THE EFFECT OF EMOTIONAL INTELLIGENCE ON THE NEW VENTURE CREATION OF NECESSITY AND OPPORTUNITY-DRIVEN EGYPTIAN ENTREPRENEURS

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ABSTRACT

The study is designed to test the relationship between emotional intelligence (EI) and entrepreneurial behaviour (EB) through a deductive approach. It uses the survey strategy and conducts self-administered questionnaires. The research is explanatory in nature due to the causal investigation being performed to see if the emotional intelligence would affect entrepreneurial behaviour (Zainal, 2007) and consequently new venture creation. Using logistic regression, the analysis showed that only some components of EI affected certain areas of EB in the case of necessity driven entrepreneurs while other EI components affected other areas of opportunity driven entrepreneurs; and had consequently a significant impact on new venture creation. The results shed light on certain areas that need to be taken into consideration when aiming at developing and enhancing entrepreneurial activities.

INTRODUCTION

The research topic of this study is highly relevant to both academia and practice. Egypt, like other developing countries, has shortage in research focusing on entrepreneurs, their behaviour and outcome of the activities undertaken by them. Ever since entrepreneurship started to gain attention, researchers extensively attempted to define the term due to its important role in creating jobs and providing new growth opportunities for new products, services and processes. Thus, it is not surprising that a critical part in the concept of entrepreneurship is the entrepreneur as a human being himself/herself (Berger, 2015). Yet the field has broadened away from the narrow focus on the stable characteristics of individuals who start and run businesses to incorporate the process of venture creation (Carlsseonet et al, 2012). New venture creation refers to the steps that lead to the birth of a new business. According to Van Gelderen, Thurik and Bosma (2006), these steps include opportunities recognition, developing a business concept, and assembling resources to create an organisation. Cornelissen and Clarke (2010) defined it as "the process by which entrepreneurs come to imagine the opportunity for novel ventures, refine their ideas, and after an initial investment, justify their ventures to relevant others to gain much needed support and legitimacy" (p. 539). Thus, new venture creatipn is a process that requires a considerable amount of creativity, proactivity and problem solving abilities.

The reason for this increasing interest in the new venture creation process within the entrepreneurship literature (Xu, 2014) is the many benefits it offers to society; mainly economic growth, new industry formation, and job creation (Allen, 2012). Although the process encompasses a number of well-defined activities; yet what makes individuals take the decision to engage in the process of creating new venture and dedicating the required time and resources remains debateable; moreover, there is no universal agreement on where the process starts and where it ends (Allen, 2012, p. 12).

One of the factors identified as having an impact on entrepreneurial attitudes and behaviours is emotional intelligence (EI). Several researches were conducted to examine the relationship between emotional intelligence and entrepreneurial intentions. One of the studies found that trait EI has an effect on entrepreneurial attitudes and intention. These emotional intelligence traits were accompanied by two aspects, which are the creativity and proactivity (Zakarevičius & Župerka, 2010; Zampetakis et al, 2009). However, fewer studies have investigated the relationship between EI and entrepreneurial behaviour (EB), specifically distinguishing EB in times of necessity and in times of opportunity.

Baum & Bird (2012) are among the few who advocated the role of emotional intelligence as a differentiating factor when investigating the individual differences in entrepreneurs' behaviour. Emotional intelligence (EI) refers to "the ability to recognize and regulate emotions in ourselves and others" (Goleman, 2001, p. 2) However, the literature in the field of entrepreneurship is particularly scarce in the topic of emotional intelligence and it was not empirically demonstrated that entrepreneurs are characterized by high levels of emotional intelligence. Therefore, the construct of emotional intelligence was not investigated in depth in the field of entrepreneurship.

Furthermore, few studies have investigated the relationship between EI and new venture creation, specifically differentiating between times of necessity (when the entrepreneur starts a business due to the lack of proper income) and in times of opportunity (when the entrepreneur starts a business to capture a business opportunity in the market). And to the knowledge of authors there are no studies that tackled this issue in Egypt. Thus, the research aims at investigating the effect of emotional intelligence on new venture creation through identifying certain emotional intelligence traits and abilities that will have an effect on the entrepreneurs' behaviour that will lead to creating a new venture. For this purpose, the study was conducted on entrepreneurs in in Egypt.

THEORETIAL FRAMWORK

Emotional Intelligence (EI)
Emotional intelligence has its roots in social intelligence and it is about having both interpersonal and intrapersonal intelligence (Naseer, Chishti, Rahman, & Jumani, 2011). It focuses on the ability to know your own emotions and manage them, as well as ability to detect emotional cues and how to react accordingly. Gardner (1993) stated that intrapersonal intelligence is the knowledge of internal aspects: access to one's own feelings, range of emotions and the ability to distinguish between emotions and to rely on them as means of guiding one's behaviour (Law, Wong, Huang, & Li, 2008). On the other hand, interpersonal is the ability to notice distinctions among people in relation to (moods, motivations and intentions). It is related to social intelligence mainly because it involves the ability to interpret the behaviour of others and to know how to act appropriately when dealing with them (Wong, Wong, & Law, 2007).

There are several definitions of EI and many scholars are using these different definitions and some developed their own models. There is a commonality between these models as they all rely on the work of Mayer and Salvoy and to some extent Goleman (Goleman, 2001; Mayer & Salovey, 1997). Goleman's definition is currently the most used as it is the most simple and the most general, which describes Emotional Intelligence as "*the ability to recognize and regulate emotions in ourselves and others*" (Goleman, 2001).

The literature shows that there are two main approaches to the models of emotional intelligence: the ability model and the mixed model (Aslan & Erkuş, 2008). Mayer and Salovey (1997) look at EI as a pure intelligence in the form of cognitive ability. Their model consists of four branches: emotional perception, emotional assimilation, emotional understanding, and emotion management (Mayer & Salovey, 1997). They argue that the ability model is focused on person's skill in detecting and recognising emotional information and use them in carrying out abstract reasoning (Caruso, Mayer, & Salovey, 2002). Also, that EI is similar to spatial intelligence with the exception that it operates on, and with emotional content. The mixed model focuses on mental abilities, existence and properties (Aslan & Erkuş, 2008). These models mix different aspects of personality often in a theoretical manner and it results in a conglomerate of traits, dispositions, skills, competencies, and abilities, which is named EI (Caruso, Mayer, & Salovey, 2002). The first of these models is developed by Reuven Bar-On who perceives Emotional Intelligence as a mixed intelligence that consists of both a cognitive ability and a personality aspect. It is a collection of emotional and social abilities: it includes the ability of self-awareness, the ability to deal and be in control of strong emotions, and the ability to cope with change and be critical in solving problems (Bar-On, 1997). It has components of intra-personal (self-regard, emotional self-awareness, assertiveness, independence, self-actualisation), interpersonal (empathy, social responsibility, interpersonal relationship), adaptability (reality testing, flexibility, problem solving), stress management (stress tolerance, impulse control), general mood (optimism, happiness) (Stys & Brown, A Review of the Emotional Intelligence Literature and Implications for corrections, 2004). The last model is also mixed and is the one by Daniel Goleman – most popular in the literature - who agrees with Reuven Bar-On model and perceives EI as a mixture of both a cognitive ability and a personality aspect. It consists of four main EI categories: self-awareness (the ability to identify one's own emotions and feelings); self-management (controlling ones emotions and feelings); social awareness (understanding and reacting to others emotions); and relationship management (inspiring and influencing others while managing a conflict) (Goleman, 2001).

Measuring EI:
The idea of 'whether EI is feasible to measure or not', has been a debatable issue for many researchers (Goleman, 1996; Steiner, 1997; Stuller, 1998; Mathews, 1996 as cited in Higgs & Dulewicz, 1999). There are multiple techniques and tests that have been introduced in an attempt to measure EI. One of these tests was Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), which was intended to measure the four abilities stated in Salovey and Mayer's model of EI. Another tool for measuring EI is 'The Emotional Competence Inventory (ECI) which is "*a 360 degree tool designed to assess the emotional competencies of individuals and organisations. It is*

based on emotional competencies identified by Daniel Goleman in working with Emotional Intelligence." The ECI measures 20 competencies which are divided into four clusters; self-management, self-awareness, social awareness, and social skills. Each respondent rate themselves or others on a Likert scale from 1 to 7 for each cluster and thereby, rate each of the competencies (Stys & Brown, A Review of the Emotional Intelligence Literature and Implications for Corrections, 2004).

Goleman (1995) identified five domains for EQ which are (knowing your emotions, managing your own emotions, motivating yourself, recognising and understanding other people's emotions and managing relationships) (Chapman, 2000- 2012). Goleman afterwards, refined the model according to statistical analysis which was done by one of his colleagues Richard Boyatzis, where there are four domains instead of five which were (Self-awareness, Self-management, and social awareness and relationship management) and the competencies were reduced from 25 to 18.

Wong came up with a summarized conceptualisation of EI (Wong, Wong, & Law, 2007; Wong, Law, & Wong, 2004; Wong & Law, 2002). It is based on all of the above and describes; appraisal and expression of emotion in self (self-emotional appraisal), appraisal and recognition of emotions in others (other's emotional appraisal), regulation of emotion in self (regulation of emotion), use of emotion to facilitate performance (use of emotion). Depending on the above 4 dimensions, Wong and Law (2002) further developed a self-report EI scale known as Wong and Law EI scale WLEIS (Kim, Yoo, Lee, & Kim, 2012). It is meant to reveal a person's knowledge about their own emotional abilities rather than their actual capacities (Wong, Wong, & Law, 2007). The reliability and validity of this measure was found acceptable for research purpose (Wong, Wong, & Law, 2007). WLEIS is one of the mixed models to measure EI as it views EI as combination of personality traits, abilities and skills (Kim, Yoo, Lee, & Kim, 2012).

Entrepreneurial Behaviour (EB) and New Venture Creation (NVC)

There is a substantial amount of discussions in an attempt to define entrepreneurship as a process and entrepreneur as a person, but no consensus has been reached. Gartner (1985) acknowledged the variations in the definition and the problems it causes in the study of entrepreneurship. Krueger (2002) concluded that there is no agreement on what it is, yet we all will know it when we see it. Among the many definitions of the term is the one provided by Stevenson and Jarillo (1990): "the process by which individuals—either on their own or inside organisations— pursue opportunities without regard to the resources they currently control" (p. 23). This definition suggests that entrepreneurship is a manifestation of a certain mind-set that drives the identification and exploitation of opportunities (Senges, 2007; Perry, Chandler, & Markova, 2012) to create a new venture. The definition also implies that the entrepreneur plays a central role in this process (Baron, 2007), which has motivated researchers to tackle the psychological and sociological traits of the entrepreneur, however, other researchers asserted that what the entrepreneur does is more important (Fusari, 2014). This finding complies with what Gartner (1985) indicated earlier that entrepreneur is only one dimension of the framework and what really seems more important to focus on is the outcome of entrepreneur's mind-set and behaviour, i.e. new venture creation.

Although a high number of new ventures fail within a few years of their creation, thousands of individuals start their own business every year (Headd, 2003), a decision that remains unclear (Allen, 2012). Scholars still have an incomplete understanding of what stimulates individuals to become an entrepreneur (Hack, von Bieberstein, & Kraiczy, 2014). Hence, entrepreneurship research is interested in examining what drives some individuals to become entrepreneurs and which personal characteristics differentiate entrepreneurs from other groups, such as managers or simply the non-entrepreneurs (Josien, 2008). This incomplete understanding of the reasons behind individuals' decision to become entrepreneurs, promoted the calls to focus attention on entrepreneurial behaviour. In 1985, when Peter Ducker introduced his theory of innovation and entrepreneurship, he used entrepreneurial behaviour as one of the keys to entrepreneurship. Thus due to its importance, there have been many trials to define the term by scholars and researchers, yet it remains poorly defined (Bird, Schjoedt, & Baum, 2012) and not well understood (Aldrich, 1999). One of the definitions of the term viewed it as the study of human behaviour involved in identifying and exploiting opportunities through creating and developing new ventures (Bird, Schjoedt and Baum, 2012), as well as exploring and creating opportunities while in the process of emerging organizations (Carter, Gartner and Reynolds, 2010). Shane and Venkataraman (2000) summarized the acts under the behaviour, which are the discovery, evaluation, and exploitation of entrepreneurial opportunities. Delmar (1996) adopted a simpler and generic view, which considered the behaviour as the actions taken by the entrepreneur to reach desired goals, whether financial or non-financial. These actions include, but not limited to, prepare a business plan, look for facilities, organize a team, hire employees, form a legal entity, and enter a market (Gartner, Carter, & Reynolds, 1996) (Delmar & Shane, 2003)

Nevertheless, Belousova, Gailly, Olivier (2009), called for further investigation to understand the specific actions behind the words discover, evaluate, or exploit, especially that the context in which the entrepreneur operates

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is also very important (Chell, 2008) and the complex interactions between the individual and the situation. To resolve this issue, Boruah et al. (2015) suggested measuring the entrepreneurial behaviour using nine competencies, including innovativeness, achievement motivation, decision making ability, risk orientation, coordinating ability, planning ability, information seeking behaviour, cosmopoliteness and self-confidence. This complies with Vijaykumar's (2001) proposal to operationalise it; that is to consider it a cumulative outcome of information seeking behaviour, decision making, leadership skills, risk taking ability, innovativeness, achievement motivation and market orientation. This in turn represents discrete units of actions which can be observed by others (Bird & Schjoedt, Entrepreneurial Behavior: Its Nature, Scope, Recent Research, and Agenda for Future Research, 2009) resulting in a new venture creation.

Timmons identified some of these earlier as partially explaining entrepreneurial behaviour and differences in performance (Neneh & Vanzyl, 2014); nevertheless, he argued that not all entrepreneurs possess all these competencies with the same level. Middleton (2010) argues that process through which the entrepreneur goes when creating the new venture does not take place in a vacuum, and the behaviour of individuals might be influenced by different factors, including motivation. The entrepreneurship literature distinguishes between wide range of entrepreneurial motivations (Robichaud, LeBrasseur, & Nagarajan, 2010). These motivations include both economic (additional source of income) and non-economic (desire for independence or work-family balance) factors. Other distinctive types of motives differentiate between necessity and opportunity based motivations: those who initiate entrepreneurial activities voluntarily (being pulled into entrepreneurship) and those who are pushed into such activities to address their unsatisfied needs due to lack of income.

Opportunity entrepreneurs are viewed as entrepreneurs who start a business in order to pursue an opportunity in the market, whilst necessity entrepreneurs are pushed by unemployment situations or dissatisfaction with their previous jobs (Liñán, Fernández-Serrano, & Romero, 2013). It is believed that understanding the motives helps in explaining entrepreneurial behaviour, while (Uhlaner & Thurik, 2007) advocate that new venture creation happens no matter what are the motives of individuals.

Scholars have identified several factors that affect the entrepreneurial behaviour; however, they are increasingly attending to the role of emotions in influencing behaviour and hence performance of individuals. Pradhan and Nath (2012) assumed that EI might contribute to understanding those individuals who are able to innovate, discover, create and exploit opportunities. However, there is a lack of sufficient research discussing the role of emotion in the area of entrepreneurship or relating emotional intelligence to entrepreneurial behaviour (Yitshaki, 2012). EI is discussed significantly in areas of organizational theory, especially performance relating it to individual and organizational performance and behaviour (Yitshaki, 2012). However, there are more studies on the entrepreneurs' EI and its impact on venture growth and venture performance (Yitshaki, 2012, p. 360) and even more on the relationship between EI and leadership (Yitshaki, 2012).

The relation between EI and EB:

Emotional intelligence traits and its effects on the entrepreneurial intention has been the topic of some studies. A study was done to examine the relationship between trait emotional intelligence, proactivity and creativity and their effect on entrepreneurial intentions and attitudes. It focused on emotional intelligence self-efficacy trait, which is mainly a group of emotions related to self-perception (emotion perception, emotion management, impulsivity, empathy and self-efficacy). Individuals having high emotional self-efficacy would be more willing to start and establish their own businesses. Consequently, people having higher emotional intelligence deal with stress better, are more confident in their experience, create and control their own business establishment (Zakarevicius & Zuperka, 2010) compared to those with lower emotional intelligence as pro-activity and creativity have an impact on emotional self-efficacy. The results of the above study showed that Trait EI, especially self-efficacy, may be required for entrepreneurial attitudes.

Studies on both the potential and existing entrepreneurs led to the conclusion that certain traits or demographic characteristics of the individual had an effect on the entrepreneurial behaviour. Entrepreneurial action can be classified as an intentional behaviour (rePlaceholder1). Personality characteristics studied are (risk taking, tolerance for ambiguity, and internal locus of control, innovativeness and independence) and motivational factors are (love for money, desire for security and status). Studies have come to the conclusion that individuals who are able to control their emotions and influence others by their emotions are potential entrepreneurs. Personality traits like need of achievement, tendency to take risk, internal control and self-confidence also contribute to entrepreneurial intentions (Zakarevicius & Zuperka, expression of emotional intelligence in development of students' entrepreneurship, 2010).

Krueger (2007) argued that people do not engage in entrepreneurship by coincidence, rather they do it intentionally. The person's reaction to the surrounding external changes will depend on his/her perception about the

available alternatives. Ajzen (2002) stated that some people have a distorted impression about their ability to carry out a certain behaviour mainly due to elements appearing randomly or facing unfamiliar situations (Linan, 2004). That is why Linan based his theory on the argument that the greater the knowledge the person possesses, the more likely this will lead to realistic perceptions of the entrepreneurial activity (Pribadi, 2005). Also, it is interesting to note, that studies have found that individuals with university education are more likely to pursue opening their own business (Zampetakis L. A., Kafetsios, Bouranta, Dewett, & Moustakis, 2009).

The literature discussion produces the following research questions:
1. Is there a relationship between EI and EB within the Egyptian context?
2. To what extent do necessity and opportunity play a role in the above mentioned relationship?
3. What biographical characteristics have an impact in the above mentioned relationship?
4. Does Gender affect the relationship between EI and NVC?
   Therefore, the study has the following objectives:
1. To identify the forces affecting entrepreneurial behaviour in Egypt.
2. To examine the roles of opportunity and necessity on entrepreneurial behaviour and new venture creation.
3. To evaluate the new venture creation process of Egyptian entrepreneurs.
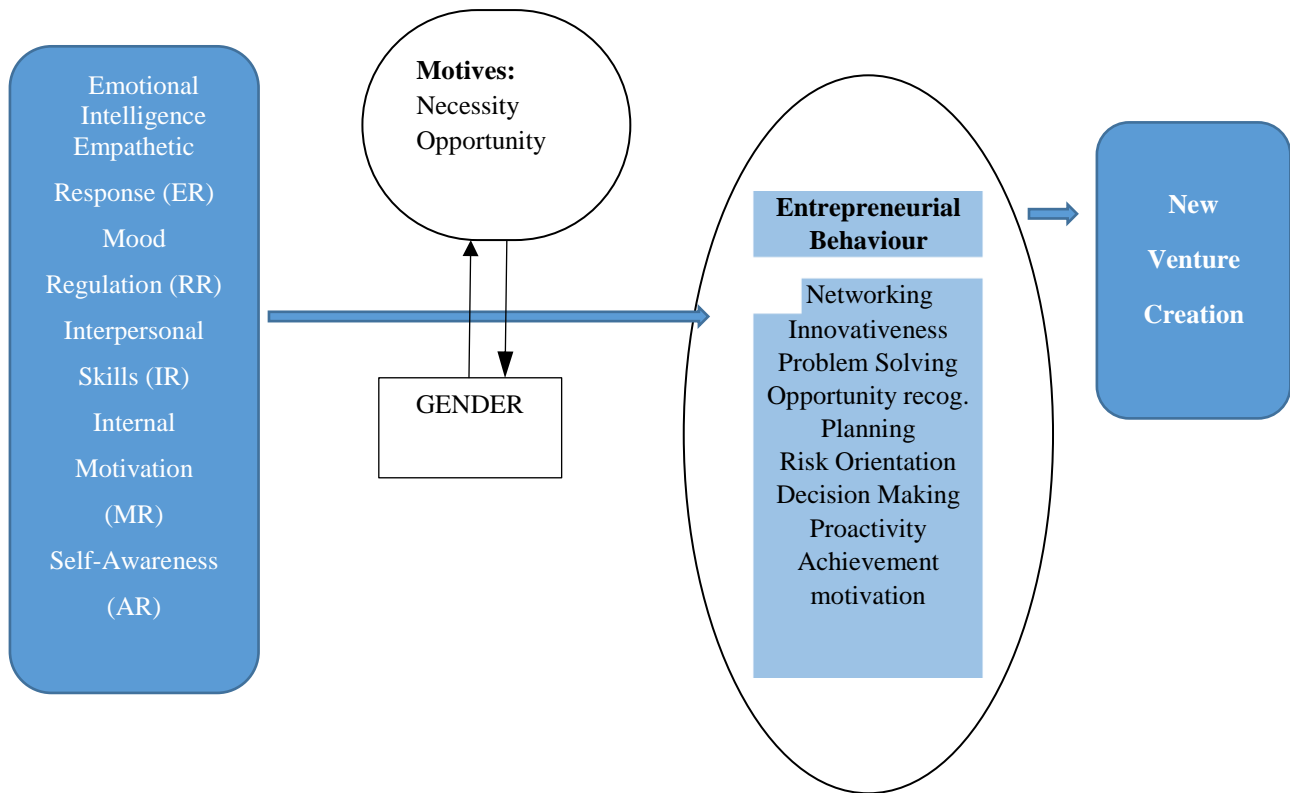   Following is the model derived from the literature:

Figure 1: The Impact of Emotional Intelligence on New Venture Creation Model

Therefore, the study will test the following hypothesis:
H1: There is a significant relationship between EI and NVC in the case of Egyptian entrepreneurs.
H2: There is a significant relationship between EI of Egyptian entrepreneurs and EB attributes.
H3: There is a significant relationship between motives to start business (Necessity and Opportunity motives) and EI and EB of Egyptian entrepreneurs.
H4: Gender of the Egyptian entrepreneurs has an impact on the relationship between EI, EB and NVC.

METHODOLOGY

A) Study Population, Unit of analysis and Sample
a. Study Population

According to Global Entrepreneurship Monitor (GEM) report for Egypt 2012 (Hattab, 2013), entrepreneurs comprised 7.8% of adults in Egypt, which if extrapolated to the total population in Egypt, 4.1 million are entrepreneurs.

b. **Sample Size**

The sample size, at a confidence level of 95%, margin of error 5%, will be between 370 and 378 (Christensen, Johnson, & Turner, 2015) (Research Advisor, 2007); hence, the targeted sample size was 378. However, the number of surveys distributed was higher in order to ensure the objectivity of data, take into account the invalid surveys and insure a high response rate. The first patch of participants was selected randomly through convenience sampling, then the snowball technique was used and participants were encouraged to forward the questionnaire to other entrepreneurs. The rationale behind the use of convenience and snowball sampling techniques, despite of being non-random, is to ensure reaching out to a diverse pool of SMEs owners; who are scarce in numbers and scattered across the country. In order to circumvent any bias resulting from using non-random sampling, the number of questionnaires distributed was around 750 questionnaires. The response rate was 65%, which is higher than the acceptable response rate in social research (estimated to be 50%)((Nutly, 2008). The questionnaires collected and received were from ten different governorates in Egypt: Cairo, Beni Sweif, Qena, Behira, Alexandria, Fayoum, Gharbeya, Souhag, Helwan, and Giza. This enhances the population diversity and assures reliability.

The data collections instruments

The data for this study will be collected from two main sources:

1. Primary Data

Since the research aim is to investigate the relation between emotional intelligence and new venture creation, a self-administered questionnaire will be used. The Self-administered questionnaires are the most suitable technique to be used to collect data here since it is an explanatory research (Christensen, Johnson, & Turner, 2015). In addition, they have proven to have greater reliability than assumed (Yitshaki, 2012). Moreover, the quantitative method particularly is useful to investigate the relationship between the independent and the dependent variables that are questioned. Hence, a deductive approach. The research is explanatory in nature due to the causal investigation being performed to see if the emotional intelligence would affect entrepreneurial behaviour (EB) (Zainal, 2007) and new venture creation (NVC).

