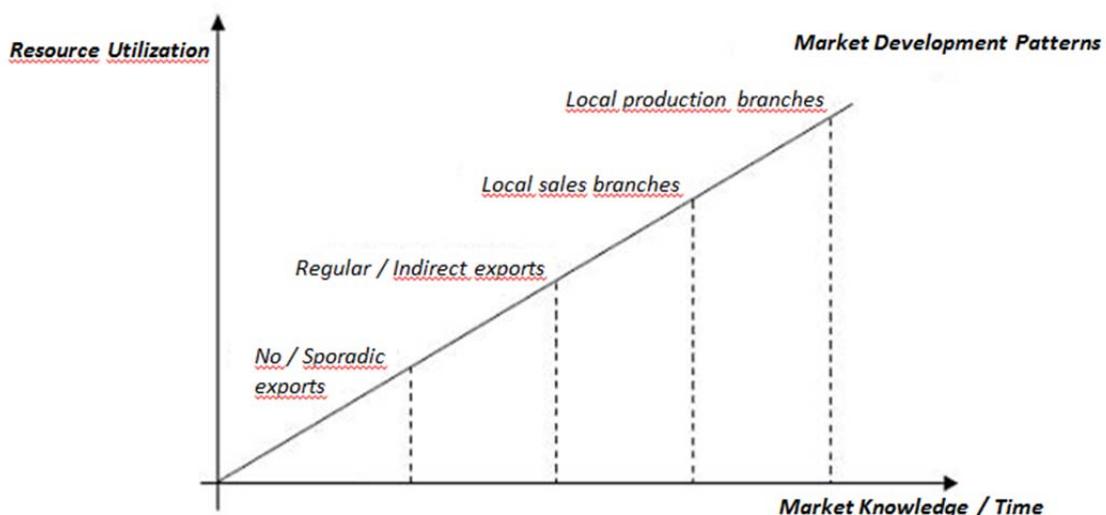
#### **Characteristics of rationality-based internationalization of large companies**

Decisions within large companies are much less tied to individuals, as is the case at SMEs. Decisions in large companies are never distinct, separate single 'events', but are made by an established

decision-making apparatus, to which several people and departments can contribute. In addition, these decisions are always based on those that have already been made in the past, and they are made in an organizational sphere or network that already includes internationalized companies (competitors, suppliers, clients etc.): They can be an example or precedent of which decisions are sensible, that is, rational, and which are not (DiMaggio, 1986). Entire departments prepare internationalization decisions on the basis of rational market analysis and decision-making models, with distinct criteria to guide them. In ideal scenarios, this all takes place under a clearly defined strategic goal associated with other goals used for reliable planning. Part of this strategy is that large companies internationalize different units of their value chain in parallel different ways. Put simply, production happens in low-cost countries, sales in high-income regions, while research and development are carried out in countries with a suitable supply of qualified human capital. In contrast, it means for SMEs to decide, according to their experience and resources, whether to even take a first step and go abroad to establish a presence in a foreign country. Studies have shown that the following reasons and occasions make large companies decide in favour of internationalization (Aspellung & Butsko, 2008):

- The opportunity to use cost advantages while minimizing transaction costs;
- The pursuit of growth opportunities in new markets when/because no or too little growth has been achieved or can be expected in the domestic market;
- The opportunity to strengthen the company's competitiveness and innovative capabilities through access to new knowledge/ knowhow abroad.

The internationalization of larger companies often proceeds step by step in accordance with the Uppsala model (cf. ill. 1). This helps minimize the risks over time (Holtbrügge, 2005). These companies thus learn to internationalize in a somewhat homeopathic way.



### Illustration 1: The Uppsala Model

#### Characteristics of emotion-based internationalization of SMEs

For SMEs, reducing costs or tapping into new markets are similarly common reasons at the start of any internationalization campaign. Despite this clear sense of purpose, SMEs remain cautious in their internationalization is mostly due to the fact that SMEs lack, or simply do not possess material or human resources or have only too limited management capacities and competences when compared to large companies (Schreier & Frik, 2012). In many cases, both the workforce and the managers or owners of such companies lack experience or knowhow concerning the strategic development of their international business. They frequently simply do not have the means or capabilities like large companies to analyse markets, regions, market-entry options, or potential and risks. Insufficient internationalization competencies are therefore named as one of the most common causes for SMEs delaying or failing their internationalization decisions (Volery & Jakl, 2006).

This ultimately means that SMEs tend not to follow the classical, rationally sensible internationalization path taken by large companies outlined above, but rather a so-called 'hit and run process', characterized by coincidences, opportunism, emotion, gut feeling, and the intuition and experience of like-minded and known "SME colleagues". These ingredients come together to form in our opinion the internationalization process of SMEs, which should be taken seriously, recognized and realized.

One would be mistaken to assume that such an approach will lead to poorer results or even outright failure because of its neglect of the classically rational process. On the contrary: Decisions made on gut feeling are often superior to those that follow rational calculation (Aspelund & Butsko, 2008). This can be seen in the case of the so-called 'Born Globals', that is, SMEs who are driven by the international vision of their founder from the start and indeed turn out to be global successes.<sup>2</sup>

At the same time, internationalization decisions relying only on intuition and visionary drive can also be problematic. Without rational basis, which can also be applied ex post, success or failures are pure coincidence. Such coincidental results reduce the chances for people to learn from experience or to draw conclusions to guide them in the future. In addition, wrong decisions can, in the case of SMEs, also quickly turn out to be life-threatening disasters. To avoid that, we need to make sure that the advantages

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<sup>2</sup> One eminent example is Toradex AG, founded in 2003, the recipient of the 2010 Innovation Award of the Trade and Industry Association of Central Switzerland.

of the rather personality-based, emotional handle on internationalization decisions of SMEs are used systematically to make benefit, to offset their natural disadvantages compared to large companies. It is important for SMEs to develop their own rationality, which ensures a healthy balance between classical rationality and gut feeling.

#### **Rational versus gut-feeling internationalization decisions**

It is essential to recognize that even rational decisions are not totally detached from all emotions. Neuroscience has revealed that emotion and intuition are what gives decisions meaning. Intuition or at least experience – with its unique emotional charge and value judgments –comes into play latest when the different rational criteria are weighed up against each other (Neubarth, 2011).

Many rational strategies are built to minimize the risks arising from internationalization decisions as far as possible. At larger companies in particular, many managers will pursue guilt-avoidance strategies first and foremost: They always keep in mind that they will be held to account for their (internationalization) decisions, even in the very near future. This makes it likely that many seemingly rational strategies are only used to give actually intuitive (pre-) decisions a later rational, exculpatory hue. There is nothing to be said against this, but it is a relevant fact that should be understood, reflected and learned from.

Their characteristic limitations of resources mean that SMEs often have no other choice but to trust and follow the emotions and intuition of their leaders/managers with trust and self-confidence. The crucial problem is that the conscious openness about such intuitive and emotional decision-making process in enterprises is usually very limited. But if, as we try to show here, SMEs cannot go without emotions and intuition, and then the question has to be how they can handle these emotions and intuitions actively, synergetically and rationally in their decisions about internationalization.

#### **The entrepreneur's emotion and intuition as the basis for internationalization decisions**

If we analyze the root of the word "emotion", it is from the Latin "movere" (english for "move"), added the prefix "e" means the word "move toward". So emotions don't just move us, but move us toward something: emotions are impulses to act and to decide (Goleman, 1997, 22ff.).

As a leading neuroscientist, Antonio Damasio pointed out that<sup>3</sup> "every decision needs an emotional impetus, people cannot behave or act only out of pure rationality" (Neubarth 2011, 59). Neurobiological knowledge indicates that it is a mistake to believe that decisions would be controlled only by pure reason. Recent Neurobiology clearly shows that those areas of the brain are active during decision-making, which represent emotional evaluations. What has been proven thousands of years as a success strategy, that can be also now applied to complex decision-making processes. The magic

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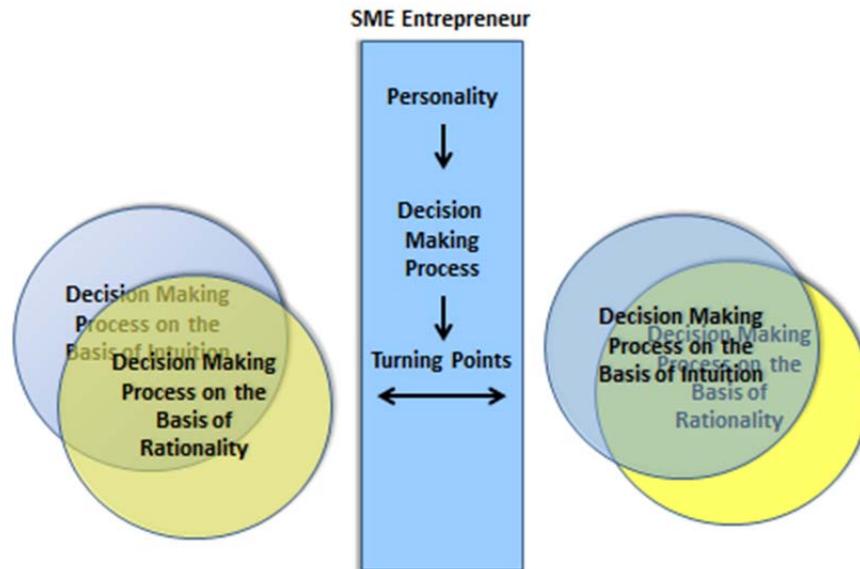
<sup>3</sup> Originally in his book published in 1994 *Descartes' Error: Emotion, Reason and the Human Brain*