Questionnaires were handed in personally, thus the process of data collection was carried over three months. While designing the questions, previous studies were considered to make sure of their validity and reliability. The questionnaire was divided into three parts, 1. Basic demographics about the respondents and characteristics of their enterprises; 2. Entrepreneurial behaviour that leads to new venture creation (creativity, networking, problem solving, etc.); and, 3. Emotional intelligence (using Wong and Law's questionnaire, which consists of dimensions for EI that are derived from Mayers and Salovey's EI model (Wong & Law, 2002). Parts two and three were previously validated in previous researches. They were re-validated using Kronbach alpha after the data has been entered and it produced (.72) for EB and (.89) for EI.

Table 1: Entrepreneurial Behaviour Reliability

Cronbach's Alpha	N of Items
.724	17

Table 2: Emotional Intelligence Reliability

Cronbach's Alpha	N of Items
.884	32

2. Secondary Data.

This includes all the relevant statistical tables, books, publications issued by Government and Non-Governmental Organisations, periodicals and any available data from internet pertinent to the topic.

B) Data Analysis

The statistical analysis is conducted using SPSS Version 21.0 for Windows. The tests that are used are correlation (to be used to check if there is any relation between the dependent and independent variables) in order to identify which variables to use in the regression and which to leave out. Then regression analysis is used to see how dependent variable is being affected by the independent variables. After conducting the correlation, it was obvious, that logistic regression has to be the one undertaken in the analysis. Our dependent variable is a dummy variable, therefore we use logistic regression; this test is more sensible to predict the contribution of each independent variable on the probability of the occurrence of the dependent variable.

FINDINGS

The analysis shows that there is no significant relationship between EI as a construct as a whole and the new venture creation as an outcome of the entrepreneurial behavior for both opportunity driven or necessity driven entrepreneurs. However, there is a significant relationship between two components of EI, namely the interpersonal skills and mood regulation, in the case of necessity driven entrepreneurs, and the NVC. For the latter, also two EB components are significant: "I try to achieve my goals quickly" and "I know where to go and how to get there"; this means "achievement motivation" and "proactivity".

Table (3) Logistic Regression with Necessity Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
IR	.298	.174	2.919	1	.088	1.347
MR	.060	.149	.162	1	.068	1.062
Q22	-1.562	.737	4.491	1	.034	.210
Q24	1.408	.651	4.675	1	.031	4.086
Constant	-1.784	3.521	.257	1	.612	.168

Q22: I try to achieve my goals quickly
Q24: I know where to go and how to get there
IR Interpersonal Skills
MR Internal Motivation

When it comes to opportunity driven entrepreneurs: self-awareness is the significant component within the EI; and within EB, "Problem solving", "Risk Orientation (Avoiding Panics and Destruction)" affect the NVC significantly. Also, there is one biographical variable which is affecting this relationship significantly, which is age.

Table (4) Logistic Regression with opportunity Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
AR	-.113	.055	4.248	1	.039	.894
Q1	.482	.201	5.736	1	.017	1.620
Q27	.627	.256	6.021	1	.014	1.872
Q32	-.658	.314	4.384	1	.036	.518
Constant	-1.134	1.531	.548	1	.459	.322

AR Self Awareness
Q1:Age

Q27 Avoid panics and destruction

PROBLEM SOLVING

When looking at gender and comparing the set of relationships of the model and comparing between males and females, there is only one significant relationship which is the male opportunity driven entrepreneurs where MR (within EI) and Problem Solving (within EB) have a significant effect on the NVC.

Based on the analysis, the following is verified with regard to the research questions:

1. Is there a relationship between EI and EB within the Egyptian context?

There is no significant relationship between the EI and the EB in the Egyptian context. However, there is a significant relationship between some components of EI and some items in the EB.

2. To what extent do necessity and opportunity play a role in the above mentioned relationship?

The necessity and the opportunity motives play quite a significant role in the above mentioned relationships. Based on the motive of entrepreneurship (opportunity or necessity driven), the variables that have a significant impact in the relationship are determined.

3. What biographical characteristics have an impact in the above mentioned relationship?

Age has some impact in certain cases within these relationships. Gender has a very slight impact in very particular cases.

4. Does Gender affect the relationship between EI and NVC?

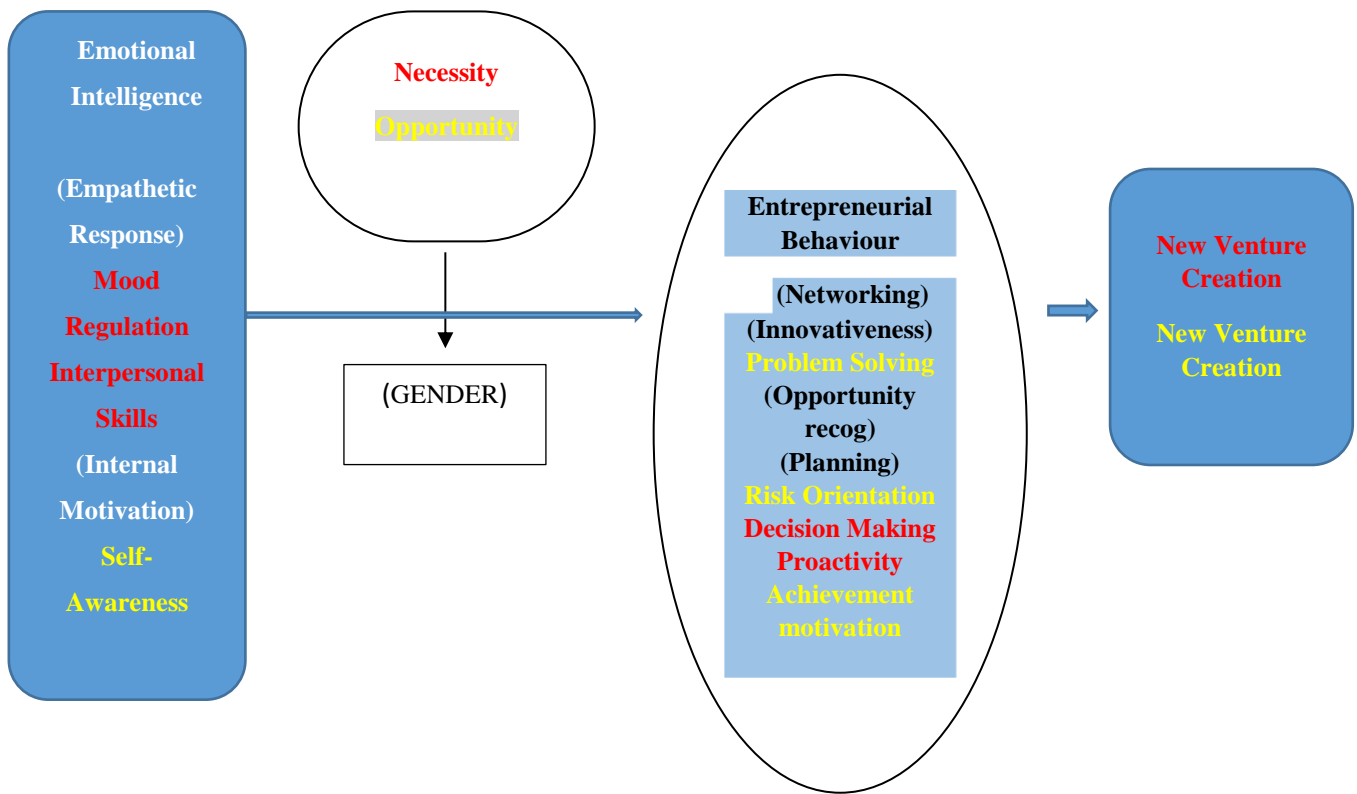Gender does not play a significant role in the relationship between EI and NVC.

Figure 2 The Impact of Emotional Intelligence on New Venture Creation - The Revised Model

NB: The variables between brackets do not have an effect in the model based on the logistic regression model.

DISCUSSION

The study had specific objectives, which were met as follows:

1.   To identify the forces affecting entrepreneurial behaviour in Egypt.

Some aspects of EI combined with the motive behind the entrepreneurial activity affect some aspects of the entrepreneurial behaviour in Egypt. Therefore, it would be useful to focus on these aspects. This means, within the EI, it is the mood regulation, the interpersonal skills and the self-awareness.

2.   To examine the roles of opportunity and necessity on entrepreneurial behaviour and new venture creation.

Necessity and Opportunity affect different variables within the EB. Necessity has a significant and direct effect on decision making and proactivity. These are the areas where necessity driven entrepreneurs work well to create new ventures. Thus, they need to be reinforced and enhanced. Opportunity has a direct and significant effect on problem solving and risk orientation. Thus, these are areas need to be developed and enhanced in any person who has the opportunity to be an entrepreneur.

3.   To evaluate the new venture creation process of Egyptian entrepreneurs.

The new venture creation process of Egyptian entrepreneurs is affected by the EI and the EB of the entrepreneurs. However, an underlying and significant force is the motive of the entrepreneurial activity, is it necessity-driven or opportunity-driven. This distinction is very important and it determines how the entrepreneurial process will lead to new venture creation.

Thus, the objectives of the study are met and the research questions are answered. In addition, when it comes to the hypothesis, the study can confirm the following:

H1: There is a significant relationship between EI and NVC in the case of Egyptian entrepreneurs.

This hypothesis is partially accepted. There are only two components of EI which have a significant effect on NVC in the case of Egyptian entrepreneurs.

H2: There is a significant relationship between EI of Egyptian entrepreneurs and EB attributes.

This hypothesis is partially accepted. There is a significant relationship between some components of EI and some components of EB.

H3: The motive to start business (Necessity and Opportunity motives) have a moderating effect on the relationship between EI and EB of Egyptian entrepreneurs.

This hypothesis is only partially accepted. The necessity and opportunity motives have a moderating effect on the relationship between specific components of EI and specific components of EB.

H4: Gender of the Egyptian entrepreneurs has an impact on the relationship between EI, EB and NVC.

This hypothesis is generally rejected. However, there is one single case where it is accepted, also in the case of opportunity driven entrepreneurs, the motivational component of EI has a high significance in the relationship in the case of male entrepreneurs (0.038 significance).

However, the one demographical component, which has an effect on the relationship between EI, EB and NVC, is age. It is significant in the case of opportunity driven entrepreneurs.

CONCLUSION

There is an underlying motive behind the process of new venture creation, it is either necessity or opportunity driven. Researchers believe that individuals' entrepreneurial behavior varies according to the type of motive (Robichaud, LeBrasseur, & Nagarajan, 2010). In Egypt, this variation in behavior according to motive is evident; moreover, results show differences in the emotional intelligence between necessity driven entrepreneurs and opportunity driven entrepreneurs. In terms of necessity-driven entrepreneurs, they are more goal-oriented; an expected outcome for an individual who is pushed into starting a new business as means of income generation. Having no alternative forces the individual to be more focused on a certain goal especially resources available to be invested in the new venture might be limited. In terms of opportunity-driven entrepreneurs, previous research has shown that they are confident and professional (Solymossy, 1997). They are growth-oriented and perceive problems as an opportunity for a new venture. They are able to build and utilize their social networks effectively to as a support system to acquire resources and have access to markets and information, hence they are able to avoid panics and destructions; which impact their performance in a positive way (Cantzler & Svante, 2007).

This study adds to the body of literature pertinent to the understudied area of new venture creation of entrepreneurs and how it is affected by traits like Emotional Intelligence. This is why some people are better than others at creating new ventures. This will give a guideline on which areas to leverage in order to increase the rates of

new venture creation. Additionally, it will help entrepreneurs themselves understand better the personal requirements for more effective entrepreneurial behavior and venture creation.

There are practical and academic implications of the outcome of this study. Egypt, like other developing countries, has shortage in research focusing on entrepreneurs, their behaviour and outcome of the activities undertaken by them. Thus this research is expected to add to the body of literature pertinent to this understudied area.

On the other hand, the rates of entrepreneurship is not corresponding to the efforts exerted by different players in the ecosystem (investors, mentors, government, etc..); hence the current research is likely to help in determining why some people are better than others at creating new ventures through highlighting the influencing role of emotional intelligence. This will give a guideline on which areas to leverage in order to increase the rates of new venture creation. Additionally, it will help entrepreneurs themselves understand better the personal requirements for more effective entrepreneurial behavior and venture creation.

Future research should investigate the same model in other countries. Studies should also compare their results with those of the Global Entrepreneurship Monitor report and identify differences and similarities. Also, there might be other forces that are affecting new venture creation within the Egyptian context like culture, education, and various variables in the environment. Thus, there is scope for further research to complement this study and overcome some limitations faced by the researchers.

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REPRESENTING UNCERTAIN TIME SERIES BY USING ENHANCED SYMBOLIC AGGREGATE APPROXIMATION

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ABSTRACT

Abstract— Uncertain time series data is characterized by its numerical and continuous values. Knowledge from uncertain time series data brings important meaning for future prediction. As the uncertain time series datasets grow more dominant in a wide variety of applications, including weather, manufacturing, environmental, finance, economic, and medicine, the need for prediction without losing information and knowledge are high. An appropriate representation of uncertain time series data is required for more accurate prediction. Data representation is one of the most important tasks in time series data pre-processing. Prior to the representation, these uncertain data properties are being compressed without losing any valuable information. The compressed properties of the data are important in order to simplify the dataset for next data handling. Therefore, this study aims to propose an Enhanced Symbolic Aggregate Approximation (EN-SAX) as the basis for uncertain time series data representation. The experimental results show that the EN-SAX manages to represent the data with lower error rates. It also improves the prediction accuracy. This work will benefit in many application domains in terms of representing the uncertain datasets without losing valuable information.

Keywords: Uncertain time series, representation, EN-SAX.

INTRODUCTION

Time series mining is one of temporal data mining applications. Time series is well-known as a stretch of values on a similar scale, indexed by a time that occurs naturally in many application domains such as weather, manufacturing, environmental, economic, finance, and medicine. Uncertainty exists in time series. Uncertainty is a basic feature of automatic and semi-automatic data processes (Keijzer et al., 2007). There are many solutions have been proposed in order to reduce uncertainty because of risks in losing information and misleading results (Radzuan et al., 2013). Besides, the uncertain time series is also a non-negative and precisely different ways in some fields. Particularly, uncertain data refers to data in which the ambiguity on whether it takes place or not exists or data for that the attribute values are not ascertained with 100 percent probability (Hooshsadat & Za, 2012).

The combination of uncertainties is significant (Cloke & Pappenberger, 2009; Jankovic, 2004; Lykoudis et al., 2010) in time series and brings important knowledge for end user. In order to gain benefits through uncertain time series data, the essential problem of uncertainty should be focused. The essential problem in the circumstance of time series data mining is how to represent the uncertain time series data. Data representation is one of the most important tasks in time series data pre-processing. Prior to the representation, these uncertain data properties are being compressed without losing any valuable information. The compressed properties of the data are important to simplify the dataset for next data handling. Therefore, this study aims to propose an Enhanced Symbolic Aggregate Approximation (EN-SAX) which uses mean values as the basis for uncertain time series data representation.

The structure of this paper is organized as follows. After the introduction, the main aims of the paper and briefly related research methods will be defined and described in part 2. The experiment on uncertain time series through Enhanced Symbolic Aggregate Approximation (EN-SAX) method will be explained in part 3, including its challenges and results. In part 4, an extensive discussion on the objectives of the investigated research, their approaches, and applied datasets are provided. The final sections of the paper contain the conclusions and references.

RELATED WORK

Uncertainty has been explicitly indicated as one of the future challenges in many fields (Halevy & Ordille, 2006). There is relationship between original series (certain) and uncertain series of data in time series. The certain time series data is a proper time series which has been corrected, or the inaccurate records have been removed from the dataset (Zuo et al., 2011). Thus, the certain time series is extracted to represent the original uncertain time series data. Prior to the representation, these uncertain time series data is being processed for valuable information. Representing time series data can be worked in various methods(Barnaghi et al., 2013).

2.1 Piecewise Aggregate Approximation

Piecewise Aggregate Approximation (PAA) presents the time series data using the mean (Avg) value of each segment (Fu, 2011) is the simplest method of representation. PAA using length of a time series and size after dimensionality reduction (Keogh & Pazzani, 2000; Yi et al., 2000) and it originally called piecewise constant approximation (Buu & Anh, 2011; Keogh & Pazzani, 2000). This method can be used although the rate of sampling is too low and missing some values is not important.

2.2 Adaptive Piecewise Constant Approximation

In 2003, (Lin et al., 2003) is proposed an extended version of representation named Adaptive Piecewise Constant Approximation (APCA). This method process with the length of each segment is not fixed with high possibility to prominent loss patterns in different segments.

2.3 Symbolic Aggregate Approximation

The common method for representing time series data is Symbolic Aggregate Approximation (SAX). SAX transfer numeric time series to a new form of data. Then, SAX discretises the time series data into segments and transforms of each segment into the symbol (Ahmed et al., 2010; Aref et al., 2004).

2.4 Extended Symbolic Aggregate Approximation

Lkhagva introduced a new time series data representation, i.e. Extended SAX (ESAX) for financial applications (Lkhagva & Suzuki, 2006). This ESAX uses Min, Avg, Max values as a string of symbols to search similarity of shapes between financial time series. But ESAX method has no numerical values as output to measure the similarity between original data and represented data (Lkhagva & Kawagoe, 2006; Lkhagva & Suzuki, 2006).

2.5 Enhanced Symbolic Aggregate Approximation

Although, PAA, APCA, SAX, and ESAX are appropriate methods for time series dimensionality reduction, but these methods are not suitable for uncertain time series data. This is because of the methods are based on mean values estimate, and there are some patterns with the high possibility to loss some of this kind of patterns. Hence, Enhanced SAX (EN-SAX) is chosen to be used for uncertain time series data. The EN-SAX are using Min, Avg, Max as a vector of data for data similarity search, using K-Means clustering method to determine symbols zones, and using cosine similarity to determine similarity between vectors of data (Barnaghi et al., 2013). Therefore, uncertain time series data can be experimented through this method.

EN-SAX is based on SAX and it uses two additional Min and Max points with original mean values of each segment in time series data. This helps to preserve some important points that are meaningful especially in uncertain time series. The Min and Max points in EN-SAX help to detect important values and improve the accuracy. There are four main steps in implementing this representation method for time series data. The steps are included (i) representation and indexing, (ii) similarity measurement, (iii) segmentation and (iv) pattern discovery.

2.5.1 Representation and indexing

Detection of uncertainty in time series data is done before implementing clustering. Prior to detection, existence of uncertainty in time series dataset is proved first. The highest percentage of uncertainty represents the highest uncertainness in the data (Radzuan et al., 2014). The purpose of this is to prove that the dataset has accomplished the experiment requirement. The clustering is being implemented where the current data is grouped into different clusters. During this step, in order to implement EN-SAX method, it is needed to map each set of data to a special symbol. Table 1 shows the example of mapping of each cluster to a symbol.

Table 1 Mapping clusters to symbols

Cluster	0	1	2	3	4	5	6	7	8	9
Symbol	A	B	C	D	E	F	G	H	I	J
Cluster	10	11	12	13	14	15	16	17	18	19
Symbol	K	L	M	N	O	P	Q	R	S	T

2.5.2 Similarity measurement

The original exchange data is transferred to new symbolized form. The description of evaluation of error rate between original data and the new symbolized data is done. Then, the mean value for each symbol using the number of the records for each symbol is calculated as shown in Figure 1.

$$\text{Min } (A) = (\text{average}[\text{cell}(A1\ldots Ax,1)]) \qquad (1)$$
//Min value column shows with 1

$$\text{Avg } (A) = (\text{average}[\text{cell}(A1\ldots Ax,2)]) \qquad (2)$$
//Min value column shows with 2

$$\text{Max } (A) = (\text{average}[\text{cell}(A1\ldots Ax,3)]) \qquad (3)$$
//Min value column shows with 3

$$\text{Mean } (A) = [\text{Min } (A), \text{Avg } (A), \text{Max } (A)] \qquad (4)$$

Figure 1 The mean (average) value provides a vector with three values [Min, Avg, Max]

The error rate can be calculated by comparing each segmented data that is mapped to a symbol with equal symbol mean value. As example, value for segment 1 of data are shown with S1=[Min, Avg, Max] that corresponds to a cluster symbol such as A as shown in Figure 2 and calculation of Min, Avg and Max value for each symbol shown in Figure 3.
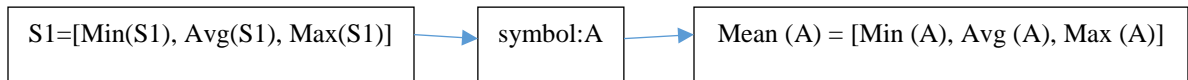
| S1=[Min(S1), Avg(S1), Max(S1)] | symbol:A | Mean (A) = [Min (A), Avg (A), Max (A)] |

Figure 2 Calculate error rate

Symbol	Min	Avg	Max
A_1	$A_{1,1}$	$A_{1,2}$	$A_{1,3}$
…	…	…	…
A_x	$A_{x,1}$	$A_{x,2}$	$A_{x,3}$

Symbol	Min	Avg	Max
A	Min(A)	Avg(A)	Max(A)

Figure 3 Calculation of Min, Avg and Max value for each symbol

2.5.3 Segmentation

During data segmentation process, the data must be divided to equal sized parts or called as segment. The size of the segment is determined by type of data and application domain. The mean value for each segment is calculated and used for representation of data for each segment. The single value for each segment is represented in SAX will then change to a vector in EN-SAX. The vector represented in EN-SAX is represented with [Min, Avg, Max] value with another attribute that is used as id for each segment.

2.5.4 Pattern discovery

The final step is categorizing and grouping different cases on the available data. WEKA is chosen as data mining tool for clustering method. The changed data to segments are clustered in order to represent with three values for each segment. The parameters for clustering are determined based on the data type and application domain.

EXPERIMENTS

The experiment in this study focuses on proposing the EN-SAX, which uses mean values as the basis for uncertain time series data representation.The uncertain data is used to prove especially the accuracy of each prediction so that these methods can be studied for time series data. The performance of EN-SAX is evaluated in terms of error rate and prediction accuracy. It is also compared with the original SAX method in order to prove the possibility to be loss of important patterns. First, the data is prepared for EN-SAX and then the data will go through Linear Regression (LR) and Support Vector Machines (SVM) method to perform the prediction.

3.1 Data collection and preparation

The real rain dataset that is time series datasets from Petaling Jaya Station is used for the experiment. The rainfall dataset of 20 years from year 1980 to 1999 is shown in Figure 4. The detection of uncertainty in time series dataset is been done first before proceeding to representation process as mention in previous section. Particularly, to add the 10 percent uncertainty to an attribute, it is attached with a 0.9 probability and the remaining 0.1 is distributed randomly among other values appear in the domain (Hooshsadat & Za, 2012). Eventually, the highest percentage of uncertainty represents the highest uncertainness in the data (Radzuan et al., 2014). This process helps in avoiding loss of information in the dataset compared with a normal time series process.

The rainfall data is chosen as a case study for this experiment. The attributes are including months from January to December, for 30 days and in 24 hours per day. There are trace value in rainfall dataset that represent value less than 0.1 mm. The data is saved as the main dataset in MS Excel sheets before applying various steps in this study. The 20 years' time series data are divided into Dataset 1 (DS1), Dataset 2 (DS2), Dataset 3 (DS3), Dataset 4 (DS4), and Dataset 5 (DS5).

The rainfall dataset is divided into equal size of parts that are defined as segments. Using the values included in each segment, the minimum (Min), mean (Avg), and maximum (Max) value is calculated for each segment. These values are calculated in order to implement the EN-SAX method as representation solution for uncertain time series data. Therefore, in the first step of representation, Min, Avg and Max value are calculated for each segment. It is needed to map each set of data to a special symbol before implement in EN-SAX method. Each segment is mapped to related symbol based on Min, Avg and Max values. The Avg value indicates the domain of each cluster which maps to the related symbol.