formula is the power of intuitive wisdom, which is unfortunately seldom used. But this mastery is not a gift of god, but from over the years generated knowledge and emotional-based experience. To remain able to act at all, we need access to our intuitive experience knowledge. It makes sense to take complexity out of decision situations in an appropriate way. Psychological and neurological findings clearly show that intuitive decisions are not only more economical and faster, but also better. Intuition or the so-called gut feeling could be understood as a kind of judgment, which appears in consciousness very quickly – with neither the clear causal reasoning nor promises a good action alternative. Our brain needs some kind of “reference projects” to get good decisions, in this respect, our intuition could be seen as “self-organized intelligence” (Neubarth 2011, 62; Schmidt, 2009).

When one recognizes that SMEs have fewer resources available and a lack of specialist know how than large companies and accepts that certain leadership skills are required to take the right entrepreneurial decisions, the conclusion has to be that the lack of traditional tangible assets can be outweighed only by intangible resources (Mejri & Umemoto, 2010). Seeing the entrepreneur's emotions and intuitions as intangible assets that can lead to successful decisions, an interesting perspective opens up: The decisions of large companies are based on rational, analysable, and seemingly comprehensible arguments. They are not, as discussed, free from all underlying emotions of the people who were involved, contributed to or eventually take the decisions. The routines of rationality are highlighted with meaning by emotions working in the background (cf. ill. 2; left side of the model). In other words: Despite all rational arguments in the context of internationalization processes, the decisions – even those of large companies – are not detached from the emotions of the decision makers.

SME managers and entrepreneurs rely now more on their emotion and intuition based on the arguments above (e.g. resource situation). As sole decision-makers with enough creative freedom, they can allow themselves to trust in their own emotions and intuition. If they are successful, they can legitimize their decisions later with the accuracy of their gut feeling.

The rational and explicit use of emotions and intuition as a basis for taking decisions and thus reducing uncertainty is the ‘ultima ratio’ for SMEs in particular (cf. ill. 2, right side of the model). When making decisions about internationalization, the entrepreneur must decide when and to which extent to give room to his or her emotions and intuition. This decision can, in turn, rely on rational arguments and thus be reflected and comprehensible. The following decision-making-logic model shows the balancing act between rationality and gut feeling that needs to be made consciously to produce emotionally based decisions:



III. 2: Decision logic and preconditions of emotionally based decisions (authors' own work, 2013)

The SME decision-maker as a person becomes the mediator between his or her own rational and intuitive reasons, ideally by involving the emotional and intuitive contributions of decision-relevant employees (sources of knowhow). The decision has to concern the turning points at which intuition or rationality become the primary contributors to the decision. The ability to identify those moments and the entire personality and competence profile of the entrepreneur become one of the significant factors in the decision-making process for successful internationalization.

**Starting points for making successful internationalization decisions of SMEs**

Successful SME internationalization is primarily the object of a decision and a decision-making process that requires an active involvement of both the rational and the intuitive sense of the entrepreneur (again cf. ill. 2, left and right sides). This process does not replace the classical dominant rational decision-making process, but rather complements it. Emotion and intuition are often lost in a blind spot in the classic models, and now need to come to the fore: Taking charge of the strategic direction, analysing the organization and its environment rationally and critically with a sense for the given resources, revealing all capabilities and limitations concerning internationalization (e.g. using gap analysis), and assessing the competences that are needed for a successful internationalization. But it does not stop here: Emotion and intuition need to be given their place in all of this, and it needs to be understood that they have been active all along. In turn, rationality needs to be added (ex post) where emotion and intuition were the only forces. At the end of this balancing act stands the entrepreneur's decision to

venture international entrepreneurship and to live – or to leave it, as the case may be.

Accepting this, it becomes clear that the characteristics of the SME decision-maker, his or her personality, self-perception, and worldview are among the key elements for any successful internationalization campaign. This is the point that needs to be recognized and referred to when evaluating a decision-making process, which supports decision-makers of SMEs with their internationalization decisions. The first step is to develop enough self-confidence to give emotion and intuition explicit room in the decision-making process. The right turning points must be found, at which the balance swings in favour of either rationality or emotion and intuition. Last, but not least, the circumstances, the requirements and conditions must be considered that need to be in place for emotion and intuition to take over their role as 'ultima ratio' in the decision process. A decision-making model needs to be developed that places intuition, trust, and emotion as a synergetic counterweight to classic rational models. At exactly this point, it will be clear why SMEs are far from disadvantaged compared to large companies in matters of internationalization.

Which emotionally driven factors affect certain organizational decisions of SMEs – here referring to the internationalization decisions– will be discussed with a closer look at our Emotion-Based Decision model.

#### **Emotion-based decisions**

It seems evident that any form of internationalization brings about certain risks for the companies in question. Following a disposition towards rationality, organizations usually try to manage risks by reducing the degree of uncertainty. Large companies do so in the case of internationalization by relying on classical strategic planning (Scherer, 2003), which includes extensive analyses and assessments (due diligence), e.g. of possible international locations. Frequently, external consultants or consultancy firms are brought on board to provide the clearest possible picture of the facts for the upcoming internationalization. Large companies rely on their functional organization, distributing tasks by classic economic criteria, e.g. to dedicated task forces. Such an approach allows internationalization to be treated as a sequence of organized, intentional actions in the sense of planning and executing as well as a comprehensible rational set of phases (Grichnik/Immerthal, 2005).

As mentioned, SMEs prefer different approaches to internationalization. Oftentimes, their management and decision-making capabilities are concentrated on a select few managers or the single person of the entrepreneur (or owner of a family business). This means that SMEs usually have neither the human resources nor the structures of large companies to share out the burden of internationalization, nor do they have the means to acquire or develop these and approach internationalization as large companies do.

If they want to reduce the complexity and insecurity of the issue, the SME entrepreneurs have few options but to rely more on less on their intuition and competences and to take decisions with a combination of experience, gut feeling and trust in their own abilities and the capabilities of the network around them. In a sense, they thus overcome the fiction of a clearly definable and predictable internationalization decision for simple structural reasons, and they are forced to proceed without a clear field of vision (Grichnik/Immerthal 2005, 566).

We have to ask now how intuitive-rational internationalization decisions can be made by SMEs. How do reason and emotion interact, and how can SMEs benefit from this situation and their specific approach? In concrete terms, this needs to consider how a model should be constructed that helps the people in charge of SMEs, be they owners or employed managers, take a systematic look at their decision-making process and arrive at rational-emotional decisions on the basis of a gut feeling?

#### **The Emotion-Based Model for internationalization decisions**

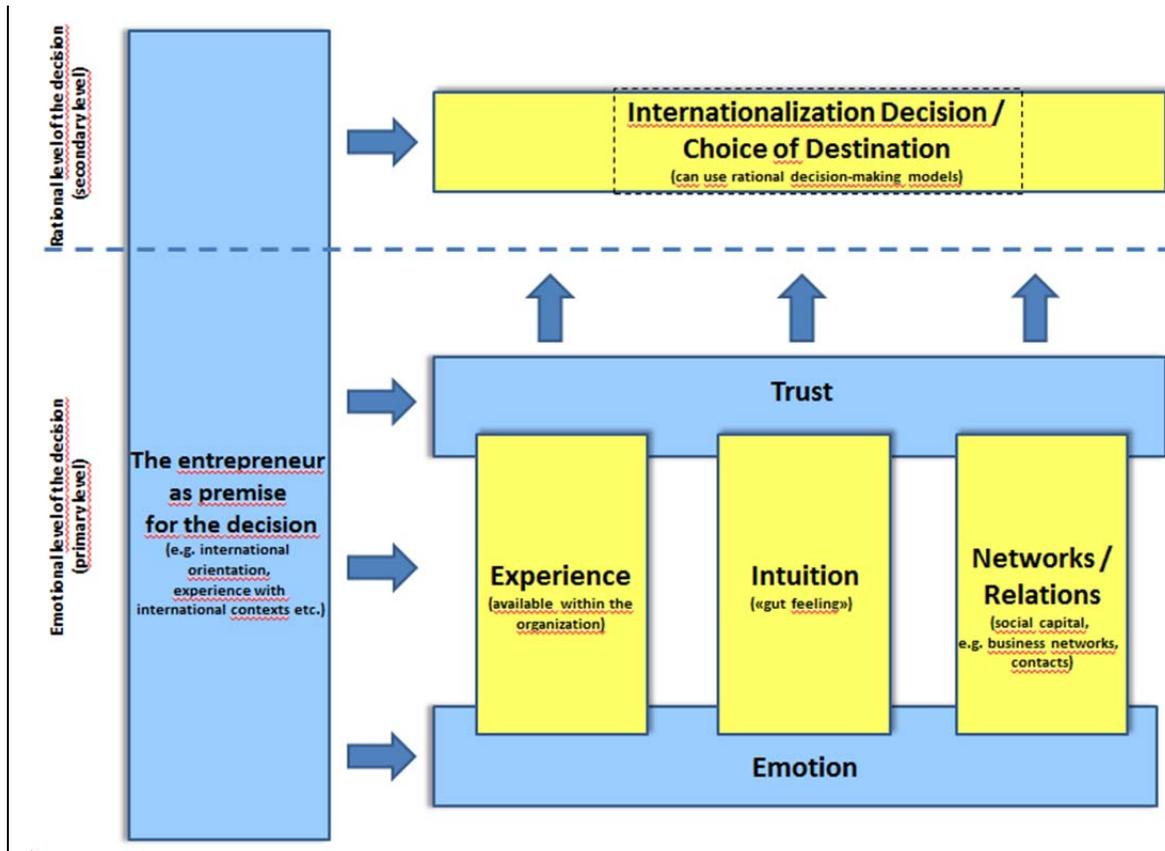
The purpose of this paper is to introduce and present a decision-making model and support that could help reduce the uncertainty that comes with every internationalization decision. From a SME's point of view, it does not seem reasonable or helpful to try to develop further classical rational models, which assume the presence of certain competences and resources that only large companies will have available.<sup>4</sup> Internationalization decisions are unavoidably associated with potential risks. These risks lead to the emotional need to reduce the resulting uncertainty. We argue that, there are in principle two ways to avoid possible/potential uncertainty: (1) Through rational analysis and routines for risk minimization (which could be almost only accomplished by large companies because of their available amount of resources and existing structures), and/or (2) to reduce the uncertainty by trust<sup>5</sup> in the people involved and also by self-confidence, and thereby to be capable of making (good) decisions. In short words, the terms "risk" and "uncertainty" must be treated separately: Uncertainty arises from potential existing risk, and this uncertainty could be reduced through analysis or by trust (in the people