													RAINFALL AMOUNT (mm.)
Year : 1999													
												Hourly Total	
Hour **Month**	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13
January	3.4	1.1	0.8	0.0	0.0	0.0	0.0	0.0	0.3	0.7	Trace	0.4	11.1
February	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	Trace	Trace
March	14.1	1.1	0.7	5.3	9.6	4.4	3.4	0.5	3.6	0.4	0.8	3.4	1.5
April	2.8	6.1	8.3	1.2	44.8	5.8	3.8	10.4	13.6	Trace	0.3	Trace	Trace
May	9.3	115.3	53.9	4.3	2.0	3.0	0.4	Trace	Trace	34.3	2.0	7.5	2.1
June	0.0	12.8	7.1	6.9	2.1	0.1	0.0	0.0	0.0	0.0	0.0	6.7	1.1
July	0.3	0.5	4.2	18.7	10.7	17.1	18.5	37.5	6.5	0.7	0.9	0.7	24.9
August	Trace	0.0	0.0	0.3	0.3	0.1	0.0	0.2	Trace	Trace	0.0	Trace	4.3
September	1.0	0.1	0.6	1.2	8.6	2.5	Trace	0.1	0.0	0.0	0.0	45.7	26.6
October	2.8	1.5	7.6	1.6	0.5	9.7	6.3	1.1	11.9	7.4	2.2	4.5	1.9
November	0.1	0.2	3.3	3.8	0.7	Trace	0.0	2.3	0.7	0.8	7.0	0.3	9.2
December	4.4	1.3	0.8	11.2	26.1	13.6	18.4	24.7	12.9	1.7	1.1	8.5	1.9

◄ ► **1999** 1998 1997 1996 1995 1994 1993 1992 1991 1990 1989 1988 19 … ⊕ ⋮ ◄

Figure 4 Rainfall dataset at Petaling Jaya Station

3.2 Similarity measurement

The SAX method, as a common method for time series data representation, is used on uncertain time series data where the original exchange data is transferred to a new symbolic form through EX-SAX method. The measurement of similarity starts between original data and the new symbolized data by calculating the error rate

between the two sets of original and new data. The mean value is used in calculating the error rate. Table 2 shows average error rate between original and symbolized data using EN-SAX. The comparison results between SAX and EN-SAX show a decrease in error rate values between original data with segmented data. Table 3 shows the result of the experiment.

Table 2 Average error rate between original and symbolized data using EN-SAX

Symbol	DS1	DS2	DS3	DS4	DS5
A	1.4	3.3	11.9	0.6	0.1
B	0.4	1.3	0.2	6.6	8.7
C	0.3	0.1	0.2	0.2	0.0
D	7.1	5.7	3.6	7.3	12.0
E	2.8	0.2	1.0	0.1	12.8
F	1.4	3.5	9.6	1.3	1.5

Table 3 The result of experiment for comparison results between SAX and EN-SAX which decrease in error rate values between original data with segmented data

Dataset	SAX	EN-SAX
DS1	0.64	0.60
DS2	0.57	0.55
DS3	0.68	0.64
DS4	0.71	0.69
DS5	0.67	0.61

3.3 Prediction error rate on discretized data

The data is prepared using SAX and EN-SAX that is read from related files and applying LR and SVM methods for prediction. The results in Table 4 shows the comparison between performance of LR and SVM method where LR has better performance for prediction as shown by prediction error rate. The less error rate in dataset, the better prediction can be made.

Table 4 The comparison between performance of LR and SVM method

Dataset	LR		SVM	
	SAX	EN-SAX	SAX	EN-SAX
DS1	0.74	0.54	0.69	0.50
DS2	0.67	0.47	0.70	0.45
DS3	0.77	0.58	0.81	0.54
DS4	0.80	0.61	0.83	0.59
DS5	0.77	0.57	0.98	0.51

DISCUSSION

The yield of representation of uncertain time series data brings important meaning for future prediction. In this study, the results from the experiment show that uncertain time series data can be represented using EN-SAX. The performed analytical and experimental of this study towards EN-SAX has proved that EN-SAX was suitable to represent uncertain time series data.

There are differences between uncertain data and uncertain time series data. While uncertain data refers to static data (Aggarwal et al., 2009), uncertain time series data refers to continuous data (Gagne et al., 2011). However, both collected data often inaccurate and are based on incomplete or inaccurate information that needed to be represented using the EN-SAX before proceeds to next steps.

As it is discussed in earlier study, EN-SAX method is more effective in comparison with other dimensionality reduction methods such as SAX. The features of EN-SAX include keeping important patterns on uncertain time series data and avoiding missing key values that may have significant role on the decision for future prediction. Therefore, the EN-SAX method is helpful in uncertain time series data.

CONCLUSION

This study proposes an improved method name Enhanced Symbolic Aggregate Approximation (EN-SAX) for uncertain time series data representation. The vector represented in EN-SAX is represented with [Min, Avg, Max] value with another attribute that is used as identification for each segment. The results show that EN-SAX method is more accurate and effective in using the represented data for prediction purposes in uncertain time series data. The results show that EN-SAX method able to represent uncertain time series data that produced more accurate and effective prediction model.

ACKNOWLEDGEMENTS

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THE IMPACT OF LEADERSHIP ON EMPLOYEES' CREATIVITY AND INNOVATION IN AUSTRALIA

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ABSTRACT

Innovation in the contemporary Hotels industry is considered as a means to convert opportunities to new business ideas, which enhance the organization competitiveness. Given such importance, the main aim of this paper was to examine the impact of leadership behaviours on employee's creativity and innovation in the Hotels and Resorts in Australia. Based on a survey of 292 participants from 3,4 and 5 stars Hotels and Resorts, this study found that perceived leadership behaviours were positively and significantly related to employee's creativity and innovation. This study contributes to the body of knowledge on leadership and innovation, also based on this study finding; the industry practitioners would be able to develop strategies for building innovative and sustainable organizations.

Keywords: Creativity and Innovation, Hotels and Resorts, Leadership

INTRODUCTION

It is believed one way for organizations to become more innovative is to benefit from their employees' ability, diversity of skills and knowledge (Subramaniam & Youndt 2005) to identify new products, services and work procedures (Axtell et al. 2000; Unsworth and Parker 2003). While research frameworks and findings vary to some extent, most of the studies share agreement upon the importance of employees' innovative behaviour for organizational success and development (Hon 2011, Slatten et al 2011; Nieves et al. 2014).

One of the crucial proposals to encourage employees' innovative behaviour has been found to be organizational contextual factors (West & Sacramento 2012). Numbers of environmental and contextual variables such as leadership, organizational support and climate have been identified as motivators of individual level creativity and innovation in organizations (Shalley, Zhou & Oldham 2004; West & Sacramento 2012, Jong & Hartog 2007).

Despite the importance of Tourism and Hospitality sector in Australia, little research has been designed to address the topic of innovation in this context. Most of scholarly studies focused on European and Asian countries, such as Spain, Germany, Hong Kong, and China (Wong & Pang 2003; Ottenbacher & Gnoth 2005; Orfila-Sintes, Crespı´-Cladera & Martı´nez-Ros 2005; Chen 2011). This paper addressed this gap in the literature by touching the topic of innovation determinants in the Hotels' industry in Australia

LITERATURE REVIEW

Employee's Creativity and Innovation

Creativity and innovation often have been used as synonym in the literature, but innovation theorists believe they are two distinct dimensions, which are related to different stages of the innovation process. Creativity has been defined as idea exploration and idea generation, while innovation is a process that involves adoption, implementation and incorporation of new ideas or practices within the organization (Axtell et al 2000; Jong & Hartog 2010). Regardless of the mutual agreement among scholars that innovative behaviour is a multi-dimensional conceptualization, most of scholarly studies focused only on one of the innovative behaviour dimensions or did not attempt to empirically separate dimensions. Janssen (2000) was among the first scholars who developed a multi-stage construct consisting of different behavioural activities to measure the innovative work behaviour. Later on Krause (2004) presents innovative work behaviour measures considering two dimensions, idea generation and idea implementation. Dorenbosch, Van Engen and Verhagen (2005) defined

two main constructs, creativity-oriented behaviour and innovation-oriented behaviour, which drew on four aspects of innovation: problem recognition, idea generation, idea promotion and idea realization. More recently, Jong & Hartog (2010) developed a dimensional measure of innovative work behaviour including four factors: idea exploration, idea generation and idea implementation. In this paper, the concepts of employee's creativity separated from employee's innovation.

Leadership

Although there are various conceptualizations of leadership, reviewing the literature of leadership definition and theories reveals that there is a mutual agreement in the definition of leadership; leadership is a process occurring in the group settings, which involve influencing subordinates toward goal achievement (Northouse 2007; pp.3). Leadership as an important factor in an organizational environment has been considered as the basis for the understanding of individual creativity and innovation (Scot & Bruce 1994). Guptha & Singh (2013) argued that leaders have a very important role in shaping the employees' daily experience through posing direct influence on their activities, aiding or hindering their access to the information and resources, and also by affecting their interactions with others in the organization (pp. 67).

Over the years different leadership styles found to be related to employee's creativity and innovation; transformational leadership (Cheung & Wong 2011), LMX (Volmer, Spruk & Niessen 2011), participative leadership (Krause, Gebert & Kearney 2007), and empowering leadership (Slatten, Svensson and Svaeri 2011). Previous scholarly studies also indicated that leadership matters in encouraging innovation practices in the context of hospitality industry. Slatten et al (2011) on a study of front line employees in the hotel industry found empowering leadership significantly affected employees' creativity and innovation implementation behaviour. Similarly, Wong & Pang (2003) in an exploratory study identified that top management support is an important predictor of employee's creativity in this industry. Recently, Nagy (2014) identified that in Romanian 3 and 4 stars Spa Hotels, leadership plays an important role in such a way that leadership practices that enforce disciplines and routines are hindering creativity and initiatives among employees.

Leadership is one of the salient characteristics of the organizational context, which considered as determinant of creativity and innovation (Krause 2004; McMurray et al 2013). This study suggested innovative leadership behaviours provide the necessary support and motivation, which encourage employee's creativity and innovation. Therefore, this study proposes:

H1: Perceived innovative leadership is positively related to employee's creativity in Australia Hotels and Resorts.

H2: Perceived innovative leadership is positively related to employee's innovation in Australia Hotels and Resorts.

RESEARCH METHOD

Sample

This study emphasized, 3 stars, 4 stars and 5 stars hotels and resorts as the target population, because according to the literature, higher categories of hotels are more innovative than lower-categories, further it has been found, chain of hotels provide a better environment for innovation endeavours (Orfila-Sintesa, Crespı´-Claderaa and Martı´nez-Ros 2005). According to Australian Bureau of Statistics (2011); hotels and resorts have higher room occupancy rates, guest nights occupied, and takings from accommodation rather than other tourism establishments.

The data collection of this research commenced by distributing 618 questionnaires to all 3,4,and 5 stars Hotels and Resorts in Australia in order to obtain a representative sample. In total 292 usable responses were collected indicating 47 % response rate.

Measures

Leadership

Leadership behaviours were measured using Innovative Leadership Behaviours (ILB) instrument developed by Moghimi, Muenjohn, & McMurray (2014). ILB examines seven major categories of innovative leadership behaviours; Empowering (e.g. Empowers me to make important decisions and take control over how to accomplish my tasks), Participative (e.g. Involves me in decision making and my ideas are listened and valued), Innovative-oriented (e.g. Has willing to consider different opinions and suggestions to improve deficiencies and solve problems), Supportive (e.g. Provides continuous support and encouragement when dealing with stressful and challenging tasks), Consultative advisory (e.g. Clarifies expectations, responsibilities, and scope of authority), Charismatic (e.g. Creates and express clear vision of future and often brings up new ideas about possibilities and opportunities for the future), and Authoritative (e.g. Is constantly controlling and directing subordinates on their tasks). The items were rated on a 5-point Likert scale, ranging from (1) 'strongly disagree' to (5) 'strongly agree'.

Employee's Creativity and Innovation

Following the current approaches to study innovative behaviour (Dorenbosch et al 2005; Jong & Hartog, 2010), this study distinguished creativity referring to idea exploration and generation and innovation referring to idea championing and implantation. In order to capture the aspects of each phase, this study adapted items from different relevant measures from the literature, which has been used widely in the literature and the internal reliability and validity have been approved by prior scholarly studies. The items were rated on a 5-point Likert scale, ranging from (1) 'strongly disagree' to (5) 'strongly agree'. For employee's creativity, items adapted from the following innovative behaviour measures in the literature; (Jong & Hartog 2010, McMurray & Dorai 2003, Krause 2004, Janssen 2000, and Dorenbosch et al 2005). For employee's innovation, items adapted from the following innovative behaviour measures in the literature; (Scot & Bruce 1994, Jong & Hartog 2010, McMurray & Dorai 2003, Dorenbosch et al 2005, and Janssen 2001).

RESULT

Demographics

The sample comprised of 145 male (49.7%) and 147 female (50.3%), showing the similar distribution of sample based on gender. The majority of respondents were in the middle age groups, 25 to 30 years old (35.3%) and 31 to 40 years old (34.2%). The sample was highly educated with a breakdown of educational level as follows; Degree/Bachelor (47%), Masters (21.6%), Certificate diploma (20%) followed by PhD and Secondary education comprising 2.1% of the sample each. Job position groups included 54.5% from staff positions and 45.5 % from managerial positions. The distribution of the sample based on tenure with the present job demonstrates one extreme figure with one group working between 1 to 3 years (112 respondents, 38.4%), following up by groups that had worked for the organization 4 to 7 years (26.7%), more than 7 years (24.3%), and less than 1 year (10.6%). The data indicated that the largest groups of participants in Australia Hotels and Resorts were from the Hotel category (133 participants, 39.7%) following by the Hotel & Resort category (116, 38.7%). The smaller groups were from Boutique hotels (47, 16.1%) and Resorts (16, 5.5%). Further, just under half of the participants were from Hotels & Resorts following by International chains (136,46.6%), and 30.5% and 22.9% respectively in Local chains and Non-chain hotels.

Analysis

The statistical package for Social Science (SPSS) (PASW Statistics 18) was utilized for conducting Regression Analysis. After controlling for demographic variables the simple regression analysis revealed that innovative leadership is positively and significantly related to employee's creativity (B: 0.627, p: 0.000) in Australia Hotels and Resorts, innovative leadership defined 39.3 % of variance in employee's creativity. Therefore, the hypothesis H1 is supported (Table 1).

Table 1 Regression Model, ILB and Employee's Creativity

Simple Regression Model	Degree of Employee Creativity		
	β	T-value	P-value
Innovative Leadership	.627[a]	13.713	0.000
R2	.393		
Adjusted R2	.391		
F-value	188.053		

Support also was found for Hypothesis 2 with a simple regression analysis indicating that the effect of innovative leadership in predicting employee's innovation in Australia Hotels & Resorts was positive and significant (β: 0.659, P: 0.000). As it can be seen from the table 3, innovative leadership predicted 43.5% of employee's innovation. Hence, It can be concluded that the hypothesis H2 is supported (Table 2).

Table 2 Regression Model, ILB and Employee's Innovation

Simple Regression Model	Degree of Employee Creativity		
	β	T-value	P-value
Innovative Leadership	.659	14.934	0.000
R2	.435		
Adjusted R2	.433		
F-value	223.037		

DISCUSSION AND CONCLUSION

Generally, this study makes a contribution to the literature of Hotels industry by identifying the predictors of employee's creativity and innovation. This study has focused on different levels of organization; leadership and organizational climate at organizational level and personal initiative at individual level. The results of simple regression analysis indicated that Innovative leadership had a direct impact on employee's creativity and innovation.

The findings point out that in Hotels and Resorts in Australia the influence of innovative leadership behaviours on employee's innovation (r:0. 43, P< 0.05) is stronger than its influence on employee's creativity (r: 0. 39, P< 0.05). One possible explanation for this finding could be that employee's innovation refers to the implementation stage of new ideas; leaders and organizational climate are the factors in the organization that shape subordinates access to resources, their authority in decision-making and goal setting. Similarly, several scholars identified contextual factors to be a critical contingency regarding employee's innovation implementation behaviour (Baer & Frese 2003, Shamir & Howell 1999). The significant positive relationship found between innovative leadership and employee's creativity and innovation in this study are consistent with the existing literature in the context of hospitality industry, which found leadership as a critical factor in promoting employee's creativity and innovation (Wong & Pang 2003; Chen 2010; Slatten et al 2011).

The findings in this study are twofold in that they make a significant contribution to both practice and scholarly theory. This research contributes to obtaining new understandings in relation to how employee's creativity and innovation can be fostered in the context of Hotels and Resorts. This research also contributes to the literature of innovative behaviour by distinguishing between the notion of creativity and innovation. Regardless of the fact that innovative behaviour is theoretically conceptualized as a multi-dimensional phenomenon, but the past empirical studies mainly focused only on either idea generation or the implementation stage. This study advances knowledge in the area by treating employee's creativity (idea generation), and innovation (idea application) separately in order to examine the influence of different organizational and individual variables.

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EVALUATION OF CUSTOMER COMPLAINTS OF EMPLOYEES: THE CASE OF TRIPADVISOR

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ABSTRACT

Generally, customers who have been dissatisfied with service have mostly complainted to the frontline, managers, friends or family. Customer use to complain direct –face to face- but now with globalization of internet customers disseminate complaints indirect through internet. Hotel management should take advantage of complaints. In that context customer complaints behaviours are need to be known and taken in consideration. In literature it is necessary to specify that literature handling costumer complaints in hotels mostly concentrates on foreign customers. But internal customers as important as foreign customer. This study aims to determine complaints of customers related employees from tripadvisor website. Tripadvisor known as one of the most important online websites. Considering registered hotel and consumer number of tripadvisor is chosen as research field. Descriptive content analysis has been done with regard to customer complaints related the employee on tripadvisor, one of the on-line sites, within customer complaint management including application method of the study. In order the data to be theming, a table has been constituted. Significant notions have been added on the right of the table, and near-synonymous notions have been united under a heading. During the analysis process, firstly, it has been examined the issues of customer complaints of employees have been concentrated. For this purpose, seven evidences have been found. Findings revealed that online customer complaints of the employees have stemmed from impoliteness, remoteness, ignorance, indifference, service failure, poor housekeeping, lack of foreign language competencies.

Keywords: customer complaints, employee, hotels, website

INTRODUCTION

It has been among the primary objectives to ensure the customer satisfaction in today's business management. In that sense, customer and customer relationship is very crucial to service industry particularly for boundary-spanning-role employees. For this reason, among various methods as service design, impression management, data mining, relationship marketing, mystery shopping, analysis regarding customer expectation and satisfaction, making use of customer complaint is the easiest to apply and well accepted to ensure good customer centricity. Customer complaint management within CRM (Customer Relationship Management) takes an important place in such service areas as hotel management, and how you handle the complaint is a strategic tool. Therefore, the matters in hand not only enhance customer satisfaction but also prevent negative marketing and image. For the hotel establishments to survive and increase the profits, customer complaints are quite substantial. Several studies show that customers have complained mostly about the grievances like the ones stemming from the staff, service malfunction, and housekeeping (Lauria, Gal and Yagil, 2014; Phau, and Sari, 2004; Gilly, Stevenson, & Yale, 1991).

In the success of customer complaint management showing up as a result of either employees or other reasons, organizational factors also have to be considered as well as employee involvement, education and encouragement. In this context, customer complaint behaviors are crucial to be known. Because, as well as the hotel management, customers have been sharing their complaints with their families, friends, and relatives. The necessities as social responsibility, drawing attention, taking revenge, unburden themselves are the reasons behind. Nowadays, another accepted and discussed development is at stake especially in the area of complaining behavior. Online customers are able to announce their opinions and complaints about the hospitality to the whole world via websites as booking.com, tripadvisor, foursquare. Therefore, it is necessary for the managers to evaluate customer complaints and offers by actively using these sites for sustainability and profitability of the hospitality.

It is seen that the studies within customer complaint management focus on the issues like tendency to report customer complaint, profit from customer complaints, loyalty marketing, types and reasons of on-line customer complaints. Lack of studies on customer complaints of the employee in complaint management is the essential reason why this study has been conducted. This study focuses on the on-line hotel customer complaints of the employee. The relevant literature is included by dwelling on customer complaint management notion primarily. In the next section, literature about what the complaints frequently encountered in complaint management in hospitality and how these complaints are dealt with has been included. In the following parts,

descriptive concept analysis has been done with regard to customer complaints about the employee on tripadvisor, one of the on-line sites, within customer complaint management including application method of the study. In accordance with the results of the application, findings are classified and tabulated. At the end of the study, the results and useful suggestions for real sector trainees in practice with regard to business practice have been presented.

The Concept of Customer Complaint Management

Complaint is the result of the situations experienced when the purchased product or service fails to satisfy the customers or the unexpected situations that show up during the course of consumption. (Kılınç and Ok, 2012). It is possible that unexpected situations can cause customer dissatisfaction and hereby result in customer complaint. Business firms, thus, should make provision against the situation that can cause dissatisfaction and value customer satisfaction. Customer complaint management is a field frequently studied by the service industry firms as tourism, health, industry and airline. Complaint that appears as a result of the customer dissatisfaction occurs owing to the fact that purchase of goods and services fails to satisfy the customers. Studies on customer complaint management date back to 1960s.

In this study, customer complaint management has been discussed within the scope of attribution and justice theories cited often in service industries. Attribution theory is an issue which is developed for service industries and well-studied on (Kelley and Michela, 1980).This theory is used to determine the impacts of customer complaint behavior on the following purchases. (Phau Sâri, 2004). According to attribution theory, success or failure can be attributed to internal and external factors (Kelley, 1967). When the customers are dissatisfied with the service or when they make such a bad choice, they blame themselves. This is described as internal attribution. Or they blame service providers andmanagers for the bad service and sales. This is described as external attribution. In a research conducted by Phau and Puspitaise (2004), customers dissatisfied with the service and sales, and reacting to this turned out to have high education levels and showed their dissatisfaction to either service providers or firms. Theory of justice is another study benefited in the research. It is obvious that studies conducted in the scope of the theory of justice till 2000s have generally been about circle of trades and legal contents. But recently there has been increase in the number of studies conducted in the scope of the justice theory stemmed from the unwanted experiences that customers have to face during purchasing service from the establishments (Collie, Sparks and Bradley, 2000). This recent phenomenon is the result of the fact that notion of justice has risen in importance and perception of justice have started to change.

In service industries, performance of services includes an exchange between customers and service providers. Therefore, customer demands that service should be fairly provided. How public relations consultants communicate with the customers has great importance as service industries is a labor-intensive sector. Improvement studies conducted for service industries clearly show that when a service failure occurs, the expectation of justice rises. Customer's expectation of justice appears when he compared the services provided to him with the ones provided to the others, as well. Furthermore, when the customer compares the products and finds out that he pays more for the similar product or service than the other customer, the expectation of justice appears. When the firms don't secure the justice or meet the expectations, customers response harshly. Meeting the customer satisfaction and sustaining it are among the crucial strategic aims of the firms, (Naumann, Jackson and Rosenbaum, 2001).The efficient management of complaint which has great importance in meeting the customer satisfaction will have a positive effect on the firm's profitability as well as the number of the customers. However, the active maintenance of complaint management process is related to the cultural level, social behavior profile, and good communication skill of the employee. Another important factor necessary for efficient complaint management is the organizational factor. These factors are described as institutional strengthening, incentive for the employee, explicit listening to the complaints. (Andreasen, 1988; Gilly, Stevenson and Yale, 1991). As a labor-intensive sector, it is always vulnerable to malfunctions, and the complaints stemmed from these malfunctions. For this reason, it is natural that malfunctions can occur in service industry. But, only if the firms can find a solution to the complaints, the complaints are noteworthy. If they listen to the complaints actively and find solutions, they will be able to meet the customer satisfaction and constitute loyalty. (Tax and Brown, 2012). While dissatisfied customers were sharing this satisfaction at least nine persons beforehand, this number is globalized as people has started to use the internet actively. Research studies show that almost half of the complaints are due to employee. (Kılınç, 2011). When customers air grievances, they think that the complaints will be taken into consideration and a solution will be found. However, if the employee whom the customer airs grievances first could not find a solution or ignores the complaint, frequency of complaints will increase. Then, customers who think that their complaints are ignored not only share them with the fellows but also announce them to the whole world by means of social media. Executives should state that solutions to their complaints have been developed by using social media just as the customers have done and they should try to make for the mistake. Only then there will be an efficient complaint management. Otherwise social media complaints will effect purchasing consideration of service users in the next period and cause financial and emotional damage. Within this period, -managers -especially customer relations managers should actively do their part and present the required behavior pattern not to lose customer.