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<sup>4</sup> Rational decision-making models assume generally unlimited cognitive abilities on the part of the decision-maker and perfect awareness of all the alternatives and possible implications. This might be unlikely even in the case of larger commercial organizations. Also cf. Grichnik/Immerthal 2005.

<sup>5</sup> As we already discussed in the previous part of this article, based on Patterson (2004), if the benefits are decided to put to the forefront as a key driver for the internationalization during the decision-making process, then it is also relevant to reduce the uncertainty in the first step. In any case, we understand trust as a risky contribution in advance (Luhmann, 2000). Although justifiable, reasonable and stable trust would be only built up over time, but at the beginning of that, trust is also a concept that Luhmann (2000) defined as a kind of "risky advance". This risky advance may be furnished and brought towards other people, institutions and organizations, or, towards oneself as decision-maker in which you have enough confidence (and also courage) to internationalize your business.

involved or in oneself), which matches better die realistic situation (lack of resource) of most SMEs and should lead to the capability of decision-making. The following decision-model has been designed to guide SMEs when it comes to establishing a confident and secure position concerning internationalization.



III. 3: The Emotion-Based Decision model (EBD) (authors' own work, 2013)

### The entrepreneur's role in the internationalization of SMEs

The Emotion-Based Decision model (cf. ill. 2) focuses primarily on the person of the SME entrepreneur or manager. This person is to be understood as a decision premise and prerequisite for the entire internationalization decision. How the issue of internationalization is perceived depends on the personality of the entrepreneur (Ullrich 2011; Kannies 2010; Frances et al. 2009).

The internationalization behaviour is determined in particular by subjective, psychologically oriented characteristics of entrepreneurs. "Subjective characteristics are a particularly salient source for intangible resources that differ from entrepreneur to entrepreneur and have thus a significant influence on the decision about going international" (Weber 1997, 129). The character traits of the entrepreneur, his or her values and norms, as well as basic attitudes towards internationalization contribute massively to the decision on the admission of international business. The basic attitude towards internationalization, which

can be called a global mindset (the 'will'), and the intercultural abilities of the entrepreneur (the 'ability') to form the basic motivation for taking the business abroad can be called international entrepreneurial orientation (the 'doing and learning'). These are the factors that make a central contribution to the internationalization decision and to its successful outcome (Schreier/Gong, 2013). The subjective factors named most often when discussing the internationalization of SMEs include openness, the ability to listen and communicate, performance motivation, psychological distance, courage, risk affinity, flexibility, conservatism, and the ability to look forward. In addition, the personality of the entrepreneur is characterized by prior experience with internationalization. Experienced entrepreneurs with a track record of international work are, in this sense, more likely to be innovative, flexible, and dynamic than those who act solely in the domestic market (Dichtl et al., 1983; Bamberger/Evers, 1997; Zanger/Hodicová/Gaus, 2008; Fabian/Molina/Labianca, 2009; Gong/Schreier, 2013).

The personality of the entrepreneur therefore also includes his or her international orientation (To what extent is he or she attracted by foreign cultures or markets?), past international experience (Rated positively or negatively?), and the subjective perception of relevant foreign markets (Does he or she know certain markets and is that knowledge being seen as sufficient by the entrepreneur?). If the decision-maker has a self-perception and self-belief that is generally positively inclined towards internationalization, it seems reasonable to assume that this filter will reinforce any potential international engagement. Each head of SME should therefore take a look at themselves and question their 'cultural intelligence', if they want to give internationalization a realistic chance (Schreier/Zemp, 2012). Culturally intelligent describes an entrepreneur if he or she has knowledge of cultures and their differences (knowledge component), can reflect on and adjust his or her leadership style in an intercultural context (learning component), and is motivated and actually dares to get active in such a cross-cultural context (behaviour component). With the entrepreneur's personality as a premise in mind, three elements that we consider relevant for the decisions of SMEs now need to be reviewed, assessed, and acted upon (or indeed not acted upon). Due to the above mentioned lack of human and financial resources and the limited internationalization capabilities (also including competences concerning any available decision-making models), it is important for SMEs to turn to alternative sources for their internationalization decisions. Our model represents these sources as three vertical pillars: Experience, intuition, and networks / relationships.

### **Intangible assets as the core of the internationalization model**

In the early 90's, Barney (1991) has investigated the link between firm resources in a way of intangible assets and sustained competitive advantage in his study related to the theory of resource-based view. To quote the Barney (1991, 102, 105ff): "A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy. To have this potential, a firm resource must have four attributes: (a) it must be valuable, in the sense that it exploit opportunities and/or neutralizes threats in a firm's environment, (b) it must be rare among a firm's current and potential competition, (c) it must be imperfectly imitable, and (d) there cannot be strategically equivalent substitutes for this resource that are valuable but neither rare or imperfectly imitable". He also pointed out and made the conclusion that "It may be the case that a manager or a managerial team is a firm resource that has the potential for generating sustained competitive advantages. However, what becomes clear is that firms cannot expect to "purchase" sustained competitive advantages on open markets. Rather, such advantages must be found in the rare, imperfectly imitable, and non-substitutable resources already controlled by a firm" (Barney 1991, 117).

The decision-making of the issue internationalization is exactly a question about, on one hand, exploring opportunities, and on the other hand, also assessing threats or risks, which are heterogeneous processes among different firms and cannot be easily copied or imitated. On this basis, we would now like to extend this concept of intangible assets with the following new factors in order to develop our model. As we show in this paper, the intuition, as well as emotion, is an important part of these intangible assets.

Experiences: by contrast to the personality of the decision-maker as a decision-making premise – which also refers to certain elements of personal experience, experience here concerns the conscious reflection of their own experiences of internationalization and those that are available to the decision-maker or the organization, which can also include the experience of other people. This conscious reflection also covers the informal organizational experiences that can be accessed and included as another source for input for the internationalization decision (Hsu et al., 2012). What is needed in essence is a conscious decision by the entrepreneur to draw on these various experiences. Decisions about going international will become more robust the more such reflective observation – i.e. the decision-maker observing how others respond to him and his intended decisions – is allowed. Reflective observation includes an opportunity and, potentially, an invitation to adjust one's own behaviour and adapt intended decision

(Grichnik/Immerthal, 2005). This corresponds directly with what we have named as the requirements in terms of the decision-maker's cultural intelligence.

Intuition: Literature terms intuition a "complex pattern of human knowledge and experience" (Schmidt 2009, 2). We understand intuition as a knowledge-based inspiration, relating strongly with a certain feeling that something has to be understood in a certain way or that something has to be done or not done. It is a form of inspiration that happens before reason and reflection come into play and that conveys a certain feeling about a decision (Busse 2012, 84ff; Neubarth 2011, 62ff). Using this definition, it should become clear that a concept is being used that is fed by more than the conscious experience of the decision-maker, which makes it distinct from the first vertical pillar 'experience'. This pillar now includes the many observations that a person makes and stores over a lifetime. We can actively access these observations only if we consciously decide to take intuition seriously as a source and decide to use it deliberately. The entrepreneur should therefore explicitly leave room for his or her intuition and the intuition of the organization. Especially under conditions of limited resources, an open dialogue within the company with decision-relevant key persons, who allow intuition its role, becomes a prerequisite for achieving a legitimate decision.