Complaint Management in Hospitality

Although customer satisfaction has been the primary goal of the business managers and owners, there isn't an explicit solution to achieve this. (Harrington et al., 2012). There have been lots of studies on how to meet the customer satisfaction, but there hasn't been a consensus upon this issue. One of the reasons why there isn't a consensus on meeting customer satisfaction and avoiding complaints is that it is a labor intensive sector. If purchases of goods and services don't meet the expectation, this will create dissatisfaction and consequently customer complaints. It is known that complaint management in hospitality has been a closely studied subject. Studies in this field have been consisted mainly of service, employee behaviors, quality and hygiene of the hospitality. In this application study, it has been found out that customer complaints about the employee are rudeness, remoteness, indifference, ignorance, lack of foreign language competency, service malfunction caused by the employee, negligence in hygiene. According to Chung and Hoffman (1998), researchers have categorized the cases of complaints in service industry as the following:

• During the service delivery process; failure to fulfill customer demands on time, and as expected.

• Inappropriate behaviors of the employee against customer complaint; employee's being deaf to the matters about which the customers complain, connivance the matters during the complaint.

• Undesirable employee behaviors; nonchalant attitude towards the customers who expect to be respected and enjoy credit.

As is seen, complaints about customer-employee interaction have been rather disturbing for the management. It is another salient issue to improve employee behavior in order to prevent this. For this purpose, sensitizing employee behavior, and encouraging all the employees who communicate with the employee within the organization to solve customer-complaints and to deal with these complaints are the first applications come to mind. (Reichheld and Sasser, 1990). Thus, the customer will notice that the complaints are dealt with and will feel cared so that customer loyalty could increase. In his study (2006), Kozak has stated that almost half of the tourists (%45) visiting Turkey have complained about lack of foreign language competency of the employee, lack of safety, lack of catering, housekeeping problems, however, the rest has not complained about anything. On the other hand, customers at first have no idea where to report their complaints. It is known that customers who have complaints have mostly hesitated to report the complaints. This is because customers don't have confidence in finding a solution to the complaints even if they have reported them. Satisfied customers have shared their satisfaction with their fellows especially relatives. Customers' sharing their experiences will contribute to create new potential customers for the hospitality. Customers who have been dissatisfied because of unmet needs have needed to confide and share the complaints. Dissatisfied customers express their experiences more harshly than the satisfied ones. (Sparks and Browning, 2010). Because, they don't want another potential customer to make the same mistakes they have done. They consider this as a role of social responsibility or a desire of avenging. The people talking about their holiday experiences tell them so lively and realistically that the audience will have a picture of those moments. Therefore, these conversations in customers' decision-making process are very influential on the potential customers.(McAlister and Erffmeyer, 2003). Another factor affecting customer decision in service delivery of hospitality is the service quality. Harrington et al., (2012), has argued that five important deficiencies are quality of the service, speed of the service, quality of the catering, employee's warmth and intimacy towards the customers, and housekeeping. Customer complaints were perceived negatively in the past, but now it is seen as an opportunity to turn a negative situation into positive and even as a means to create customer loyalty. (Alabay, 2012).However, most of the hotel institutions haven't taken lesson from the complaints derived from service malfunction. Hospitality can make improvements by working through the complaints and avoiding these malfunctions that cause complaints so that they could meet the customer satisfaction and avoid future customers' complaining about the same malfunctions. If these improvements are implemented considering the previous models and theories, more effective process will be realized.

By means of today's technology, complaint in electronic media notion described as online complaint has been used. Customers sharing their experiences via the internet tell both negative and positive aspects of the experiences. But negative experiences are told more harshly than the positive ones as customers think that they have been hard done by the hospitality. In their studies Sparks and Browning (2000) state that online complaints are aimed at evaluating the hospitality in positive aspects, namely encouraging customers to go to that hospitality, or in negative aspects namely discourage customers who will probably go to that institution. It has been stated that customers have behaved like that because of many reasons such as taking revenge, carrying out social responsibility, calming down, preventing other customers to experience the same bad events. Online websites enable the customers who got service beforehand or the potential customers free access. These websites have enabled the potential customers to choose the hospitality they will get service easily as they share the previous customers' experiences. For this purpose, websites like foursquare, tripadvisor, booking.com have been improved in order for the customers both to make reservation and to have an idea about the hospitality. These websites have enabled the customers to make front desk transactions themselves. In these sites, firms

have been classified in terms of many aspects like price, class, type and location. The root cause of why service providers in these websites have been built like this is the desire for the customers to share either positive or negative experiences in the hospitality. Developing and wide spreading webs offer the potential customers in search of accommodating and vacationing elaborate written and visual information. This information could include opinions of the previous customers as well as the information provided by the hospitality itself.

The fact that the social media has recently been used by the customers actively require the managers as well to use the social media, because customer experiences shared in this platform have been of vital importance for the hospitality to improve its service facilities. However, if the customer relations management and the managers linger on the complaint instead of getting started to fix the problem, the firm not only won't find a solution but also won't be able to prevent the future complaints. Therefore, complaints need to have the qualification of feedback and be used effectively in recovery phase. It can be stated that the active use of online websites has contributed both interpersonal and mass communication. What makes these complaints different from face to face complaints is that they have been registered on the website for a long time. Accordingly, firms should give detailed information about the solution to the customers by responding to the complaints via the same website in order not for potential customers to be affected by these complaints and change their minds negatively.

RESEARCH METHOD

It's known that online websites are often used by the customers to evaluate the firms. In this study, tripadvisor which is one of the important online websites is chosen. The reason why the complaints have been chosen from this site is that it is one of the biggest travelers group sites in the world considering the number of members and complaints. The area of the research is five-star hotels in Antalya region registered in Tripadvisor. Number of the hotels in Antalya district registered in Tripadvisor totals 225. Within this scope, customer complaints about 39 five-star hotel in Antalya region registered in this website have been evaluated. The data have been acquired by the excellent, very good, average, bad, awful parameters on Tripadvisor's comment page. On that page, bad and awful parameters have been accepted as complaints and the data have been selected from these two parameters. On the website, the number of the complaints in these two parameters totals 1076.The complaints are limited to the ones between 2013 January-2014 June season and of the employees. As they want the research to contain current data, such a restriction has been needed. As a result of the survey, the sum total of the complaints of the employee is 72 which make up the sample of the research. So as to analyze, complaints of the employees have been taken manually from the relevant site. Significant notions have been underlined. In order the data to be materialized, a table has been created. Significant notions have been added on the right of the table, and near-synonymous notions have been united under a heading. During the analysis process, firstly, it is has been studied the issues at which the customer complaints of the employees have been concentrated. For this purpose, seven evidences have been found. Hotel managers' attitudes towards customer complaints have been the second intensified area. Secondly, it is seen that customer complaint behavior has been concentrated in two basic dimensions. In this phase, also findings related with the complaint procedure have been acquired. Explanation about the issue is included in research findings part.

RESEARCH FINDINGS

The study has been planned in order to determine the cause of the online customers' complaints of the employees in hospitality. Research findings have been presented under three headings. These headings have been ranked as customers' online complaints of the employees, hotel managers' attitude towards customer complaints, and complaint procedure.

Customers' Online Complaints of the Employees

The ratio has been included in Table 1 in order to understand more clearly the origin of customers' online complaints of the employees which have been taken from the parameters on Tripadvisor and evaluated. It is seen on Table 1 that customer complaints of the employees consist of seven different items. While on the top of the issues about which customers complain is employees' misconduct by %58,3, at the bottom there is the employees' lack of knowledge by % 8,3. Thus, it can be stated that employees in hospitality behave rather rudely, remotely, indifferently towards the customers. Rude, remote, indifferent attitudes that make up the large part of the complaints are behavioral aspects. Employees' lack of foreign language competency and employees' ignorance are the complaints stemming from employees' qualitative characteristics. Service failure stemming from the employees and housekeeping are in the category of other complaints.

Table 1 Customers' Online Complaints of the Employees

TYPE OF COMPLAINT STEMMING FROM THE EMPLOYEE	%
1-Rude employee behavior	42/72
2-Remote employee behavior	24/72
3-Service failure stemming from the employee	23/72
4-Indifferent employee attitude	18/72
5- Employees' lack of foreign language competency	14/72
6- Poor housekeeping	10/72
7- Ignorant employee	6/72

Note: Because some customer complaints stem from more than one reason, they are shown proportionally. Actual number of total subject is 72.

### Hotel Managers' Attitudes toward Customer Complaints

In Table 2, the results of to what extent the hotel managers take the complaints into consideration which is another finding acquired from the study are shown. It shows that most of the hotel managers (%58.3) haven't taken the complaints into consideration. This result could be an indicator of the degree of the importance given to customer complaints and the dimension of customer complaint management issue.

Table 2 Hotel Managers' Attitudes toward Customer Complaints

	N	%
Number of complaints responded by the managers	30	41,7
Number of complaints stood idly by the managers	42	58,3
Sum total of the number of the complaints	72	100

Costumer Complaint Process

The managers and the employees in hospitality finding a solution by responding to customer complaint positively affect the intention of the customer to prefer the same hospitality again. (Çeltek, 2013:163). Customer complaints are important for the hospitality to overview their situations and improve their service facilities. However, as is seen in this study neither the employee nor the managers can utilize the reversal of the customer dissatisfaction to customer satisfaction efficiently. Efficient customer complaint management can be carried out with the employees' active participation in the procedure. So, employees should firstly quit rude, remote, and indifferent behaviors, and then should value the housekeeping and delivery service and lastly should gear up namely increase the level of knowledge and language proficiency so that they can contribute positively to the complaint management procedure.
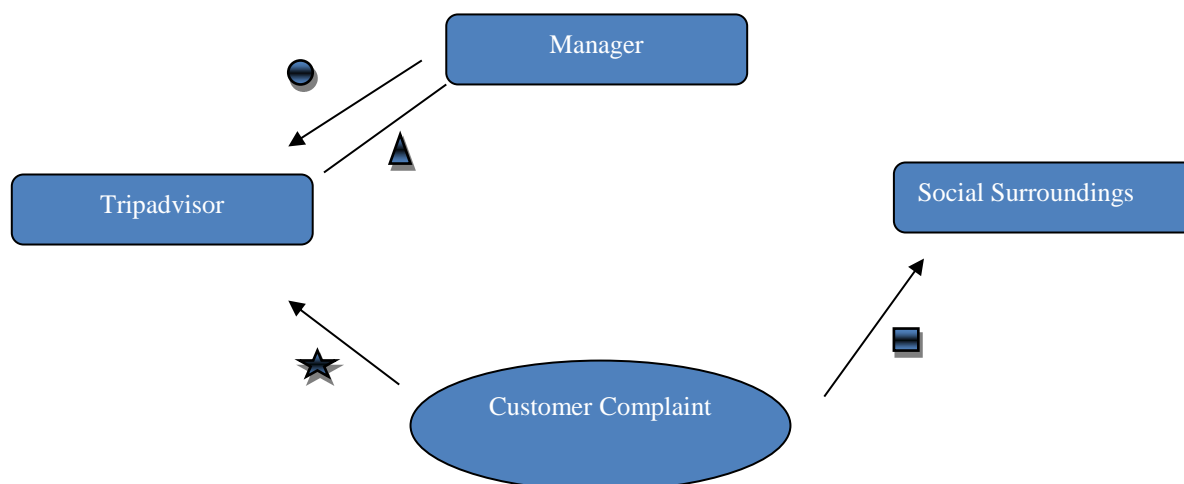
Worksheet	
Symbols	**Activities**
★	Customer reporting the complaints to the website
●	Managers responding to the complaints
▲	Managers standing idly to the complaints
▬	Customers sharing the complaints with their social surroundings

Figure 1 Customer Complaint Process

As seen in Shape 1, customers share their complaints with their social surroundings and then complaint websites. As to managers, they stand idly to more than half of the complaints (%58).Therefore, in such a procedure, meeting the customer satisfaction and preventing customer loss cannot be possible. Firms should find solutions by responding to the complaints in order to minimize customer complaints and overcome the customer dissatisfaction. Also, catch-up work, foreign language, education of communication, seminars as to the importance of customer complaints can be organized for the employees so that the hospitality can make improvements and meet the customer satisfaction.

CONCLUSION AND IMPLICATIONS

This study conducted to determine the cause of the customers' online complaints of the employee, firstly the relevant literature has been searched. It has been observed that the studies conducted in this field have concentrated on tourism, banking, health, airline and industry within the scope of service industry. The studies have been done in the areas of tendency of reporting customer complaints, learning from the complaints, build up loyalty of customer complaints, types and reasons of online customer complaints. As a result of these studies, it has been decided to work upon the causes of the online customer complaints of the employees. As well as the online customer complaints of the employees in hospitality, the hotel managers' attitudes towards these complaints have been searched in this study.

As a result of the study; it has been determined that online customers complaints have stemmed from rudeness, remoteness, ignorance, indifference, service failure, poor housekeeping, lack of foreign language competency of the employees; a large part of the online customer complaints of the employees (%58,3) is because of the employee misconduct; the hotel managers stand idly to online customer complaints and leave unanswered these complaints.(%58,3)

Considering the results in this study, the study can be recommended as it is a cognitive analysis or synopsis study in which all the issues about customer complaint management have been dealt with and an advisor for the following studies for the researchers. Also, issues on complaint websites after content analysis has been done can be used as an important source of information for the future services which will be provided

or the ones which shouldn't be provided on no account by hospitality managers. By means of interactive relations on these websites, also customer relations can be carried out based on customer complaints and testimonials.

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A CASE STUDY: UTILIZATION OF PMBOK® PROJECT MANAGEMENT TO CONSTRUCT U-TICKET SYSTEM

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ABSTRACT

Abstract- The objective of this study was to introduce a case study on utilization of PMBOK project management to construct u-Ticket system of u-Tour as a prototype. The u-Tour service as 'anytime', 'anywhere' has a concept to provide a convenient tourism information service related to tourism system. Especially, this project focuses on u-Ticket system development of various u-Tour services and the u-Ticket system means the adoption of mobile phone RFID technology. With one RFID ticket in a mobile phone, tourists would be able to visit package tour places. Ticket management that saves paper would be computerized for efficient tour operation. This study focused on using PMBOK Guide to manage the u-Ticket project. Thus, this paper described some results about this project. First, after introducing project overview including project need, this study described the outcomes of the project and development plan of u-Ticket system. Second, this study described the project management tools and techniques used on the project, and the opinion as to their effectiveness. In order to organize the description, relationship among the project knowledge areas, tools & technique, and outputs in u-Ticket project was presented by a summary table. Third, this paper described the lessons learned based on team members' opinion for future projects.

Keyword: u-Tour, u-Ticket, PMBOK, Project Management, Ubiquitous technology

INTRODUCTION

As a trend of IT service, the interest of ubiquitous technology is gradually increasing. Ubiquitous computing is not virtual reality and ubiquitous computing endeavors to integrate information displays into the everyday physical world [2].

This concept is currently being adopted in a variety of area [9, 10, 11, & 12]. Under this circumstance, final study introduced the project related to ubiquitous tour (u-Tour) service. The objective of u-Tour service as 'anytime', 'anywhere' is to provide a convenient tourism information service related to tourism system (transportation, attractions, lodging, experience place, festivals, food, facilities and public facilities, etc.). Especially, this project focuses on u-Ticket system development of various u-Tour services and the u-Ticket system means the adoption of mobile phone RFID technology [7, 9]. This study focused on using PMBOK (project management body of knowledge) Guide (4th ed) [8] to manage the u-Ticket project. In this vein, this paper described some results about this project. First, after introducing project overview including project need, this study described the outcomes of the project and development plan of u-Ticket system. Second, this study described the project management tools and techniques used on the project, and the opinion as to their effectiveness. In order to organize the description, relationship among the project knowledge areas, tools & technique, and outputs in u-Ticket project was presented by a summary table. Third, this paper described the lessons learned based on team members' opinion for future projects.

PROJECT NEED AND DESCRIPTION

1.1 Project background and selection

Tour industry is being a global competitiveness and Tour service industry is achieving high added-value. As targeting region of this project, Jeju Governing Province has a goal to establish tour service industry foundation with global competitiveness utilizing IT technology [4]. Jeju Governing Province is now trying to improve whole process of travel in minute detail from tour consumer's prospective. Under this background, all organizers including tour companies in Jeju province should improve life quality of people by improving travel convenience. For the future time, Jeju province will become international free city having IT-based ubiquitous tourism as representative tour industry local government. Especially, most overseas tourists heavily depend on travel guides and the service quality of travel guide determines global satisfaction on a tour of Jeju province. Thus, more customized tour information to the Internet and mobile devices is required.

U-Tour service should provide with differentiated system dependent on various classes in tour industry. Finally, service providers can offer the high quality service to tourists by ubiquitous technology. U-Ticket system of u-Tour services was finally selected as this project through a company meeting. U-Ticket system focuses on the adoption of mobile phone RFID technology including the existing actual card system. With one RFID ticket in a mobile phone, tourists would be able to visit package tour places. Ticket management that saves paper would be computerized for efficient tour operation.

1.2 Project Key Stakeholder

Generally, stakeholder includes all individuals and organizations that are impacted by the project. Especially, the key stakeholder includes executive management with an interest in the project and key users identified for participation in the project. The stakeholder analysis is best accomplished before a project is initiated or at some beginning phases [6].

OVERALL OUTCOME OF THE PROJECT AND DEVELOPMENT PLAN OF U-TICKET SYSTEM

The objective of this section is to describe the outcomes of the project and development plan of u-Ticket system.

Installing u-Ticket management system can have the effect of shifting the entrance tickets currently circulated in paper coupons into u-Ticket. That is, u-Ticket is the system implementing integrated ticket only for resorts that the system is installed, which increases tourist's convenience to use, also and can be utilized as ticket medium to be reliable and to guarantee publicity. The effect could be obtained to substitute the ticket distributed by traditional paper coupon with u-Ticket card through u-Ticket ticketing management system installed at tour sites.

But settlement of service should be preceded by test operating and participation of travel agencies and operators at tourist's spots. Participation of travel agencies and operators at tourist's spots and institutional improvements will make calculating statistical data (functional realization of the system is on the premise of completion) possible for development in tourism and environmental improvement in the future. And u-Ticket should prepare a chance to diversify tour-related travel products by developing u-Ticket related travel products. Tourist's reliability for prices could be improved by model operation of u-Ticket distribution which publicity and economic feasibility are guaranteed. In addition, u-Ticket should implement an opportunity to prepare one-ticket service of tour by extending functionality of u-Ticket. Since this system would be constructed through public asset execution, price policy to enhance transparency and discount policy to guarantee economy for tourists should be established as well as policy to guarantee the profitability for travel service providers, a broker that operates this approach. In the future, price policy and discount policy should be established through the stage of stabilizing service, which must lead to continued expansion of service.

PROJECT MANAGEMENT TOOLS AND TECHNIQUES USED AND ASSESSMENT

The objective of this section is to describe the project management tools and techniques used on the project, and the opinion as to their effectiveness. This section presents the approach and aspects in relation to project management in u-Ticket system project.

4.1 Requirements Control Plan

This plan specifies the mechanisms for measuring, reporting, and controlling changes to the product requirements. And it describes how to assess the impact of requirement changes on product scope and quality, and on the project schedule, budget, resources, and risk factors.

4.2 Risk Management Approach

Due to weak infrastructure of organization, unclear organizational objectives, and intra-organizational resource conflict, risk culture is very important factor for the success of risk management [5]. So, this paper focuses on the risk management based on this risk culture.

Project manager continuously searches each risk element, reduce or removes the risk level, establishes and manages measures in order to reduce the influence related to risk and uncertainty in the overall stage of project development. A Project Risk Management Plan is a controlling document that incorporates the goals, strategies, and methods for performing risk management on a project. The project manager explains potential risk domains of a project to participating personnel of the risk review meeting and provides Risk Checklist for identifying risk factors. The risk discoverer identifies potential risk factors of a project by utilizing "Risk Checklist". The risk discoverer analyzes the root cause on identified potential risk factors, assesses influence, seriousness, probability of occurrence and expected time in aspects of the process, quality, scope and technology and describes it in detail by utilizing "Risk Checklist". The risk discoverer establishes a recommendable risk response method on decided risk factors by

considering the aspects of the process, quality, scope and technology, and describes it in detail by utilizing "Risk Management Plan".

4.3 Communications Management Approach

The project manager takes a proactive role in ensuring effective communications on this project. The communications requirements are documented in the Communications Matrix presented in this document. The Communications Matrix is used as the guide for what information to communicate, who is to do the communicating, when to communicate it and to whom to communicate.

4.4 Schedule Control Plan

The goal of this plan is to specify the control mechanisms used to measure the progress of the work completed at milestones. And it specifies the methods and tools used to compare actual schedule performance to planned performance and to implement corrective action when actual performance deviates from planned or required performance.

4.5 Resources Plan

Sponsor wants to keep the confidential report. Therefore, cost (budget) including other resources (Human, Procurement) was omitted in this project.

4.6 Monitoring and Evaluation Methods

Monitoring is a procedure for checking the effectiveness and efficiency in implementation of u-Ticket project by identifying strengths and shortcomings and recommending corrective measures to optimize the intended outcomes. Monitoring is normally conducted at the project level and the results are consolidated to provide monitoring information at the program level. Monitoring is conducted throughout all the phases in the project life cycle and covers all the Knowledge Areas identified in the Project Management Body of Knowledge (PMBOK) produced by the Project Management Institute. Evaluation involves the application of rigorous methods to assess the extent to which a development program has achieved its defined impact objectives. It is a process which attempts to determine as systematically and objectively as possible, the relevance, effectiveness, efficiency and impact of the program in the context of its stated objectives.

PROJECT KNOWLEDGE AREA, TOOLS & TECHNIQUES, AND OUTPUTS IN U-TICKET SYSTEM PROJECT

Table 1 shows project knowledge area, outputs, and related deliverable in this project.

PMBOK Guide (2008) shows a project charter in the initiating step as part of project integration management [8].

✓ Writing of a document formally approving the u-Ticket project
✓ Documentation of measures necessary for defining, preparing, integrating and adjusting all assistant plans
✓ Performance of activities necessary for completing project requirements
✓ Securing, management and utilization of resources of materials, tools, equipment and facility, etc.
✓ Construction of communication channels of internal and external projects of a Project Team and its Management

Table 1 Project Integration Knowledge Area, Process, Inputs, Tools and Technique, and Outputs

Knowledge Area	Process	Inputs	Tools & Techniques	Outputs
Project Integration Management	Develop Project Charter	Business Case	Expert Judgment	Project Charter
		Product Scope Description		
	Develop Project Management Plan	Project Charter	Expert Judgment	Project Management Plan
		Outputs from planning processes		
	Direct and Manage Project Execution	Project Management Plan	Expert Judgment	Project Management Plan Update
				Project Document Updates
	Monitor and Control Project Work	Project Management Plan	Expert Judgment	Project Management Plan Update
	Close Project or Phase	Project Management Plan	Expert Judgment	Final Product

After the Project Team collects a project record, evaluates success or failure of the project, and collects learned lessons, the project information is preserved for being utilized at organizations in the future.

The following table 2 shows project scope & quality knowledge area, processes, inputs, tools and techniques, outputs, and related deliverable in this project.