Networks / Relationships: The third vertical pillar of the model is formed by networks and relationships as further counterweights to the ambiguity of the internationalization decision. When one is placed in networks whose members have already taken the step abroad and for whom an international presence is par for the course, it should be possible to benefit from their experiences. This usually goes beyond experience and focuses on relevant external sources of knowledge in the foreign countries on site, who can establish contacts with possible local business partners, who know the local markets at first hand (acting as brokers), or who can help with finding the right locations. The networks and relationships in this model therefore concern the participation in the available "social capital" (Kühlmann, 2005) and consciously following the lead of an established social or organizational sphere (DiMaggio, 1986) of actors with standing experience of internationalization. Opening up to networks and cooperation in this sense means a decision in favour of relationship management. These relationships then, in the good case, lead to positive attitudes / emotions and trust concerning one's own internationalization plans in the absence of own experience (Knop, 2007; Carlsson/Dale, 2011). Internationalization is thus not only the individual achievement of a single decision-maker, but rather the engagement with external feedback and its integration in one's observations and decisions.

Combining all three vertical pillars, it shows clearly that prior to any decision to take of SMEs to the international stage first needs a conscious decision on the part of the entrepreneur to invest in or to deliberately engage with these pillars. Decisions about SME internationalization therefore are already

taking place a step earlier. The actual decision about internationalization, which seemed to be the first step, turns out to be a secondary step at a closer look, following and being determined by the entrepreneur's intuitive decision. Every business decision made by entrepreneurs thus grows to a greater or lesser extent from an intuitive, but subconscious construct, which we take for granted without recognizing it for what it is: a result of another decision (Grichnik/Immerthal, 2005).

It needs the – quite rational – decision to engage with other sources of experience; it needs the decision to see intuition at work and take it seriously. And it needs the decision to invest consciously into trust-based, international social capital to add to one's own experiences and abilities. All of these are pre-decisions that must to be made before the actual decision of SMEs' internationalization even comes into play<sup>6</sup>.

#### **The intuitive energy of internationalization: Emotions and trust**

The three pillars, applied by entrepreneurs, result in the displayed model to a 'load' of the horizontal pillar of trust. Trust is to be understood as an investment into a (risky) advance investment, whose payoff is uncertain (Luhmann, 2000). The formation of trust or the potential for trust needs time, and it is generated almost automatically by investing in the pillars named above. In the end, trust is needed as a form of stored energy to be invested into an uncertain situation, in this case internationalization. A virtual mirror image is formed by the other horizontal pillar and foundation, emotions, on which the three pillars of trust, intuition, and networks / relationships are built. Decision-making and emotions research has revealed that decisions can only be taken when they are imbued with emotion and, by extension, with sense (Busse, 2012; Neubarth, 2011). Our model includes interaction between the vertical pillars and emotions. There is a certain pre-existent emotional charge in terms of experiences, intuition, and networks / relations, which

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<sup>6</sup> For all the introduced and presented elements of this decision model, a separate and special theoretically and empirically based modeling is needed to ensure the further course, that we can measure them reliable and reasonable. This is very necessary, since we assume that different subjective constructions / ideas of the mentioned elements are present at the decision makers, who are possibly only in the same way in the semantics. The first major empirical study to test the here presented "Emotional-based decision model" will start at the end of October 2013. This quantitative survey is aimed at the decision makers of Swiss SMEs. The goal is to figure out how the decision-makers, from their perspective and understanding, handle with their experience, intuition and networks to make decisions about internationalization. We also want to find out what role they attribute to themselves in the context of internationalization decisions. Finally, we are concerned to find out how the correlations are existed, between the self-perceived success of internationalization (or the expected success of internationalization) and the above mentioned element, such as Intuition. This study should lead to get a first empirically assured indication of whether we are with our model on the right research path to lay the foundation to expand, develop and complete the classical decision models for internationalization, which are rather based on rational factors, with here presented "intangible assets".

determines whether and how investments are made in these areas. At the same time, focusing on these pillars leads to a shifting of emotions that can promote or inhibit involvement with these areas. These activities not only change the emotional foundations, they also affect the basis of trust. To explain this with an example: If the head of a SME has a basically good feeling about investing into networks and relations, experiences curiosity in this area, and expects that the investment will feed into the decision about internationalization, and if that investment indeed pays off, the emotional basis is loaded positively. This in turn leads to more investment in this area and makes it more likely that future decisions will go for more activities in the area of networks. The pattern is one of a positive, self-reinforcing feedback loop (Dievernich, 2012). The approach leads to an increase in trust in terms of self-belief in the entrepreneur's actions in these areas and in decisions for (or against) going international (Hodicovà, 2008).

The horizontal and vertical pillars of our Emotion-Based Decision model for internationalization decisions refer to resources that lie within the reach of most SMEs, as compared to the decision-making instruments and apparatus available to larger businesses. These resources are found on the interpersonal, social, and emotional level and are made consciously usable by this model. In this sense, our model contributes to a rationalized or rational use of the non-rational factors lying mostly on the side of the individual entrepreneurs. When a decision is taken on this more emotionally driven level, it is up to the decision-makers of SMEs (and, depending on the situation, reasonable)<sup>7</sup> to decide whether to take recourse to classical decision-making models if their finances and time allow and the necessary interest and competences are present. These are designed to add a layer of rational certainty to decisions in the various phases of internationalization (market selection / decision to enter / entry modes / factors affecting entry modes) (London 2004, 134ff).

#### **The sense of internationalization**

The decision-making model presented here is aimed primarily at the individual decision-makers of small or medium-sized enterprises. This does not mean that managers at larger companies or corporations cannot apply it in their decisions. It is safe to assume that the basic logical concept can also be relevant for other decisions, such as larger investments into factory equipment or HR decisions. However, it is important for us to reiterate that it is a model designed first and foremost for (individual) people who have to take decisions on uncertain ground and who a) either have no direct access to classical rational decision-making processes or b) could use these, but would not draw the same emotional reassurance from them.

The model is based on the assumption that just in case of internationalization, means decisions

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<sup>7</sup> Pure 'gut feeling' decisions without any properly documented preparation will encounter limited acceptance – depending on the given culture – and might stand in the way of internationalization in general.

need to be taken under particularly uncertain circumstances (Brandstätter, 2010). The stereotypes that come with any internationalization decision also tend to convey certain emotions that can only be handled reasonably with outspoken openness about using intuition and the processes of trust formation. When ambiguities arise, decision-makers respond with a sense-making process to recover a form of manageable social reality and a sounder basis for their decisions (Weick, 1995). For this purpose, they use all resources at their disposal to produce explanations that help them sustain or, potentially, explain the ambiguity. This happens both in an individually and a socially constructive process. For our topic of internationalization of SMEs, this means that entrepreneurs can reduce the prevalent uncertainty by drawing on experiences in their organizations, by following intuition if such experience is present, and by taking on board the contributions of other persons or networks who have more experience with going global, forming their input into his or her own arguments for or against internationalization. This all feeds into a basis for the decision that is emotionally grounded. When classical rational models are added to this – to whatever extent – this adds another layer of stability on the emotional level that the rational approach alone could never offer.

The SME entrepreneur should weigh up to which extent he or she would allow intuition implicitly or, even better, explicitly and to which extent classical analyses should be produced to be able to take the decision. Decision-makers with a penchant for rationality will be tempted to include as much analysis as possible; more intuitive personalities will, by contrast, give more room for gut feeling and prevent paralysis by analysis. We can see a unique competitive advantage for SMEs in their internationalization issues that due to the limitations and restriction they have to open up to the essential core of all decisions: emotion and intuition. Our model has been designed to raise awareness for this fact and empower people to work with it.

#### **Looking ahead**

The purpose of this paper was to work towards a more complete understanding of the non-rational elements so commonly derided, whose conscious use in SMEs' internationalization decisions can indeed be called highly rational and sensible. The useful element lies in reconciling the decision with the individual disposition of the decision-maker, with his or her emotions, motivations, and attitudes. From a psychological point of view, their cognitive – rational – side is always accompanied by other activating – non-rational – emotions and stimuli that the decision-maker will follow just as much as the rational deliberations (Grichnik/Immerthal 2005, 578). What is needed now is practice-oriented research to reveal whether the elements identified here represent the full picture or whether other important factors still have to be added to the model. Going forward, further research will also be required to understand whether the model developed here is indeed to be limited to questions of internationalization or whether it can meaningfully be expanded to cover all (complex and impactful) decisions of SMEs. Even if this is the

case, nothing speaks against testing its relevance in the context of the ever topical questions and needs relating to internationalization. Finally, we are aware of our omission of a clear definition of what we include in the term internationalization of SMEs. For this first hesitant step, we assume that our Emotional-Based Decision model applies to all steps in the process of going abroad (selecting markets, choice of locations, entry modes etc.). Nonetheless, we expect that its use will differ (implicitly) depending on the complexity and ambiguity of the every specific decision. The more complex and uncertain a decision, the greater the value of an emotionally reaffirmed decision will likely be. It is up to future research to ascertain the truth in this respect. Nevertheless, we are aware that the individual elements of our emotional-based decision model, each of them, should and must be empirically assured studied and researched (see our comments in the footnote 6 of this paper).

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