Table 2 Project Scope and Quality Knowledge Area, Process, Inputs, Tools and Techniques, and Outputs

Knowledge Area	Process	Inputs	Tools & Techniques	Outputs
Project Scope and Quality Management	Collect Requirement	Project Charter	Facilitated workshops: QFD Group Creativity Techniques: Brainstorming	Requirements documentation
	Define Scope	Project Charter	Expert Judgment	Project Scope Statement
	Create WBS	Project Scope Statement Requirements Documents	Decomposition	WBS
	Verify Scope	Project Management Plan	Inspection	Project Document Updates
Project Quality Management	Plan Quality	Scope baseline - Scope statement - WBS	Proprietary Quality Management Methodologies	Quality Management Plan

The project scope is managed through setting and control of the completed scope. After understanding the scope of the u-Ticket project through the first meeting, the project members were divided into each team.

Project members discussed the scope management direction after setting up a plan through meeting with the Project Manager. The requirements of customers were confirmed through a questionnaire survey as a part of collection of requirements.

These requirements are delivered to the development team to be applied to system analysis through the QFD technique. In facilitated workshops, we adopt Quality Function Deployment (QFD) method to help determine critical and important characteristics for product development through the connection between the user and developer [4]. The project scope was managed through setting and control of the completed scope.

'Plan Quality' is a process for confirming whether the corresponding quality standard and operating definition were used, while watching the quality requirements and measured quality control value. This includes the process and activities that decide a quality policy decision, etc

The following table 3 shows project time knowledge area, processes, inputs, tools and techniques, outputs, and related deliverable in this project.

Table 3 Project Time Knowledge Area, Processes, Inputs, Tools and Techniques, and Outputs

Knowledge Area	Process	Inputs	Tools & Techniques	Outputs
Project Time Management	Define Activities	Organizational Process Assets	Decomposition Expert judgment	Activity List Milestone list
	Sequence Activities	Activity List Milestone list Project Scope Statement	Dependency Determination	Project Document Updates
	Estimate Activities Resources	Activity List	Expert Judgment Project Management Software: MS Project	Project Document Updates
	Estimate Activities Duration	Activity List Project Scope Statement	Expert Judgment	Project Document Updates

	Develop Schedule	Activity List Project Scope Statement	Schedule Network Analysis	Project Schedule
	Control Schedule	Project Management Plan	Management Software: MS Project	Project Document Updates

As the basic material on the schedule was well written, the process executing version up was easily achieved later. The communication wasn't well carried out in delivering information on the scope changed at the Scope Team at first, but it was gradually improved. The continuous amendment of the schedule was reflected and delivered to each team, and the final schedule was completed. The following table 4 shows project communication knowledge area, processes, tools and techniques, outputs, and related deliverable in this project.

Table 4 Project Communication Knowledge Area, Processes, Inputs, Tools and Techniques, and Outputs

Knowledge Area	Process	Inputs	Tools & Techniques	Outputs
Project Communication Management	Identify Stakeholder	Project Charter	Expert Judgment	Stakeholder Register
	Plan Communication	Stakeholder Register	Communication Requirements Analysis	Communications Management Plan
	Distribution Information	Project Management Plan	Information distribution Tools: e-mail, telephone	Project reports

After writing a list of total members, the communication method capable of achieving efficient communication between members was discussed. Meetings were useful by preparing an agenda before each meeting through information and a management plan between project teams. It enabled the project to be achieved smoothly by preparing agenda according to a meeting purpose at every meeting.

The following table 5 shows project risk knowledge area, processes, inputs, tools and techniques, outputs, and related deliverable in this project.

Table 5 Project Risk Knowledge Areas, Processes, Inputs, Tools and Techniques, and Outputs

Knowledge area	Process	Inputs	Tools & Techniques	Outputs
Project Risk Management	Plan Risk Management	Project Scope Statement Schedule Management Plan Communication Management Plan	Planning Meetings and Analysis	Risk Management Plan
	Identify Risks	Risk Management Plan Stakeholder Register Schedule Management Plan	Information Gathering Techniques: Brainstorming Expert Judgment	Risk Register
	Perform Qualitative Risk Analysis	Risk Register Risk Management Plan Project Scope Statement	Risk Probability and Impact Assessment Expert Judgment	Risk Register Updates: Relative ranking or priority list of project risks
	Plan Risk Responses	Risk Register Risk Management Plan	Strategies for Negative Risks or Threats Expert Judgment	Risk Register Updates Project Management Plan Update
	Monitor and Control Risks	Risk Register Project Management Plan	Risk Reassessment Risk Audits	Risk Register Updates

The risks, capable of occurring in the risk management plan in the future were grasped through the existing

material etc., and the version 1.0 was completed by performing meetings and analysis on a potential risk based on this information. After the comparative rating or priority of a project risk was decided by discussion between team members, the risks were classified according to a category and their importance was calculated. The reason and solutions are sought with a classified risk. The risk priority could be changed by discussion between team members, and the calculation of importance is possible. However, AHP method proposed by Mustafa & Al-Bahar (1991) may be considered as the better calculation of risk priority in the next project [2]. As such, it was improved to the final risk management plan by removing terminated risks etc., and adding other risks that were generated.

CONCLUSION: PROJECT TEAM RECOMMENDATIONS AND FUTURE CONSIDERATIONS

The objective of this section is to describe the lessons learned for future projects. First, this study described the lessons learned with seven questions that Schwalbe (2000, pp. 115-116) proposed [14]. The following results are based on brainstorming method including team members' opinions. This brainstorming method works best if there is no formal authority presents [6]. Also, every documented lesson learned should contain at least these general elements [5]:
- ✓ Project information and contact information for additional detail
- ✓ A clear statement of the lesson
- ✓ A background summary of how the lesson was learned
- ✓ Benefits of using the lesson and suggestion how the lesson may be used in the future

6.1 Did the project meet scope, time, and cost goals?

Table 6 Lessons learned on question 1 by Knowledge area in u-Ticket system project

Knowledge area	Lessons learned
Project Integration Management	· The integrated management of a general project was efficiently achieved. · The overall project was managed by a periodic meeting per week.
Project Scope & Quality Management	· The scope coincident with the initial purpose was set.
Project Time Management	· The overall schedule management efficient was achieved. · The version up of the program was executed through adjustment and planning of a work schedule of each team performed every week at the weekly meeting.
Project Communications Management	· The smooth management of human resources was possible through periodic meetings.
Project Risk Management	· The general risk management process was achieved efficiently. · Management of risks through a periodic meeting per week

6.2 What was the success criteria listed in the project scope statement?

Table 7 Lessons learned on question 2 by Knowledge area in u-Ticket system project

Knowledge area	Lessons learned
Project Integration Management	· The integrated monitoring and control of a project in the middle of a project integration management process.
Project Scope & Quality Management	· Progress corresponding to the standard of collection of requirements on scope adjustment, scope definition, writing of a work breakdown system (WBS).
Project Time Management	· Process necessary form an aging the project to be able to timely complete was performed · Major processes such as activity definition, arrangement of activity sequence, calculation of activity resources, calculation of an activity period in addition to schedule development, schedule control, etc. was performed. · The schedule of each team by linking with the rest teams was adjusted and changed.

Project Communications Management	· Delivery of execution items related to the project.
Project Risk Management	· Risk surveillance and control during a risk management process · Sensing of risk change according to environmental change through surveillance and control.

6.3 Reflect on whether or not you met the project success criteria.

Table 8 Lessons learned on question 3 by Knowledge area in u-Ticket system project

Knowledge area	Lessons learned
Project Integration Management	· Integrated project report
Project Scope & Quality Management	· Prior to scope definition, an analysis on requirements was carried out, and this focused on analyzing the importance of u-Ticket-related users. · The needs of users were understood due to this, and the scope of key items was adjusted. · The scope was adjusted while performing version up gradually by describing items on the scope through a scope statement.
Project Time Management	· The version up of the overall schedule management of the project every week was performed.
Project Communications Management	· Informing each team-related material and meeting-related agenda. · Mediating communication information between a team leader and project team members.
Project Risk Management	· Risk Evaluation

6.4 What will you do differently on the next project based on your experience working on this project?

Table 9 Lessons learned on question 4 by Knowledge area in u-Ticket system project

Knowledge area	Lessons learned
Project Integration Management	· It is expected that the internal problems can be solved through periodic discussion or a meeting for efficient project integration management in the next project.
Project Scope & Quality Management	· There is the necessity that must progress the project more efficiently by sharing work through communication between team members.
Project Time Management	· It is expected that the efficient activities could be achieved on the basis of this experience in the next project.
Project Communications Management	· It is expected that any project could become a help in completing the project based on work methods and knowledge acquired while performing communication - related activities.
Project Risk Management	· It is expected that the internal risk could be solved through discussion or a meeting.

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HOW DO CREDIT RATINGS INFLUENCE EXCHANGE RATES IN STOCK MARKETS ?

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ABSTRACT

Credit rating agencies first appeared in 1900 with Moody's. Since that time, agencies became one of the most followed companies in the World especially by investors. Their main function is grading countries and/or companies depend on tendecy to bankrupcty/ economic crises. It means the grades are being used as a clue for the strength. Therefore, the common sense, people consider the grades before put in money to a country, a company, or a project.

Even though, undoubted power of the agencies over the business world, it is hard to say they are definetly reliable. Especially, after we have experience few false grades which suppose to be higher or lower. Many comments had been made on that situation, its results, and confidence of the agencies. In this study, we will examine if credit ratings efffect currency excgange rates by analyzing historical data which is gathered from the world largest ten stock markets.

Keywords: Credit Rating Agencies, Stock Markets, Credit Ratings, Currency Rates.

INTRODUCTION

Rating companies first appeared in 1900, John Moody founded the John Moody& Company and that year the company published "Moody's Manual of Industrial and Miscellaneous Securities." The manual provided information and statistics on stocks and bonds of financial instutions, goverment agencies, manufacturing, mining, utilities and food companies.

In 1909, the company started to sell security values' analysis. First credit rating was appeared for the creation of railroad industry. In the 19th century investing class grew and needed to more information about the new securities. Investors was unsure over invest to railroads and when Henry Poor realizeded that need he write and published " The Manual of the Railroads of The USA". The book was containing the financial information of all major railroads companies and providing an independent source of information on the business conditions of these corporate borrowers. Shortly, analyzing the railroads and their outstanding securities.

John Moddy used letter rating symbols which was adopted from the mercantile and credit rating system that had been used by the credit-reporting since the late 1800s to express his conclusions.

In 1913, he expanded his base of analyzed companies, launching his indutrial companies and utilities.

Like as Moody's S&P firstly analyzed railroad companies. Henry Varnum Poor (Poor Co. Founder) published "History of Railroads and Canals of United States in 1860.The manual is updated annually, keeping investors current and allowing them to chart a company's progress over the years.

In 1919 the company (Poor's Railroad Manual Co.) merged with Moody's Manual Co. and changed the name to Poor's Publishing Co. By the date 1922, the new company begin rating corporate bonds and municipal securities.

Fitch Ratings is the last of the three well-known ratings agencies which well-known in worldwide. Fitch Ratings was founded as the Fitch Publishing Company on December 24, 1913 in New York by John Knowles Fitch.The company is orginally an European company but it has heartquarters both London and New York.

In 1924, the Fitch Publishing Company first introduced the now familiar "AAA" to "D" rate scale.At the beginning the company aimed to analyze just banks but in time the scope had been expanded.

Today we have not just three credit rating agencies. There are 83 rcredit rating companies(See the table 1) all over the World. Moreover, those companies are not just rating railroads and banks but country, company, and projects also.

Since their foundation, 19th century, credit rating agencies (CRAs) have became are an important factor in finacial World. CRAs express their own opinion/forecast about a country/company or Project, give information about default likelihoods and recovery rates of a security widely available, limiting duplication of effort in financial markets. In this way, investors have a overall idea, at least, about their potential investment.

Moody's explain its credit ratings as opinions of the credit quality of individual obligations or of an issuer's general creditworthiness (without respect to individual debt obligations or other specific securities).

Fitch Ratings' defines credit rating as a symbol of proving an opinion on the relative ability of an entity to meet financial commitments, such as interest, preferred dividends, repayment of principal, insurance claims or counterparty obligations. According to S&P credit ratings are forward-looking opinions about credit risk, the credit ratings express the agency's opinion about the ability and willingness of an issuer, such as a corporation or state or city government, to meet its financial obligations in full and on time. Also, it can speak to the credit quality of an individual debt issue, such as a corporate note, a municipal bond or a mortgage-backed security, and the relative likelihood that the issue may default. We can say credit ratings show a country/company or project default and credit risk based on CRA's knowledge, experience and forecasting ability.

CRAs reduce asymetmetric information which blurs investors vision, and, moreover; give opportunity to investors enter foreign markets and build their own portfolio by providing standard of comparison and rating scale.

Today, especially in developing markets, many countries and companies afford to get a good credit rating. Because finding money is not easy for these kinds of countries, the borrowers with a low credit rating borrower face with high interest rate problem, it is way to attract foreign investors, reaching new fund sources, gain prestige.

Moreover, issuers seek ratings to improve the marketability or pricing of their financial obligations, to increase their trustworthiness to business counterparties or because they wish to sell securities to investors with preferences over ratings.

Investors, financial intermediaries and regulators use ratings as an indicator of the risk and likely repayment of securities, they can compare credit quality among various publishers to pick up best investment. Also, certain categories of institutional investors are obliged by regulation to rely on ratings for their investment decisions.

The number of credit rating agencies are increasing day-to-day, it reached 83 by 2014. There is a list at the above which shows some of the credit rating agencies in the World. We can extend that list a lot but in that study we just use the most popular three CRAs; S&P, Moody's and Fıtch. I wish to give some useful inforation about those theree CRAs history and their rating scales.

Table-1 : Credit Rating Agencies

CRA	COUNTRY
A. M. Best	USA
Baycrop Advantage	Australia
Bulgarian Credit Rating Agency	Bulgaria, USA
Central Avrupaan Ratings Agency (CARE)	India
Credo line	Ukrain
CreditSiren	EU
Credit Rating Information and Services Limited (CRISL)	Bangladesh
CRISIL	India
Dagong Global Credit Rating Co.	China
Dominion Bond Rating Service	Canadia
Duporti	UK
Egan-Jones Rating Company	USA
First Report	UK
Fitch Ratings	UK
HR Ratings de Mexico S.A de C.V	Mexica
ICRA Limited	India
Japonya Credit Rating Agency, LTD.	Japan
Kroll Bond Rating Agency	USA
Moody;s Investors Service	USA
Muros Ratings	Rusia
Standard & Poor;s	USA

CRA	COUNTRY
UK Credit Info	UK
Weiss Ratings	USA
Onicra Credit Rating Agency of Hindistan Ltd.	India

1.MOODY'S:

Moody's is the first founded rating company in the World. Moody's was founded on 1900 by John Moody and that year John Moody & Company published Moody's Manual of Industrial and Miscellaneous Securities. The manual provided information and statistics on stocks and bonds of financial institutions, government agencies, manufacturing, mining, utilities, and food companies. Moody's company was sold in 1907 because of the stock market crash.

John Moody returned to the financial market in 1909 with analysing of security values. He expressed his conclusions using letter rating symbols adopted from the mercantile and credit rating system that had been used by the credit-reporting firms since the late 1800s. Moody had entered the business of analyzing the stocks and bonds of America's railroads, and with this endeavor, he became the first to rate public market securities.

In 1913, the company expanded his base of analyzed companies, launching his evaluation of industrial companies and utilities. By that time, the "Moody's ratings" had become a factor in the bond market (Moody's Offical webside, 2015).

On July 1, 1914, Moody's Investors Service was incorporated and Moody began expanding rating coverage to bonds issued by US cities and other municipalities. By 1924, Moody's ratings covered nearly 100 percent of the US bond market.

In the 1970s, Moody's ratings were further extended to the commercial paper market and to bank deposits. Also, the major rating agencies including Moody's began the practice of charging issuers as well as investors for rating services.

Moody's has a global long-tern scale and global short-term scale. In the long term scale obligations are controlled and the rating scale is like Aaa, Aa, A, Baa, Ba, B, Caa, Ca, C. Aaa is the highest score, it means obligations are fulfilled whereas lowest score is C and means obligations are typically in default, with little prospect for recovery of principal or interest.

 But, for short-term Moddy's use another scale. The possible score are as P1, P2, P3 and NP. P1 is the highest and NP is the lowest score.P denote Prime and P1 means issuers (or supporting institutions) have a superior ability to repay short term debt obligations. NP means issuers (or supporting institutions) Not Prime do not fall within any of the Prime rating categories

2.S&P:

Standard & Poor's (S&P) was created in 1941 through the merger with Standard Statistics and Poor's Publishing. The company has evolved from the days of Henry Varnum Poor to now provide a wide range of information on financial products and markets. Standard & Poor's sells investment data, valuations, analysis and opinions. The flagship product is their S&P 500, an index that tracks the high capitalization equity markets in the United States. (S&P Offical webside, 2015)

Likewise Moody's , S&P use two different scales as short-term and lon-term. The long-term issuer credit rating are   AAA, AA, A, BBB, BB, B, CCC, and CC. 'AAA' is the highest issuer credit rating and CC' is currently highly vulnerable. Besides these, there more score exist; R, SD, and D.

R: An obligor rated 'R' is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision, the regulators may have the power to favor one class of obligations over others or pay some obligations and not others (S&P Offical webside, 2015)

SD and D: An obligor rated 'SD' (selective default) or 'D' has failed to pay one or more of its financial obligations (rated or unrated) when it came due.

Sometimes a "+" or "-" will be added to "AA" and "B" grades. It means if some positive improvements will happen the grade go up. For example; B+ will be a BB grade. So AA+ is more advantages than AA. Adversely, "-" means because of long-term risks the grade will go down. So, BB- is more risky than BB (S&P Offical webside, 2015). Short-term credit ratings are A-1, A-2, A-3, B, C, and D. A-1 again the higgest score.D means   has failed to pay one or more of its financial obligations when it came due.

3.FITCH:

Fitch Ratings is the one of the three ratings agencies which well-known in worldwide. It was founded as the Fitch Publishing Company on December 24, 1913 in New York by John Knowles Fitch.

In 1924, the Fitch Publishing Company first introduced the now familiar "AAA" to "D" for independent analysis of financial securities. Fitch decides the rates based on:

• Be informed by non-disclosable management projections,

- Be based on a trend(sector or wider economic cycle) at a certain stage in the cycle
- Be based on historical performance (Fitch Ratings Official webside, 2015).

Its rating scale is similiar with other two CRAs' in the long-term rating scale the highest rate shows highest abilitiy to fulfill obligations and it is expressed as AAA. The other rates are AA, A, BBB, BB, B, CCC, CC, C, RD and D(default).

'RD' indicates an issuer that in Fitch Ratings' opinion has experienced an uncured payment default on a bond, loan or other material financial obligation but which has not entered into bankruptcy filings, administration, receivership, liquidation or other formal winding-up procedure, and which has not otherwise ceased operating (Fitch Ratings Official webside, 2015).

Short-term ratings are F1, F2, F3, B, C, RD, and D. F1 shows highest power for obligations, while D means default.

RELATED LITERATURE

Joanne Li et. al. (2006) made a study in Japanese market and found that global agencies (Moody_s and S&P) are more influential than local raters (JCR and R&I) for rating downgrades, that is, the market reaction is more severe on average in response to downgrades by Moody_s and S&P and for upgrade announcements, the reactions are not statistically different. Moreover, there is no difference in market reactions between the boom period and recession period of the Japanese economy. In general, the order of rating initiation, i.e. who initiated rating changes, local or global, is not relevant to the influence of rating agencies.

Elyas Elyasiani et.al. (2014) investigated investors' reactions over the immediate and longer-term horizons to financial institutions' announcements of capital infusions through private-market transactions and TARP injections. It remains to be seen whether the longer-term effects are positive. In addition, our initial evidence on how these capital infusions affect post-injection financial performance suggests that TARP-related events do not affect capital adequacy but coincide with altered risk-taking behavior.

Sakarya (2011) worked on corporate governance index's effects over stock returns of eleven companies in Istanbul Derivatives Market (IMKB). In that study, he picked 11 companies and 21-days return (before and after 10 days of the rating announcement) were analysed with event study method. The results showed that there is a positive correlation between ratings and returns. After a positive ratings announcement earnings on stocks rise.

Boot et al (2006) to predict the reaction of stock market to credit rating changes during the crisis. The study testimonies that the credit ratings present a focal point for investors when multiple equilibria are possible under the assumption that institutional rigidities link the actions of some investors to choose only viable project and avoid risky project. The value of the latter role will depend on how divergent and uncoordinated the beliefs of investors in the market are. Otherwise, CRAs are most valuable when analysts expectations are divergent in uncertain time. This imply a stronger negative (resp. positive) stock market reaction to downgrades (resp. upgrades) rating changes during a crisis if investors belief that CRA is honest and do not hide information.

Kaya et al.(2015) measured the reactions of credit defaults swap (CDs) and Turkey's rating grades to economic and social situations. In this study, they used daily-basis data of between 01/01/2007- 04/22/2014 and analysed them with multi-way regression analyse. According to findings, at the first glance, there is a connection between rating grades and reaction, but with a detailed analyse they found out there is a not a significance relations between grades and events.

Tang (2007) researched how firms respond to rating changes by using Moody's senior rating and Watchlist. The database contains historical credit ratings and Watchlist database (contains historical credit ratings and Watchlist inclusions of firms in Moody's coverage universe from 1983 to 2005, and from 1991 to 2005, respectively).

That study showed that credit market information asymmetry has impacts on firms' financing and investment decisions. When investors can reach more refined credit information, they are able to better identify firms' credit quality according to the new information revealed and as a result, credit market information asymmetry is permanently reduced, which allows firms to accelerate their financing and investment decisions immediately following the refinement.

Joo and Pruitt (2006) study the impact of bond ratings changes during the Korean crisis on the Korean stock market. Their data during the crisis include only downgrades changes. The major finding of their study is that bond downgrades result in strikingly more negative stock price reaction during the Korean financial crisis than either before or after.

Kingsen (2004) researched direct effects of credit ratings to capital structure decisions. He divided firms to three levels; high third, middle third and low third ranked by their respective credit scores. Kingsen concluded after various tests such as plus and minus test and FF(Fama and French) test credit ratings directly affect capital structure decions. Managers cares ratings as seen anecdotally in the press and through survey results. It demonstrates that these concerns translate into real economic decision-making.

Antonio Afonso et. al (2013) studied the impact of the three main rating agencies announcements (S&P, Moody's, Fitch) on financial markets volatility by considering a panel fixed-effect analysis of the daily EU stock market and sovereign bond market returns. According to the study rating upgrades do not have any significant effect on volatility, but sovereign downgrades increase stock market volatility.

Jun Xie (2013) investigated the effects of investor sentiment and inertial thinking while making investment. They used a new behavioral portfolio model based on the Markowitz's M-V portfolio model. The results in the model show that: (1) Generally, when the absolute level of sentiment is relative low, the investor who is affected by the sentiment and inertial thinking should do a well-diversified investment the same as the rational investor. Moreover, the trading positions are the same as the rational investor. (2) When the absolute level of sentiment is high enough, the investment strategies are complex and volatile. In particular, if the investor is optimistic about all assets, he (she) should only concentrate investment on the assets which the absolute level of sentiment is relatively higher. If investor is pessimistic for all assets, the investor may concentrate his (her) investment in the assets which the absolute level of pessimistic sentiment is relatively lower, or investor may invest non asset entirely. If investor is optimistic about one asset and pessimistic for the other rest assets, he (she) does a diversified investment: (i) He (She) may have long positions in optimistic assets and have short positions in pessimistic assets; (ii) He (She) may have long positions in optimistic assets and invest none in pessimistic assets; (iii) In a harsh condition, he (she) may even have long positions in pessimistic assets and have short positions in optimistic asset.Shortly, the results show that: Under the effects of investor sentiment and inertial thinking, investor may do a well-diversified investment or do a concentrate investment. And which investment strategy is selected is determined by the absolute level of sentiment. The results provide theoretical support for thewell-diversified investment and concentrate investment simultaneously in the real financial markets.

Juliana Ismailescu et.al.(2010) examined the response of sovereign CDS markets to a deterioration or improvement in creditworthiness of an emerging economy during the years 2001–2008 and found an evidence of an asymmetric reaction of CDS markets to credit rating events. Positive rating announcements have an immediate impact, while negative rating announcements have no impact on sovereign CDS markets. Alternatively, positive ratings announcements are more likely to spill over into other emerging CDS markets than are negative announcements. The magnitude of positive events' spillover effects, however, declines when previous rating announcements are included in the analysis. Positive rating announcements have an immediate impact, while negative rating announcements have no impact on sovereign CDS markets. That finding may suggest that a credit upgrade in emerging economies conveys more information than a credit downgrade.

Christina E.Bannier et.al.(2010) examined Moody's formal introduction of the watchlist procedure in 1991 influenced the informational content of credit ratings and possibly extended the economic role that rating agencies play in financial markets. They found that after the introduction of the review instrument, rating downgrades lead to stronger market reactions than in the pre-watchlist period. Their analysis indicates that the introduction of the review procedure may have been a suitable instrument to this end: by choosing between direct and watch-preceded rating changes, the agencies are able to disclose risk-relevant information of differing quality.

Sheng-Syan Chen et.al. (2013) researched sovereign ratings' effects over a country. They focused sovereign rating revisions because may be it is associated with changes in country risk and net capital flows, which in turn cause the risk-free rate and the risk premium to vary. That study examined a sample of Standard & Poor's sovereign rating changes for 48 countries during 1983–2009 reveals that real private investment growth increases significantly following upgrades in sovereign ratings. The increases are temporary, and occur only in the upgrade year and in the first year after the upgrade. Similarly, following downgrades in ratings, private investment growth exhibits significant and temporary declines in the downgrade year and in the first year after the downgrade. One possible explanation for the temporary changes in private investment growth associated with sovereign rating revisions is the irreversible nature of investment. According to results suggest that sovereign rating downgrades boost a country's risk and uncertainty, so agents decide to wait for the arrival of new information and not invest, resulting in a temporary reduction in private investment growth following the downgrade. Conversely, when there are sovereign rating upgrades, agents accelerate committed investment projects because of reduced country risk and uncertainty.

Ting-kai Chou et.al.(2012) investigated whether credit ratings reduce the negative value impact of diversification by mitigating information asymmetry among investors. They observed 45,140 firms in the period 1985-2008 and found that the existence of credit ratings is positively correlated with an excess value of diversification. Further evidence indicates that higher rating levels are associated with a further decrease in the diversification discount. These findings are consistent with the diversification discount decreasing with both the existence and the level of credit ratings. Another finding is that the credit ratings effect on the diversification discount is more pronounced for firms with greater information asymmetry, indicating that the mitigating effect of credit ratings on information asymmetry problems leads to higher valuation. The evidence is important because it confirms that credit ratings provide the market with private information, and in this way

reduce the negative effect of diversification due to information asymmetry problems. For investors, the analysis suggests that ratings should also affect the equity market. On the other hand, to the extent that regulators believe that information dissemination is valuable for efficient resource allocation, that study implies that credit ratings play a relevant role in this respect. For managers, obtaining ratings helps to improve firm transparency, that is, to lower uncertainty about firm valuation, especially when managers want to decrease information asymmetry and the mispricing of their firms' stocks.

Kraaussl (2005) conducted an empirical study to analyze the role of credit rating agencies in international financial markets. In particular, the specific impact of sovereign rating changes during the financial turmoil in emerging markets in the latter half of the 1990s has been examined. The data set was not only expanded to update previous studies but also to test new hypotheses about the implications of sovereign rating changes on financial markets in emerging economies. The results of the study indicate that credit rating agencies have a substantial influence on the size and volatility of emerging markets lending. The empirical results are significantly stronger in the case of government's downgrades and negative imminent sovereign rating actions such as creditwatches and rating outlooks than positive adjustments. By the market participants' anticipated sovereign rating changes have a smaller impact than surprising rating events on financial markets in emerging economies. Through other news stories contaminated sovereign rating events have a stronger impact than just pure rating events.

RESEARCH GOALS AN DATA SET

Credit rating agencies are accepted very powerful and have a strong influential effects over investors.Even though they mention their credit ratings are just the CRAs opinion, it does not mean the ratings exactly show the future, they are just high possibilities people continue to observe the credit ratings.But besides to observing , do people really obey what CRAs say to do, follow the CRAs reactions in close, put their money to high rated securities, is not there any hesitation? In this study we will examine these questions answer by using previous studies about those issues and try to apply the results to Turkisk stock market (BIST).

DATA SET AND ANALYZING

In this study, I will focus the world's biggest ten stock markets. According to World Federation of Exchanges' May 2015 report the top ten stock markets are like that with their market capitalization;

Market	Country	Market Capitalization (USA bn)
1.New York Stock Exchange	USA	19,223
2.Nasdaq	USA	6,831
3.London Stock Exchange	UK&ITALY	6,187
4.Japan Stock Exchange	JAPAN	4,485
5.Shanghai Stock Exchange	CHINA	3,986
6.Hong Kong Stock Exchange	HONG KONG	3,325
7.Euronext	EU	3,321
8. Shenzen Stock Exchange	CHINA	2,285
9.TMX Group	CANADA	1,939
10.Deutsche Börse	GERMANY	1,762

Before explaining data set and analysing detail, I wish to give brief information about the stock markets.

1. **New York Stock Exchange (NYSE):** NYSE, it is also known as *Big Board,* is the biggest stock market of the world. It was established in 1792 in the USA. Products are equities, options, exchange traded products/funds and bonds in that market and the total market capitalization is $19,223 bn by May 2015.

2. **NASDAQ:** Approximately 200 years later of NYSE, NASDAQ began trading in 1971 primarily US-based equites change. The market's main feature is its all-electronic trading system. Investors can trade and track all financial products. Again equities, funds, fixed incomes, commodities, options and futures and private shares are trading in the market. It is the second biggest exchange market in the World and the USA after NYSE.

3. **London Stock Exchange (LSE):** London Stock Exchange (LSE) is the third largest stock exchange market whose headquarter located in London, UK. It is the oldest stock exchange market with its 300 years history. Starting life in the coffee houses of 17th century London, London Stock Exchange quickly grew to become the City's most important financial institution (London Stock Exchange Official webside, 2015). LSE merged with Borsa Italiana in 2007 and became London Stock Exchange Group.

4. Japan Stock Exchange (JPX): Japan Stock Exchange Group, Inc. was established in 2013 with corporation of Tokyo Stock Exchange Group and Osaka Securities Exchange. It is the top Asian stock market.

5. Shanghai Stock Exchange (SSE): The Shanghai Stock Exchange (SSE) was founded on Nov. 26th,1990 and in operation on Dec.19th the same year (Shangai Stock Exchange Offical webside, 2015). The market is directly being governed by the China Securities Regulatory Commission(CSRC).

6. Hong Kong Stock Exchange (HKEx): It is another Chinese stock exchange market and it is located in Hong Kong. In 1999, The Stock Exchange of Hong Kong Limited (SEHK), Hong Kong Futures Exchange Limited(HKFE) demutualised and together with Hong Kong Securities Clearing Company Limited(HKSCC), merger under a single holding company, HKEx (Hong Kong Stock Exchange Official webside, 2015). The first formal market in Hong Kong was established in 1891 as the Association of Stockbrokers and its name was changed in 1914 as the Hong Kong Stock Exchange in 1914.

7. Euronext: Euronext is the European stock exchange and it operates regulated markets in Belgium, France, the Netherlands, Portugal and the UK.

8. Shenzen Stock Exchange (SZSE): It is another Chinese stock market. It has been operating since 1st December 1990. SZSE's products cover equities, mutual funds and bonds. The product lines include A-shares, B-shares, indices, mutual funds (including ETFs and LOFs), fixed income products (including SME collective bonds and asset-backed securities), and diversified derivative financial products (including warrants and repurchases) (Shenzen Stock Exchange Official webside, 2015).

9. Deutsche Börse: Since January 2010, Deutsche Börse AG and SIX Group AG became the sole shareholder of STOXX Ltd. In July 2015, STOXX has been fully taken over by Deutsche Börse Group. (Deutsche Börse Official webside, 2015)

Data Set: We will investigate the collect 10 years historical data before and after credit ratings have been released to measure effects of rating announcements.

Event study(90,90)

	S&P	FİTCH	MOODYS
USA	6/10/13	6/10/13	8/5/11
GERMANY	3/27/13	11/21/11	8/5/13
EU	12/20/13	-	-
UK	4/13/12	4/19/13	2/22/13
CHINA	2/20/12	11/21/11	8/5/11
HONG KONG	11/29/11	11/21/11	8/5/11
JAPAN	11/29/11	5/22/12	8/23/11
CANADA	2/20/12	11/21/11	8/5/11

ANALİZ

	S&P	FİTCH	MOODYS
USA	STABLE	NEGATİVE	NEGATİVE
GERMANY	STABLE	STABLE	NEGATİVE
EU	STABLE		
UK	NEGATİVE	STABLE	STABLE
CHINA	STABLE	STABLE	STABLE
HONG KONG	STABLE	STABLE	POSİTİVE
JAPAN	NEGATİVE	NEGATİVE	STABLE
CANADA	STABLE	STABLE	STABLE

SONUÇLARI

SONUÇ

Reinhart (2002), using data from 1979-1999, found that credit ratings have systematically failed to anticipate currency crises and that nearly half of all defaults were linked with a currency crisis. Moreover, default did not occur in some cases due to IMF intervention and assistance. The report concluded that rating

agencies were reactive, especially with respect to emerging markets. In addition to the problems with timing, the magnitude of downgrades was significantly higher for emerging markets.[1]

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[1] 26 numaralı yazı

CAPACITY BUILDING ON FOOD CROP FARMING TO IMPROVE RURAL AND AGRICULTURAL DEVELOPMENT IN CENTRAL JAVA, INDONESIA

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ABSTRACT

Agriculture sector still plays an important role in Indonesian economy. It shares for more than 30% to Gross Domestic Product. However, this sector avails for more than 45% for labor employment. With more than 240 million people and majority depend on rice as a single food-source, the country facing a challenge on food availability. To fulfill food demand for diversified people and environment, strategy for improving food-production needs to consider to the potency of local resources.

This paper describes the capacity of food crop production for improving regional food security. It is also identify crops which have high and prospective economic-values. The results of the study might help in formulating a proposed model to improve food crops production in supporting food security. The case study was conducted in districts which play the important roles on agriculture (rice) production in Central Java, Indonesia. These are Klaten and Magelang districts. Data were collected from farmers and officers from agriculture-related institutions.

The results show that Central Java Province has the capacity on food crop (rice) production for securing food availability, distribution, and accessibility for people in the region. It has good-enough on food security for the products, and surplus of production have distributed to other regions within the country. However, other food crops still facing shortage of supply since lack of productions. It requires a commitment from government and stakeholders for improving capacity building on agricultural development.

Keywords: crop production, food security, capacity building, Indonesia

INTRODUCTION

Indonesia is an archipelago country with 240 million people, the world's fourth most populous country, third largest democracy, and largest Moslem country. Agriculture supports the livelihood of millions of Indonesians. Three out of five people still live in rural areas with the main occupation on farming. Agricultural sector plays an important role in the economy in Indonesia, and shared to Gross Domestic Product (GDP) for about 14.7% at 2010, with the growth rate of 4.5% (see, Table 1). Agricultural sector avails raw materials (especially for industrial sector) and employment for about 42,6 million or 42% of labor force in the country. As an agro-based country, the development of agricultural-related sectors will lead the socio-economic progress. These are not only producing economic-commodities, but also important to the basic functioning for the human life by providing food productions. With the population growth rate of 1.7%, Indonesia will demand in a larger amount and varied food commodities. One of the main issue in Indonesian agricultural development is related to food security, and as a foundation for development of other sectors (CBS, 2006; Rahman, Ariani, and Purwantini, 2007). For the period of 2008-2009, average growth rate of agricultural sector is about 5% per year. Manufacturing sector had a highest share to GDP (27.5%), followed by trade sector (14.9%), and agricultural sector (14.7%). However, agricultural sector provides a highest share in providing employment for the people.

Table 1 Contribution to Gross Domestic Product for the Period of 2008 to 2010 (in percent)

No	Sectors	2008	2009	2010
1	Food-crops, Veterinary, Forestry, and Fisheries	13.0	13.8	14.7
2	Mines	11.0	11.2	11.4
3	Manufacturing Industry	27.5	27.0	27.2
4	Electricity, Gas, and Water Supply	0.9	0.9	0.8
5	Constructions	7.5	7.7	7.9

6	Trade, Hotel, and Restaurant	15.0	14.9	14.4
7	Transportation and Communication	6.9	6.7	6.2
8	Finance, Real Estate, and other Services	8.1	7.7	7.4
9	Services	10.1	10.1	10.0
	Total	100.0	100.0	100,0

Source: CBS Indonesia, 2010

Agricultural policy in Indonesia has been primarily concerned with implementing production-based policies designed to pursue food self-sufficiency, especially rice. This goal was reached in 1984, when domestic rice production exceeded consumption. The current agricultural development policy in Indonesia has been launched in 2005, called Revitalization of Agriculture, Fisheries and Forestry. The policy is considered as one of the triple-track strategies of economic development (Suryana and Sudaryanto, 2006) and to improve people's welfare and to place strong base for economic development (Subejo, 2008). From the point of view of agricultural revitalization, food security is unarguable step to encounter problems and to achieve the policy objectives.

Sustainable food security is defined as the ability to provide adequate food for population from time to time as such they will be able to live healthy life and can undertake their daily activities. Adequate in this sense includes quantity, quality, and accessibility to food products for all (Mustamin, 2000). According to Suryana (2008), food security has three dimensions: (a) availability of sufficient quantities of food in appropriate quality, and supplied through domestic production or imports; (b) accessibility of households and individuals to appropriate foods for a nutritious diet; and (c) affordability of individuals to consume food according to their respective socio-economic conditions, cultural backgrounds, and preferences. In the operational sense, food security entails food availability, accessibility, and stable procurement.

Table 2 Selected Food Production in Indonesia, 2009

No	Commodities	Volume (million ton)	Growth (% per year)
1	Paddy	57.16	4.96
2	Corn	13.29	14.45
3	Cassava	17.99	1.42
4	Sugar	2.45	1.33
5	CPO	17.40	5.68

Source: MOA Indonesia, Suryana, 2010

In Indonesia, one of the problems on agricultural sector related to the stagnancy of productivity. During the First Five-Year Plan (year 1969), rice production was 2.2 ton per hectare and 30 years later became 4,5 ton. Table 2 indicated food production in Indonesia for the year 2007. While, data for rice supply and demand for the year 2005-2008 is described in Table 3. Agricultural development have reached food sufficiency might facilitate economic growth in rural areas (Sajogyo, 2002). However, if there is no incentive system which benefited to small-scale farmers, therefore, the production system will benefited to large-scale farmers and food-traders. Another problem related to the performance of food security which should be solved appropriately.

In relation to Indonesian agriculture and food productions, Central Java Province is one of the "buffers" for agriculture productions at the national level. This province consists of 29 districts and 6 municipalities, with the total area of 3.25 million hectares (1,70% of Indonesia). One-third of the area is utilized for agricultural activities, and most of them are irrigated land which can be cropped for paddy twice in a year (CBS, 2008). Population of Central Java Province at 2008 is more than 33 million with the growth rate for about 1.5% per year (CBS, 2008). There is increasing amount and pattern of food demand, hence, food security concept need to be socialized to all stakeholders.

Table 3 Rice Supply and Demand in Indonesia, 2007-2010 (million ton)

No	Food Balance	2007	2008	2009	2010
1	Production (Paddy)	54.15	54.45	57.16	60.28
2	Production (Rice)	30.67	30.84	32.37	34.14
3	Consumption	30.59	30.00	31.50	31.70

| 4 | Import | 0.19 | 0.44 | 1.30 | - |
| 5 | Ending Stock | 2.04 | 2.32 | 4.49 | 6.93 |

Source: CBS Indonesia, Suryana, 2010

West, Central and East Java, the three most populous Indonesian Provinces with a combined population of over 100 million produce almost 30 million metric tons of rice annually, plus substantial other food crops. It is a remarkable statement of the basic productivity of the agricultural resource base of the island, and this is especially the case as the average land holding is about 0.3 hectares. Total rice production on the whole of the island of Java in 1965 was only 4.9 million tons, indicating more than a six-fold increase in production. Over the same period per capita rice consumption rose from 85 to 140 kilograms per year, while the population increased 140 percent. Substantial gains in rice production on Java, Indonesia's most productive rice-farming zone, were largely offset by population and per capita consumption increases. For supplying domestic demands, Indonesia still import some agricultural products as indicated in Table 4.

The development of food security system basically is development with focus on harmonizing a number of related systems, i.e. resources availability, food availability, distribution, consumption, diversification, and agribusiness (Susilowati et al., 2005; 2006). One of the main problems is that food security in Central Java Province is still need to be improved. This is because food security in one of the important aspect and issue which need to be considered. Food is a basic need which should be avails continuously, well-distributed, and can be accessed by people. On the other side, most of rural people is still facing poverty. Therefore, a study for assessing the capacity development of food crops is necessary to be conducted. Based on the previous description, research questions raised for this study are as follows: (1) what is the performance of food crop in Central Java?, and (2) what is the management and strategy for increasing food product and food security in the region? In overall, this study is aimed at analyzing the performance and capacity of food crop for increasing food production and food security.

Table 4 Indonesian Food Import Dependency, 2009

No	Commodities	Production (million ton)	% Import to Total Supply
1	CPO	17.40	0.00
2	Rice	32.37	4.00
3	Maize	13.30	8.10
4	Sugar	2.45	13.50
5	Beef	0.36	28.00
6	Soybean	0.59	61.80
7	Wheat	0.00	100.00

Source: MOA Indonesia, Suryana, 2010

Capacity Building and Food Security

Capacity building often refers to assistance that is provided to entities, usually societies in developing countries, which have a need to develop a certain skill or competence, or for general upgrading of performance ability. UNDP define it as "the creation of an enabling environment with appropriate policy and legal frameworks, institutional development, including community participation, human resources development, and strengthening of managerial systems. The needs for capacity building are always changing. There are no ready solutions, and any program must be appropriate for the local situation and organization. Local government, communities, and NGO are the main clients of capacity building, but central government and the private commercial sector also need support. Capacity building encompasses human resource development as an essential part of development. It is based on the concept that education and training, and focuses on a series of actions directed at helping participants to increase their knowledge, skills and understandings and to develop the attitudes needed to bring about the desired developmental change.

World Food Summit 1996 has come to a common agreement (Rome Declaration) that all countries should provide food security for all people and free the nations from hunger. The summit goal was to reduce the number of inaccessible people for food by 50 percent in 2015. The declaration has shown its strong commitment on the importance of agricultural and rural development as a key-role to achieve food security (Suryana and Sudaryanto, 2006). It is understandable that 70 percent of the world's poor-people are living in rural area and depending on agricultural sector. This description is relevant with situation in Indonesia. About two-third of

poor people were dwelling in rural and remote areas. This fact leads to a conclusion that eradication from hunger and reduction of poor people would be achieved through sustainable agricultural and rural development.

Agricultural development is an integral part of the national development. With vision, mission, and objectives of agricultural development, the development program covers food security improvement, agribusiness development, and farmers' welfare enhancement. Food security is important to assure the availability and accessibility of food for all people. Agribusiness development is also important to achieve productive and efficient activities in producing agricultural products. Agricultural development is planned and designed to accommodate the dynamic of community problems and needs. Local government will play significant role in agricultural development as consequences of decentralization. As the facilitator of agricultural development, local government role is focused on the development of local specific commodities, managing bottom-up approach and decentralizing the creation of people's participation instead of top-down and centralize policies (Suryana and Sudaryanto, 2006).

Indonesian Experience: Central Java

Administratively, Central Java Province consists of 29 districts and 6 municipalities with the total area of 32,548 km². Agriculture is the important sector which involved most of job employment of the people. Central Java Province is one of the main "buffer" area for national food production, especially rice, corn, soybean, cassava and vegetables. This study was conducted at a number of the centre of agricultural (rice) products in Central Java. These are the districts of Klaten and Magelang. Primary and secondary data were collected through interview with farmers and key-persons, observation, documentation, and FGD with stakeholders.

Performance of Production

About 60% of selected farmers are on the age-group of 40-50 year, and most of them have a tertiary education. The number of household member is on the average of 4-5 persons. Farming especially for paddy, is the main occupation and source of family income. Some of the farmers have additional activities from small-scale traders, livestock, and other informal occupations.

In relation to production performance, elasticity coefficients for farm inputs are positive (i.e. land 0.739, labor 0.497, and seed 0.163). It implies that as larger the land size, the production will increase. Fertilizer is the significant influencial variable to the foodcrop production (coefficient 0,084). Farmers who utilized K fertilizers were able to have larger productions as compared to others. Farmers who utilized organic fertilizers were able to have larger productions as compared to others. Pesticide is not the significant influencial variable to the food crop production (coefficient 0,018). This input did not used regularly by farmers at the study area. Estimation result shows that farmer's experience in farming did not influence significantly to the production. However, return to scale with the value of 1.15 indicated that farming is still possible to extended. The average value of technical efficiency is 0,942, meaning that farming did not efficient. In addition, there is a possibility to increase the use of production inputs. At the indivual level, the rate of technical efficiency is ranged from 0.73 to 0.99.

Developing Strategy for Food Production

It was indicated that input availability is the most important aspect for developing strategy of farming (score 0,511). It is followed by institution (score 0,209), post-harvest (score 0,128), marketing (score 0,85), and technical cultivation (score 0,67). Performance of food crop farming is closely related to inputs availability and its distribution. The strategy for input supply might covers: providing subsidy, access of private sector to involved in, and avails farm inputs at suitable time, amount, and quality.

Another aspect to be developed is agricultural and rural institutions. The proposed strategy which can be done for example: extension services, providing incentive for agricultural institution, and revitalize extension institution (centers as well as officers). Revitalizing institution for extension services will be the main priority for improving agricultural performance. The third aspect for building the agricultural performance is marketing. It might be implemented by designing partnership between farmers and traders, farmers and products' users, and providing financial assistance. Lastly, improving the technical assistance is still notify the important aspect for developing agricultural performance. The proposed strategy which can be done are: extension services, providing technical assistance for utilizing organic fertilizers and perticide, as well as using branded seeds for obtaining higher production.

Low educational attainment as well as low capacity and less skills in production and management are among the counter-productive condition when talking about human resources in agricultural sector. Learning activities through informal education, training, and extension should be prioritized to support agricultural development in the future. Revitalization of extension workers, therefore, is a priority to accelerate agricultural development. Certain farmers may move from farming to off-farming or non-farming in rural areas if the opportunities are offered. If the number of people involved in farming reduces substantially, the units of managed land by each farmer is expected to increase. This strategy will provide benefits and incentives for farmers to improve their productivity. Farmers are also still facing difficulties in accessing high quality seeds. The high price of seeds caused by monopoly ownership has hampered this. Water access is also a very crucial issue for farmers.

Performance of Agricultural Extension for Increasing Production

Program for increasing food-crops production is one of the important decisions in agricultural development in the province. It is because food production has the strategic and economic values. Based on the study conducted in the selected area, food-crops farming were not efficient yet. One of the solutions is by improving the delivery of agricultural extension services.

Agricultural extension service in Central Java was intensively implemented since 1970s, with the support for input supply, technical as well as financial assistance. The program was implemented through national-program called Mass Guidance. It is a major program which was implemented in Indonesia to disseminate agricultural knowledge to farmers. At this scheme, farmers were instructed what to do and given incentives through the provision of cheap-credit to follow these instructions. A major contributor to the stabilization of self-sufficiency in the staple food (rice) has been the Supra Insus (Super Intensification) system, which was introduced in 1987 (Resosudarmo and Yamazaki, 1999). The innovative experience in Indonesia has demonstrated that self-sufficiency in rice can be achieved through a combination as such: political will, continual technological efforts, progressive rural structure, mass guidance, socioeconomic engineering, and well-coordinated program. In supporting Bimas to Supra Insus, the establishment of extension services was done through Rural Extension Centre in each sub-district. The centre was serve in delivering information concerning to agricultural innovation, especially to farmers.

Revitalizing the agricultural sector is a key component of the government's rural development strategy (World Bank, 2007). Indonesia faces a major challenge to develop an effective institutional mechanism for disseminating technology relevant for small-scale farmers. While there is less experience in new model of agricultural advisory services, there is growing evidence of significant benefits to decentralized extension systems that involve the private sector and civil society. Educational qualification levels of public extension agents are being improved. Poor linkages between agricultural research and extension had militated against ensuring focus on farmers' problem. The new extension law (Law No.16/2006) explicitly recognizes the multi-provider system for the delivery of agricultural services to increase the competitiveness of Indonesian agricultural sector and improve farmer incomes. It is aimed at: (1) reorganizing extension and farmers institution, (2) improving number and qualification of extensionists, (3) improving implementation of extension system, and (4) establishing networks for extension services and agribusiness.

Political will is a prerequisite for the success of a food production program, and is reflected by the commitment of the (central and local) governments and community leaders. At the same time, it was recognized that learning new-technologies would give rise to the need among farmers for other farm inputs such as seed, fertilizers and pesticides, with working capital to finance them. Post-harvest and marketing skills, procedures and facilities would have to be improved. These requirements created the need to ensure close integration with infrastructural improvement, such as irrigation systems and roads in order to support rice production and improve access to markets (Anonimous, 2004). Approaches for achieving effective extension might include all or a combination of strategies based on circumstances at national and local levels. Rivera (2003) advocates important strategy recommendations to address the food security challenge. An example of good practice and lesson is decentralization of extension in Indonesia. Enacted by law in the 1990s, it shifted extension management from central to local (district) government, made extension works more agribusiness-oriented and established research-extension-farmer linkage mechanism at the local level. The goals aimed to ensure effectiveness, to be more responsive to clients and to be less-costly to the government. Staffs training and upgrading were emphasized, including partnership development between the various components.

CONCLUSION

Food production is not an easy matter. Success will only be attained if national and regional policies give high and proper priorities to agricultural development. There is a lot of work to do regarding policies on agricultural development, with fundamental issues such as farmer's access to main farming inputs such as land, seeds and water. The potency of food production capabilities and the huge demand for food, either from national or global consumers, has become not only a challenge, but also an opportunity for national agriculture since Indonesia have enough natural and human resources. The country definitely has an opportunity to produce enough food for the population. In the case of capacity building improvement, the release of new Extension Law will make the delivery of agricultural services in Indonesia increase productions as well as the competitiveness of agricultural sector and improve farmer incomes.

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AN ANALYSIS OF GENERATION Y LEISURE TRAVELLERS' NEEDS AND THE SOLUTIONS OFFERED BY NEW HOTEL BRANDS

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ABSTRACT

International hotel corporations have recognised Generation Y's frequent travel behaviour and its significant impact on the hospitality industry. New hotel brands targeting specifically Generation Y are entering the market. The intention was to develop a concept which satisfies a Generation Y guest before, during and after a journey, not only on-site but also online. According to exploratory research design, expert interviews with representatives of Moxy and Hyatt Centric revealed that both brands target the young at heart by focusing on technology, providing personalised service and developing hotels with love for detail. The descriptive research design used a survey (N=301) to explore Generation Y's needs and travel behaviour. Projective techniques helped to support the survey data and showed that Generation Y appreciate a central location, a fair price, dedicated staff, cleanliness, good reviews, free Wi-Fi, free breakfast and F&B facilities in a hotel. Compared to Generation Y's needs, the investigated brands fulfilled the main requirements with a few discrepancies partly in hotel facilities and partly in online activities.

Keywords: Generation Y, Leisure Travellers, New Hotel Brands

INTRODUCTION

In 2020, 50% of all workers worldwide will belong to Generation Y (PwC international, 2012) which in this study refers to all those who are born between 1980 and 1999. This leads to the conclusion they will have the budget to travel, not only as business guests but also for leisure purposes, superseding Generation X and the Baby Boomers as hotels' main target clientele. Being aware of the development international hotel chains such as Marriott International Inc. and Hyatt Hotels Corporation are introducing new hotel brands to the market which are geared towards the needs of Generation Y (Mayerowitz, 2015). Since any service or product development starts with the recognition of a customer need (Chen, Chen, Leong, & Jiang, 2013), Generation Y's needs and wishes have to be analysed in detail. This particular generation is used to modern technology, the use of social media and to have everything instantly (Lee, 2013). When travelling, it is important to them that they are able to mingle with other travellers as well as locals so that they have a unique experience they can share with the rest of the world (Lee, 2013). Generation Y like to report their experiences and therefore their decisions are influenced by peer reviews (Kotler, Bowen, & Makens, 2010), for instance comments and ratings on TripAdvisor. With concepts being new and untested this research paper aims to investigate if enough market research has been completed to really satisfy the needs of Generation Y leisure travellers.

Overall, the study aims to examine how new hotel brands adapt to Generation Y leisure guests' needs, both online and on-site and in all stages of a journey. In order to reach the aim, first the existing literature concerning generational theory and Generation Y as well as online marketing tools, has been reviewed. Afterwards the author investigated how Moxy and Hyatt Centric attempt to enhance Generation Y guest experience through all travel stages, online as well as on-site. The following step included an examination of Generation Y's expectations of a hotel brand, followed by a comparison of the hotel brands' key attributes and the demand of Generation Y. The research paper ends with a conclusion and an explanation of the study's limitations.

LITERATURE & THEORY

2.1 Generational Theory

The concept of generations was first introduced by Karl Mannheim (1893-1947) (Pendergast, 2010). The generational theory segments people into groups according to their year of birth and assigns certain characteristic traits and patterns to the generation groups (Pendergast, 2010). Apart from their temporal bond, members of a generation are tied by the experiences they share through their social and historical background (Mannheim, 1952).

According to Strauss and Howe (1997) it is possible to determine a generation's "attitudes about family life, gender roles, institutions, politics, religion, lifestyle, and the future" (p.65).

2.2 Definition and Travel Behaviour of Generation Y

After the Baby Boomers and Generation X, Generation Y is now on the way to its peak spending time (Ponchione, 2014). Generation Y (short: Gen Y) is also called the Now Generation or the Millennials. Researchers are quiet discordant when it comes to their age classification. Some researchers claim that Generation Y started in 1977 or 1978, ending in 1994 (Kim & Jang, 2014; Nusair, Bilgihan, Okumus, & Cobanoglu, 2013) or even earlier from 1972 to 1992 (Mihaiu, 2013). Pendergast (2010) uses a later frame from 1982 to 2002. For this research paper the frame has been set on the average timespan of 1980 to 1999.

Having grown up with smart-phones, Internet, social media and automated services, Generation Y are very proficient in the use of technology and exploit them to the fullest extent (Nusair et al., 2013). Furthermore, they want to meet and socialise with new people, learn and explore new things and share their experiences with everyone online (Lee, 2013).

As the average millennial has not yet reached their peak earnings and is therefore still dependent on a low budget, prices play a big role in the choice of accommodation (Lee, 2013). In a survey conducted by Destination Analysts with 2,025 millennial respondents, 69.3% admitted to be price sensitive when travelling (2014). The same research revealed that 73.2% of the millennials travel out of cultural interest and 71.2% already did a journey to explore another cuisine (Destination Analysts, 2014). A third aspect worth pointing out is that 68.7% are not interested in commercial, touristic holidays but rather want to experience the real, local destination (Destination Analysts, 2014). Another study, conducted by the World Youth Student and Educational Travel Confederation, explored the travel behaviour of Generation Y and found out that they travel more often and spend more on travel than other generations (as cited in Pendergast, 2010). The study is supported by research conducted by Ipsos and Tripadvisor, showing that 88% of Generation Y respondents have taken a domestic leisure trip and 65% had travelled abroad in 2014 (Ipsos, 2014).

Travelling and collecting experiences has become the new status symbol (Waldthausen & Oehmichen, 2013). If Generation Y guests stay at a hotel, the expectation is to be in an authentic, friendly and home-like environment with staff that treat them as friends, not as customers (Waldthausen & Oehmichen, 2013).

Being connected is Generation Y's greatest need and hotels try to satisfy that need by providing a spacious lobby with a seating area, so millennials can mingle with other guests while working, relaxing or even holding small meetings (Waldthausen & Oehmichen, 2013). Some hotels even go one step further by extending the lobby area with a bar or a food service station, making it seem like a living room (Waldthausen & Oehmichen, 2013).

2.3 Online Marketing in the Hospitality Industry

The hospitality industry has recognised the importance of marketing and utilising the Internet to their benefit. Hudson (2008) explains that there are six functions for which hotels use the Internet: "direct email marketing, advertising, providing information, distribution and sales, customer service and relationship marketing and marketing research" (p.334).

Online marketing or "e-marketing" means reaching marketing goals by using electronic means and through digital distribution channels (Baker, 2003; Smith, 2011). The biggest difference to traditional methods of marketing is the enabled customisation and interactive communication (Baker, 2003; Smith, 2011), as well as the ability to contact the consumer at any time (Smedescu, 2013) anywhere in the world (Rosenbloom B., 2013).
Social media marketing is able to be used to raise brand awareness and manage customer relationships and provides consumers the ability to exchange their opinions which is beneficial for determining customer satisfaction (Smedescu, 2013). For businesses, the other advantages of online marketing include the speed of the messages and transactions, reduced costs and increasingly efficient information and relationship management capabilities (Rosenbloom B., 2013).

2.4 Research Gap and Research Question

Although there has been a lot of research into generations in general, Generation Y specifically and some studies that examined Gen Y's travel behaviour, there is only little research available on what millennials expect from a hotel. Due to the limited research into the topic of millennial-targeting, hotels are yet to investigate the success of what their concepts build on and how well they fit the needs of their target customers. According to the examined research gap and the aim of the study, the following research question was formulated: How do new hotel brands adapt to Generation Y leisure guests' needs, online and on-site, in all stages of a journey?

METHODOLOGY

3.1 Research Design and Method

In this research two interviews and a structured-undisguised online survey have been conducted. The survey was used to research the travel behavior and needs of Generation Y members. A survey is undisguised if the participants know the true objective of the research (Iacobucci& Churchill, 2010) and structured if the questions are standardised and have a fixed order (Brotherton, 2008; Iacobucci & Churchill, 2010).

All matrix questions in the survey of this research paper use a five-point Likert scale for the predetermined answer options. For the survey analysis, the most positive expressions, such as "very intersted" were attributed with the highest value (5) and the most negative answer options such as "not interested at all" were attributed with the lowest value (1). Question two to six were created with the concept of projective techniques and had no given answer options. Projective methods help to collect more detailed data (Iacobucci & Churchill, 2010) and to expose subconscious thoughts (Brotherton, 2008). The responses to those questions were later classified and coded.

3.2 Sample

The population for the interviews of this study included all new hotel brands targeting Generation Y. The sample for the expert interviews consisted of two representatives of new hotel brands. The first interview was conducted with the General Manager of the Hyatt Centric South Beach Miami. The second interviewee was a representative of Moxy, who decided to stay anonymous.

The population for the survey included all people born between 1980 and 1999 and therefore belonging to Generation Y. To find a sample, the convenience sampling method has been used. Due to limited time and budget, this method helped the researcher to achieve a high sample size by contacting the people that were easy to reach (Brotherton, 2008). The sample size for the survey was 301 of which 64.8% were female and 35.2% were male. The majority of the respondents were students (87%). In total the respondents had 26 different nationalities. The most frequent nationality with 80% was German, followed by 3.4% Russians and 2.7% Indians.

3.3 Elements of Investigation

The interview questions were focused on five themes: Brand Facts, online activities, on-site facilities, on-site services and Generation Y. The survey consisted of 22 questions which can be divided into four groups. The first category tried to acquire a spontaneous and impulsive answer from the respondent and aimed to examine what millennials associate with the perfect hotel. Category two were matrix questions which asked about the importance of certain attributes before, during, and after the stay. The third category consisted of questions about the general travel behaviour and the last four questions covered demographics as age, gender, employment status and nationality.

RESULTS

4.1 Exploratory findings
4.1.1 The Concepts of Moxy and Hyatt Centric

Rather than targeting young people, Hyatt Centric strives to target "the young at heart" (personal communication, July 1, 2015). The representative of Moxy confirmed: "It is really about the mind and the heart. It's about the spirit. It's not about the age that you have in your passport" (personal communication, July 8, 2015). While Hyatt Centric has been developed as an upscale brand with full service, four star properties with a casual and relaxed atmosphere, Moxy is a budget lifestyle brand with one three star property so far in Milan. Hyatt Centric relies on smaller hotels with smaller rooms but with a cosy and warm environment. A central location is the focus of the brand. Moxy's hotels will be located either next to airports as the current Moxy Milan, or in city centres as well, depending on the location and the situation. Moxy has a straight forward concept without any leisure facilities but with the possibility to choose between mingling with other guests and staying on one's own. The pricing strategy fits the circumstances of this concept and allows even the younger Generation Y travellers to go and try it out. Hyatt Centric's pricing strategy highly depends on the location and competition and is quite high compared to Moxy due to the level of services and facilities.

4.1.2 Online Activities

Hyatt Centric's and Moxy's representative both agreed that social media is of great importance to their target customers. Hyatt Centric keeps intense contact with their guests and soon-to-be guests via Instagram, Facebook and Twitter as they are aware of Generation Y being constantly connected. Moxy even took it one step further by creating its own hashtag called #atthemoxy for the same social media websites, and have already collected more than 1000 pictures of guests and employees. Hyatt Centric sets high value upon guest contact via e-mail. The representative of Hyatt Centric explained that they send out newsletters on a weekly basis and also contact the

guests with personalised emails and promotions. Before arrival, a guest receives an email asking for the preferences, so the stay can be customised as much as possible. The only email that guests receive by Moxy after their departure is the Marriott survey which is sent out randomly to approximately 20% of the guests. Hyatt Centric guests receive surveys as well, unlike Moxy though every guest registering with an e-mail address will get the survey after the stay. Just as in online reviews, people demonstrate their opinions in surveys in their own words and without any expert knowledge, equivalent to the VOC (Crawford & Di Benedetto, 2011; Gaskin et al., 2010).

4.1.3 On-Site Facilities

As explained by Waldthausen & Oehmichen (2013), the lobbies of new and young hotel brands differ from the classical entry space due to Generation Y's need to mingle with others. In the Hyatt Centric South Beach Miami the lobby is located on the third floor. It is intended to give a home feeling and remind guests of a library or lounge. A bar is located in the same room, confirming the trend of open spaces combining the lobby with a bar or restaurant (Waldthausen & Oehmichen, 2013). Moxy has a rather funky and cosmopolitan lobby, also with a wide, open space and the self-service food area again fitting the mentioned new tendency to mixed areas. Hyatt Centric has full service restaurants whereas Moxy presents a self-service, 24-hour food area with fresh meals and a do-it-yourself station. No focus on local food can be traced within Hyatt Centric's restaurants, however healthy menu options are provided. Breakfast is not included in either of the hotels' regular room rates. The Hyatt Centric South Beach Miami offers a fitness centre and a pool to support the modern healthy lifestyle. The Moxy Milan does not have any leisure facilities but this is mainly due to the small property. Moxy's representative explained that larger hotels will probably have a small gym. Both, Hyatt Centric and Moxy try to satisfy Generation Y's need of making holidays at home by creating a warm and friendly atmosphere. The interviewee representing Moxy described the hotel design as modern, straight forward and cool. In contrast to Hyatt Centric, Moxy hotels will have the same design in all locations. While the Hyatt Centric still has all the traditional room equipment in addition to modern details such as the ability to connect the phone to the TV via Bluetooth, the Moxy Milan concentrates on the highly necessary or effective furnishing. There is no desk or phone, but instead the emphasis lays on technical details, for instance implemented Apple and Android devices allowing guests to connect their phone to the TV.

4.1.4 On-Site Services

Apposite to Generation Y's needs, both brands offer free Wi-Fi to every guest throughout the entire hotel. Both Hyatt Centric and Moxy claim to always have a high-speed and reliable connection. Moxy even went one step further by implementing one router for each hotel room so guests do not have to share their connection with others. In Moxy hotels, to create a bond between the staff and the guests, polite phrases are replaced by easy-going conversations and approaching the guest by their first name. Recommendations, for instance a drink at the bar, are formulated as nonbinding invitations. Additionally the staff work in jeans, t-shirt and Converse All Star sneakers. Although Moxy hotels are very self service oriented, the check-in and check-out are still done by one of four crew members on shift. Both the Moxy and Hyatt Centric decided to have the reception staff acting as concierge.

4.2 Descriptive findings

4.2.1 Generation Y's Travel Behaviour- Accommodation Choice

Out of the 301 respondents, 25 said they stay at a hotel less than once a year. The majority (54.5%) uses hotels as accommodation once or twice a year while 37.9% stay in hotels even more than three times a year. As many Generation Y members do not have a regular income yet, budget plays a big role in the choice of accommodation. In fact, the price is the most important criterion before the journey (M=4.69, SD=.53). The before mentioned survey conducted by Destination Analysts pointed out that 69.3% of the survey's Generation Y travellers are price sensitive when travelling, confirming the outcome of the study at hand. Besides the price, the most important aspects for the hotel choice are appealing pictures on the hotel's website (M=4.46, SD=.75) and good reviews on TripAdvisor and other review websites (M=4.39, SD=.79). Free Wi-Fi achieved rank four on the importance list of the attributes before a journey (M=4.22, SD=0.96), re-emphasising how important Internet access is to millennials. The importance of a hotel being present on social media, reached only a medium high mean of 3.14 and a relatively high standard deviation of 1.2. Millennials wish for an easy booking process, although the booking has not to be possible via an app as this service is seen as unimportant (M=1.88, SD=1.06). When it comes to customer service before a journey, Gen Y seem to prefer personal e-mail contact (M=3.42, SD=1.11) or above all, customer service via phone (M=3.55, SD=1.22). The hotel's design achieved a mean of 3.39 with a standard deviation of 0.976 in the question which attributes are important during the stay. The mean for an included breakfast was very high with 4.06 (SD=0.99) but this does not necessarily indicate that those who ranked it very important or important would only book a room if breakfast was included. A central location has a high importance attached in question eight, with a mean of 4.09 and a standard deviation of 0.831. The location has also been mentioned in all sorts of ways in question two, asking for the three most important aspects for choosing a hotel. Some respondents indicated they would like a hotel to be close to the beach; others preferred it to be close to the centre or to interesting

sights and some simply said the hotel should be close to public transport stations. Contrary to a widely spread belief that Gen Y guests cannot be loyal, the likelihood of millennials returning to a hotel that they are satisfied with, is very high (M=4.12, SD=.73). In case the hotel belongs to a chain and they travel to another city with properties of the same brand, the likelihood of booking the desired brand is still rather high (M=3.81, SD=.7).

4.2.2 Generation Y's Needs- Hotel Facilities

The third question in the survey aimed to find out which hotel facilities Generation Y require. Different categories have been mentioned, for instance, F&B facilities including restaurant, breakfast facilities, bar or kitchen to cook own meals. What is striking is that many respondents wished to have several restaurants to be able to choose from different cuisines. Although wishes differ due to personal traits and cultural backgrounds (Manrai & Manrai, 2011), general preferences of Generation Y are recognisable. The most important characteristics of the menu and the food offered are first of all, having local dishes on the menu (M=3.96, SD=0.92), secondly having healthy options (M=3.8, SD=0.98) and thirdly having a broad and diverse menu (M=3.52, SD=1.17). The healthy lifestyle which is growing in popularity can also be seen in the fact that fast food was the least important option with a mean of 2.2 (SD=1.07). Those results confirm the general perception of Generation Y wanting to explore local cuisine and culture, being less demanding but more healthy than other generations. In general a restaurant in the hotel is of medium importance (M=3.5, SD=1.17). A hotel bar is of slightly less importance, as here the mean amounts to 3.16 (SD=1.2). Popular health and wellness facilities included a pool, spa, gym and sports facilities, for instance a tennis court. The pool & spa area is seen as rather important (M=3.54, SD=1.2) although it has been mentioned that the need for these facilities also depends on the location and type of the hotel. The hotel shop has the lowest importance assigned with a mean of 1.75 (SD=0.96). A lobby with a seating area is seen as moderately important (M=3.11, SD=1.12) which supports the theory of a growing interest in lobbies as mingle places (Waldthausen & Oehmichen, 2013).

4.2.3 Generation Y's Needs- Room Facilities

Electronics required in the room include a TV, stereo, fridge, a hair dryer, kettle and coffee machine, a phone and lastly an alarm clock. With a mean of 2.25 (SD=1.21) the availability of a Smart TV or Apple TV is of rather little importance. This might be because it is still quite new to connect one's phone to the TV but this does not mean that this will not change over the next few years. Free amenities asked for included water bottles, coffee, tea, cookies and sugar. Beside these, it was asked for the usual toiletries in the bathroom such as shampoo and body wash.

4.2.4 Generation Y's Needs- Services Offered

Personal service remains the most popular check-in/ check-out method (M=4.11, SD=1.05). The popularity of mobile check-in and self-check-in machines is quite similar, as the means are 2.05 (SD=1.07) and 2.15 (SD=1.15) indicating they are rarely used. Generally speaking, the numbers tell us that Generation Y is not as technology focused as some might think and that they are still seeking personal contact. Relatively high importance has been attached to the provision of a city map (M=3.82, SD=1.07) and the renting out of adapters and chargers (M=3.33, SD=1.24). Confirming the statement of Moxy's representative saying that Generation Y is very self-reliant, the importance of a suitcase carrier is quite low (M=2.02, SD=1.15). Another service seen as rather unnecessary is the Concierge desk, which only achieved a mean of 2.65 (SD=1.18).

4.2.5 Generation Y' Needs After the Journey

With a total mean of 2.52, the attributes of contact with the hotel after the stay, are by far less important than those before the stay with a total mean of 3.59 or during the stay with a total mean of 3.23. Once millennials leave the hotel, they do not have a big need for keeping in touch and if they do, they like to decide themselves when to get information. To do so, they can like the hotel's Facebook page or follow its posts on Twitter, where they have more control than with e-mail newsletters or the like. The highest interest in after journey contact exists for vouchers and discounts for the next stay (M=3.22, SD=1.16) and for a survey (M=2.85, SD=1.17) where guests can express their opinion and impression of the hotel and make suggestions for improvement. The lowest interest were e-mail newsletters (M=1.76, SD=0.9) and personal e-mails (M=1.72, SD=0.99), for instance birthday wishes. The interest in answers to written reviews is a little higher, having a mean of 2.8 (SD=1 .31). Loyalty points are also rather less important (M=2.75, SD=1.29) to Generation Y although it is willing to be loyal to a brand it likes, as is evident in 4.8.2. When their income increases and their number of hotel stays per year increases, so might their interest in a hotel loyalty program.

4.2.6 Comparison between Supply and Demand

Generally speaking, both the Hyatt Centric and Moxy fulfilled most criteria needed to target Generation Y. However, they did so in two completely different ways. There will always be a group of people who prefer a certain luxury and another group with lower expectations and higher price sensitivity. Hyatt Centric and Moxy both respond to Gen Y's high need for technology whereas Hyatt Centric is an upscale brand and Moxy belongs to the budget category. While Hyatt Centric might be too expensive for most millennials today, this will change over the next

years when they have finished their education and start working for a regular income. A central location is seen as important which Hyatt Centric has taken to heart and opened up hotels in vivid and central areas. Moxy will have hotels close to airports but also in city centres and therefore partly fulfil this need. Millennials think it is of rather low importance that a hotel is present on social media sites. Nevertheless, Hyatt Centric and Moxy think it is crucial to regularly post on their social media sites. Other hotel brands have a less exciting presence than new brands, targeting young people and those who still feel young and this could be the reason for Generation Y placing a low importance on this aspect. Since it has been found that appealing online pictures of a hotel are a significant criterion for the hotel choice, Moxy's #atthemoxy is a great idea for their happy guests to spread pictures of themselves at the hotel. On-site, a stay in a hotel starts in the lobby. To have a lobby with a seating area is moderately important to Generation Y (as a reminder: M=3.11, SD=1.12) and both hotel brands interviewed pointed out having a spacious lobby where guests can mingle.

When eating in the hotel restaurant, Generation Y prefers to have a menu with local dishes and healthy options. While healthy food is available in both analysed hotels, local dishes are only offered by Moxy Milan which has a lot of Italian dishes on its menu. Additionally, Moxy Milan offers diversity with the do-it-yourself station. The Hyatt Centric has a Mediterranean menu, with local influences and local ingredients and fulfils Gen Y's third wish, for a broad menu. Both new hotel brands investigated do not fulfil Generation Y's strong need for free breakfast. Other requirements fulfilled by both brands are fast, reliable and free Wi-Fi, personalised service and a check-in/ check-out which is done by employees instead of machines. Although the need for Smart TV or Apple TV is rather low, it is possible to connect the phone to the TV at both the Moxy and Hyatt Centric hotels. As already discussed, the need for this feature has a potential growth in the coming years. Hyatt Centric also satisfies the millennials need for free coffee and tea amenities which Moxy has cut out. Further, Hyatt Centric concentrates on an individual design in each hotel, which is evidently appreciated by millennials (M=3.39, SD=.98). The concierge service has been left out by both new brands, which again is a reasonable development, since millennials are fine with asking the reception staff for advice or simply searching for information on the Internet.

CONCLUSION AND FUTURE WORK

5.1 Conclusion

Generation Y has become an important target group for the hospitality industry. To target that special consumer group, online marketing is essential as it helps to develop new services or products with direct help in the form of the VOC and is useful to manage customer relationships. Although Moxy and Hyatt Centric have rather different concepts, both are targeting the young at heart. They have a strong focus on technology and try to enhance the guest experience by personalised service and extraordinary design. Generation Y is a generation with high expectations concerning technology and hotel staff. Generally the needs of millennials are rather simplistic. They prefer decent service, standard facilities and room equipment but they do not appreciate receiving newsletters or personal emails after their stay in the hotel. Hyatt Centric and Moxy adapt to Gen Y's needs in different ways. The Moxy matches Generation Y's needs for a low price, less contact after the hotel stay, local food and easy and amicable staff, while Hyatt Centric satisfies with a central location, a pool and fitness room, personalised service and a design which is unique and different in every hotel. For future hotels targeting Generation Y the retention of a personal check-in, the provision of free Wi-Fi and free breakfast, modern technology especially in the rooms, an extraordinary design, fair pricing, a restaurant offering local and healthy cuisine and ongoing, intensive staff training are highly recommended.

5.2 Future Research and Limitation

Several limitations have been inevitable while writing this research paper, due to a restricted amount of time and budget. Most importantly, the survey has been conducted only with one specific consumer group, namely Generation Y, so results cannot be generalised to all potential travellers. Besides, it has been conducted only once whereas ideally the survey should be run over a longer period of time. With a longitudinal study over many years, it would be possible to see the changes within Generation Y as the income increases and it grows older.

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HEALTH INSURANCE AND PRECAUTIONARY SAAVINGS UNDER LIQUIDITY CONSTRAINTS

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ABSTRACT

In this study, we analyze the effects of households' private health insurance subscription on their savings behavior in Korea. To do so, we adopt data from the Korea Welfare Panel Study for 2008–2013 and employ a panel Tobit regression model. We present evidence on the existence of a motive for precautionary savings for unexpected medical expenditures. However, this result is in contrasts those of a study on the United Kingdom (Guariglia and Rossi, 2004), which has a mixed healthcare system that combines public and private health insurance and is similar to that in Korea. This contrasting result can be attributed to the significant difference in the insurance coverage rates of the public healthcare sector between the two countries. In addition, the results revealed that a precautionary savings motive is more often found among households who face liquidity constraints than among unconstrained households, even under differing empirical specifications. Finally, our empirical results are robust to the random effects Tobit model for unobserved effect and a control function approach for endogeneity problem.

Keywords: Liquidity constraints, Panel Tobit regression model, Precautionary savings, Private health insurance

INTRODUCTION

Households face various sources of risks; for instance, as labor market risks, they encounter unemployment, the possibility of being disabled, resignation, or temporary leave due to health problems. These risks play a crucial role because households make their consumption–saving decision according to the risks they face. Most studies measuring uncertainties tend to use the conditional variance of consumption or income growth (Dynan 1993; Kimball 2001), while others use proxies for uncertainty, such as health insurance (Starr-McCluer 1996; Guariglia and Rossi 2004). Households are likely to subscribe to private health insurance as a precautionary measure for unexpected spending in the case of an illness. However, despite the use of health insurance as an instrument in the empirical testing of precautionary savings and its various policy implications related to healthcare systems, few studies in the literature examine the topic from this perspective.

In Korea, the proportion of household medical expenditures to total household consumption expenditures was 6.61% in 2012, which is the highest level recorded to date. Such medical expenditures create severe uncertainties in households regarding their future economic situation and thus cause them to save more and consume less. In other words, households tend to formulate a motive for precautionary savings for unexpected medical expenditures. Against this background, the growth rate of private health insurance (PHI) subscription in Korea has gradually gained momentum. The healthcare system in Korea, in particular the coexistence of public and private healthcare, has recently gained researchers' attention. Every individual subscribes to one of the two types of mandatory national health insurance (NHI), that is, for employees and self-employed, and medical aid.[1] However, as frequently pointed out, the coverage rate of NHI in Korea is substantially lower than that in other OECD countries, and this situation is unlikely to improve without an increase in households' contribution to NHI. To explore the implication of this problem, this study aims to present empirical evidence of a precautionary savings motive in Korea with respect to medical expenditures.

Thus, we analyze the effects of PHI subscription on household savings behavior in line with the research direction pioneered by Starr-McCluer (1996). PHI is supplementary to NHI in Korea in terms of medical cost financing. In this case, if a motive for such precautionary savings exists, the purchase of supplementary PHI is likely to negatively affect household savings. In other words, PHI mitigates uncertainties regarding unexpected medical expenditures. Reducing the precautionary savings motive will in turn flatten the optimal consumption path. If households' motive for precautionary savings is significantly strong, a subscription to PHI is likely to yield a positive welfare effect in terms of consumption smoothing, as highlighted in Chou et al. (2003).

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[1] Medical aid is similar to Medicaid in the United States.

However, a precautionary saving motive under a liquidity constraint may differ from motive without one.[2] Only a few papers attempt to explain the linkage between precautionary savings and a liquidity constraint. For instance, Lee and Swada (2010) empirically tested this relationship in Pakistan and found substantial precautionary saving motive in this developing country. Using Italian household data, Deidda (2014) provided empirical evidence of a stronger effect on households who face liquidity constraints than unconstrained households.

In this study, we analyze not only the effects of PHI on savings behavior but also the relationship between liquidity constraints and precautionary savings in the form of PHI subscription in Korea. To do so, we conduct empirical tests using various specifications and present interesting findings. The contributions of this paper are two-fold. First, we use PHI as an uncertainty measure in the present model, whose results have implications for health policymakers in Korea. Korea has a unique healthcare insurance system, which comprises mandatory public healthcare as well as the choice of private health insurance, thus rendering it comparable with the healthcare system in the United Kingdom. Second, we provide empirical evidence on precautionary savings motive under liquidity constraints. To the best of our knowledge, few empirical studies discuss the linkage between precautionary savings and a liquidity constraint in developed countries. Further, we conduct a robustness check for our findings using a control function approach.

To explore the implications of our theoretical predictions, we reference the Korea Welfare Panel Study (KOWEPS), constructed to develop welfare policies in Korea. Following Guariglia and Rossi (2004) and Hsu et al. (2011), we adopt the panel Tobit regression analysis, invented to address the censored data problem and unobserved heterogeneity across individuals. It is essential to control for unobserved heterogeneity to deal with endogeneity inherent in the purchase of private health insurance. Further, to perform a robustness check of our key empirical results, we use a control function approach and present a two-step estimation. First, we treat the residuals from the probit model with the main explanatory variable as the dependent variable, and then include the residual as an explanatory variable to check whether the main variable is still significant. The empirical results from the control function approach confirm that our main results are still valid.

When examining precautionary savings and liquidity constraints in the case of uncertainties resulting from capital market imperfections, it is important to adopt a model that accounts for these features. However, as Carroll and Kimball (2001) point out, there is no analytical closed-form solution, and the simulation results from existing theoretical models present mixed conclusions. Liquidity constraints may induce precautionary savings and both share a complementary or substitutive relationship. In the case of a complementary relationship, uncertainty has a larger effect on constrained households than on unconstrained households. Our empirical findings reveal a complementary relationship between precautionary savings and liquidity constraints for Korean households. This is consistent with Deidda's (2014) result for Italian households. Furthermore, the empirical findings suggest that the precautionary savings motive is significantly stronger for households who have limited access to the credit market.

The remainder of this paper is organized as follows: Section II presents a brief explanation of the health insurance systems in Korea. Section III discusses the empirical models. Section IV describes the data and main empirical results. Section V concludes.

HEALTH INSURANCE SYSTEM IN KOREA

In Korea, there are three types of health insurance systems: NHI system, medical aid program (MAP), and private health insurance (PHI). NHI provides universal coverage for outpatient care, in-patient service, preventive care, and prescription drugs to all citizens in Korea, except lower-income groups, which are supported by MAP.[3] In 2013, 50 million people, or approximately 97.2% of the total population, were covered. The insured are classified into two groups: insured employees and self-employed. The insured employee category includes the insured's spouse, direct lineal ascendants and descendants, unmarried brothers and sisters, as well as the employees themselves in the private and public sector. In 2013, insured employees in Korea paid 5.89%[4] of their average monthly salary as a monthly payment toward the insurance system. The self-employed insured category includes all persons who do not fall under the insured employee category. The contribution of the insured self-employed is calculated on the basis of the annual average income, properties, vehicles, age, and

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[2] According to Modigliani and Sterling (1983) and Kimball (1990), individuals should have prudence preference for precautionary saving motive. By contrast, Besley (1995) and Caroll and Kimball (2005) suggest that precautionary savings stem from individuals facing a binding constraint with non-prudent preference.

[3] Koreans who are overseas and foreigners residing in Korea may also opt for the NHI program by completing a registration procedure.

[4] The contribution rates tend to vary by year.

gender.[5] The remaining 2.8% were covered by MAP, is a tax-financed public assistance scheme to secure the minimum livelihood of low-income households and assist them with medical services that provide self-help. Under MAP, the government incurs all medical expenses for patients who are unable to pay for medical services.[6] Since 2004, MAP has been expanded to cover patients with rare, intractable, and chronic diseases as well as children below 18 years of age. This program is jointly funded by the central and local governments.

Table 1 Population Coverage (2013)

(Unit: 1,000 persons)

Classification		Coverage	%
Total		51,448	100
NHI	Subtotal	49,990	97.2
	Insured Employees	35,006	68.1
	Self-employed insured	14,984	29.1
MAP		1,458	2.8

Source: NHIS Statistical Yearbook (2013)

The last pillar of the Korean health insurance system is private health insurance, which broadly covers medical expenses for chronic illnesses and accidents. PHI plans play both a supplementary and complementary roles in the NHI plan by paying a lump-sum disbursement on the diagnosis of a critical illness, irrespective of actual medical expenditures and medical care receipts (critical illness plan), or providing itemized medical expense compensation upon service use (medical expenses plan). The demand for PHI plans among public insurance members further increased because of the limited coverage[7] and weak financial protection from public insurance packages. Unlike NHI, private plans pay the claimed benefit directly to the policyholders and not the healthcare service providers. According to Shin (2012), PHI's financing out-of-pocket payment for NHI-excluded services and cost sharing make it worthwhile for NHI members.
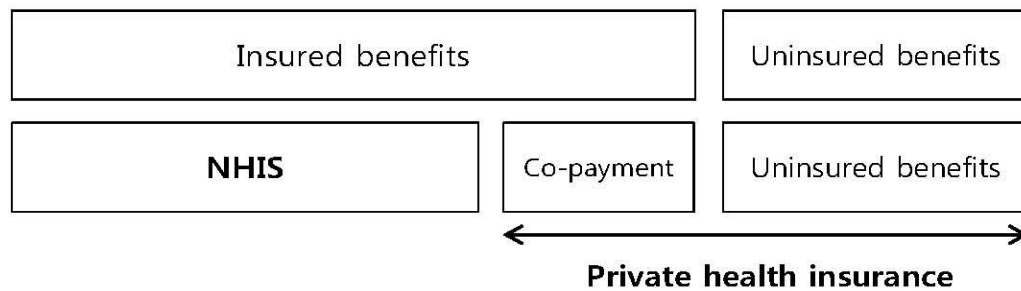

Figure 1 PHI Coverage

EMPIRICAL MODELS

Our main analysis is based on a panel Tobit regression model with individual-specific effects. The model is used to analyze the determinant of individuals' savings decisions and applied to a situation where savings take a positive value or the value of zero to represent negative savings. In particular, we estimate a random effects model because there is no simple consistent estimator for fixed-effect models in a general micro-econometric setting of a short panel.[8] Similar to Guariglia and Rossi's (2004) model, the Tobit regression model with random effects in this study is estimated as follows:

$$S_{i,t}^* = \gamma PHI_{i,t} + \beta' X_{i,t} + \mu_i + \varepsilon_{i,t}, \quad \begin{cases} S_{i,t} = S_{i,t}^* \text{ if } S_{i,t}^* > 0 \\ S_{i,t} = 0 \quad \text{if } S_{i,t}^* \leq 0 \end{cases} \quad (1)$$

where $\varepsilon_{i,t} \sim N(0, \sigma_\varepsilon^2)$. $S_{i,t}^*$ is an unobservable savings variable for household i at time t and the observed savings variable $S_{i,t}$ holds the relationship described in eq. (1). $PHI_{i,t}$ is a dummy for PHI enrolment and takes the value of 1 if the household head has at least one PHI at time t, and 0 otherwise. β' is the transpose of a finite

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[5] For details on the calculation of the contribution score for the low-income group, see National Health Insurance Service (2014).

[6] However, the deductible for outpatient services was introduced for those who qualified for MAP.

[7] NHI offers uninsured benefits as well as co-payments.

[8] More complicated semi-parametric estimators that permit fixed effects in Tobit and generalized Tobit models are discussed in Cameron and Trivedi (2005).

dimensional vector of unknown parameters, β, with control variables X. These control variables include those for taste-shifters, health status such as the household head's age, number of household members, dummies for non-residency within Seoul, self-rated health status, and other variables described in Table 2. In addition, as Carroll and Samwick (1998) suggested, because savings may vary across levels of permanent income, we include a proxy for permanent income for each individual.[9] The joint density for the ith observation $\mathbf{S_i} = (S_{i1}, \ldots, S_{iT})$ can be written as

$$f(\mathbf{S_i}|\mathbf{X_i}, \mu_i, \gamma, \beta, \sigma_\varepsilon^2) = \prod_{t=1}^{T} [\frac{1}{\sigma_\varepsilon}\phi_{i,t}]^{d_{i,t}} [1 - \Phi_{i,t}]^{1-d_{i,t}},$$

where $\phi_{i,t} = \phi\left(\frac{S_{i,t}-\mu_i-\gamma PHI_{i,t}-\beta'X_{i,t}}{\sigma_\varepsilon}\right)$ and $\Phi_{i,t} = \Phi(\frac{\mu_i+\gamma PHI_{i,t}+\beta'X_{i,t}}{\sigma_\varepsilon})$. $\phi(\cdot)$ and $\Phi(\cdot)$ denote the standard normal probability density function (pdf) and cumulative density function (cdf), respectively. Under the assumption that $\mu_i \sim N(0, \sigma_\mu^2)$, the random effects maximum likelihood estimator of β, σ_ε^2 and σ_μ^2 maximize the log-likelihood $\sum_{i=1}^{N} \ln f(\mathbf{S_i}|\mathbf{X_i}, \gamma, \beta, \sigma_\varepsilon^2, \sigma_\mu^2)$,

where $f(\mathbf{S_i}|\mathbf{X_i}, \gamma, \beta, \sigma_\varepsilon^2, \sigma_\mu^2) = \int f(\mathbf{S_i}|\mathbf{X_i}, \mu_i \gamma, \beta, \sigma_\varepsilon^2) \frac{1}{\sqrt{2\pi\sigma_\mu^2}} \exp(\frac{-\mu_i}{2\sigma_\mu^2})^2 d\mu_i$.

This one-dimensional integral can be computed using a Gaussian quadrature rule.

DATA AND EMPIRICAL RESULTS

4.1. Data
The data used in the empirical investigation are from the KOWEPS, administered by the Korea Institute for Social and Health Affairs and Seoul National University to elaborate on a more flexible social welfare policy. The first such study in 2006 covered 7,072 households. Over the years, KOWEPS has surveyed families and individuals, collecting information on various aspects, for example, social service needs, utilization patterns, economic and demographic characteristics, income sources, and emotional and behavioral health status. The survey comprises three questionnaire types: households, household members aged 15 years and above, and special topics (supplements). The most recent wave of surveys (eighth wave) was conducted in 2013, and the attrition rate of original households (compared to the first wave) was 25.47%.[10] We ignore data from the first and second waves in this empirical study because they do not contain information on households' PHI status.

4.2. Samples and Descriptive Statistics
Table 2 presents the descriptive statistics for the explanatory variables used in this study. Our unbalanced panel data comprise 15,155 observations, which include household heads from 4,433 households for 2008–2013. The table presents a comparison between households that own PHI (67.2%) and those that do not (32.8%). In addition, it shows the distinctive features between the two groups. We observe that households with PHI are those with higher permanent income and a greater number of younger household heads. Further, household heads with PHI are more likely to have a college (or higher)[11] education, be healthier in terms of self-assessed health, and enroll for the NHI employee insured scheme. The proportion of those who do not have a partner is higher in households with no PHI than in households with PHI. Finally, households with PHI are more likely to own a house and have more housing-related debt.

Table 2 Descriptive statistics of explanatory variables

	PHI (n = 10,178)	No PHI (n = 4,077)
Share of total sample	0.672	0.328

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[9] To obtain fitted values, we estimate a panel regression model for log disposable income by age, age squared, education dummies, certain occupational dummies, and other dummies. The results for the earnings equation are not reported, but can be made available by the authors upon request.

[10] The recorded retention rate was an approximate 75%, which is similar to that of other panel surveys or relatively higher levels. Nevertheless, to address the problems of the declining original sample size owing to survey rejection and natural loss and the distribution of the sample and representativeness, a new panel sample was constructed in 2012 with 1,800 households.

[11] This group comprises those who have a two-year college degree, four-year university degree, a master's degree, or a doctorate.

	Mean	S. D.	Mean	S. D.	Description
log permanent income	8.218	0.387	7.936	0.486	
Age	44.73	10.14	50.93	14.54	
nhh	3.218	1.218	2.758	1.336	number of household members
non-Seoul metropolitan area	0.545	0.498	0.531	0.499	dummy; those who reside outside Seoul metropolitan area
female	0.156	0.363	0.191	0.393	dummy
without partner	0.225	0.418	0.372	0.483	dummy; unmarried, widowed, divorced or separated
single household	0.108	0.310	0.206	0.404	dummy
single parent	0.026	0.159	0.029	0.168	dummy
college	0.425	0.494	0.269	0.443	dummy; those who have than a college degree
good health	0.808	0.394	0.648	0.478	dummy; self-rated health
poor health	0.054	0.225	0.144	0.352	dummy; self-rated health
rented housing	0.490	0.500	0.551	0.497	dummy
housing-related debt	0.392	0.488	0.306	0.461	dummy

4.3. Estimation Results

In this study, we are primarily interested in eq. (1), which describes the relationship between PHI and savings behavior. By doing so, we reveal that the purchase of a supplementary PHI can reduce uncertainty regarding unexpected health expenditures and thus, reduces households' precautionary savings motive. To control for other factors influencing savings behavior, we include age, income, health status, and wealth control variables, as described in the earlier section.

Table 3 presents the main empirical results of the panel Tobit regression analysis. These estimation results are compared to different specifications. First, the coefficient for PHI in the pooled Tobit model is −0.254, which is negative and statistically significant at the 1% significance level.[12] Second, in our benchmark model, which is a random effect Tobit, the coefficient for PHI is negative. Although we use the panel Tobit regression with random effects for unobserved heterogeneity, an endogeneity problem can still be found, a phenomenon also highlighted in other studies. Therefore, we employ a control function approach to provide additional evidence. We detail the control function approach later in this chapter. Column (3) in Table 3 presents the result for the control function approach. Here as well, the effect of PHI on savings behavior is significantly negative, which is consistent with our main findings. Thus, our empirical results provide evidence in support of the existence of a precautionary savings motive for PHI in Korea.

Table 3 Results of panel Tobit regression for household savings

	Pooled Tobit	Random Effect Tobit	Control Function Approach
private health insurance	-0.254***	-0.355***	-200.2***
	[0.098]	[0.103]	[39.55]
log permanent income	2.228***	2.413***	-0.291***
	[0.228]	[0.278]	[0.027]
age	-0.273***	-0.295***	-633.7***
	[0.033]	[0.039]	[20.27]
age*age/100	0.283***	0.302***	757.4***
	[0.033]	[0.040]	[22.99]
ln (hhs)	-1.766***	-1.677***	68.46
	[0.162]	[0.190]	[67.09]
non Seoul	-0.079	-0.072	-166.5***
	[0.088]	[0.111]	[35.01]
female	-0.114	-0.201	-2,565***
	[0.153]	[0.186]	[91.80]
without partner	0.260	0.380**	2,058***
	[0.159]	[0.186]	[85.47]
single household	-0.812***	-0.730**	-719.0***
	[0.248]	[0.291]	[93.84]
single parent	-1.138***	-1.208***	-58.51
	[0.303]	[0.344]	[116.5]
college	0.049	-0.166	294.5***
	[0.136]	[0.171]	[59.20]
good health	-0.324***	-0.257**	-330.0***
	[0.122]	[0.120]	[50.58]

[12] The results are found to be robust using the private health insurance premium amount and are available upon request.

	Pooled Tobit	Random Effect Tobit	Control Function Approach
poor health	-0.299	−0.277	1,097***
	[0.184]	[0.180]	[78.88]
rented housing	-0.239**	-0.189	762.7***
	[0.101]	[0.117]	[44.56]
mortgage debt	0.167*	0.170*	-121.0***
	[0.098]	[0.103]	[39.48]
constant	−7.655***	−8.634***	17,098***
	[1.574]	[1.918]	[509.2]

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are given in parentheses.

This implies that households are less likely to save after they purchase private health insurance. This finding supports our precautionary saving hypothesis and is similar those in Lee and Sawada (2010) and Deidda (2014), who use different models and specifications for testing. In addition, they use a classical linear regression model with variations in consumption and income growth and subjective measurements. However, in comparison to existing studies, our specification with a PHI subscription is a more direct measurement of uncertainty when testing for a precautionary savings motive.

Thus, our analysis revealed the existence of a precautionary savings motive. However, under the possibility of a liquidity constraint, households may change their risk attitude because of limited access to credit borrowing. Lee and Sawada (2007) and Deidda (2014) find the coefficient of precautionary motive to be larger for liquidity-constrained households. Our specification is a sample-splitting analysis to assess the degree of liquidity and conduct our benchmark analysis. The sample-splitting approach is commonly used when empirically analyzing broad macroeconomics concepts, for example, permanent income or a lifecycle hypothesis (Hayashi (1985), Zeldes (1989), Shea (1995), Parker (1999), Ni and Seol (2014)).

Thus, we split the samples into subsamples on the basis of liquidity, income level, and age of household head. We further divide them into two groups: low- and high-liquidity households, which hold the top and bottom 20% of liquid assets relative to household disposable income respectively. Low-liquidity households are found to face more uncertainty if households have a binding constraint in borrowing money; therefore, they are likely to have an incentive to save more. However, high-liquidity households have less incentive to save because they possess sufficient liquidity for future uncertainties. Our Tobit regression results show that the estimate for the low-liquidity group is stronger than that for the high-liquidity households. The coefficient of PHI is −0.905 (significant at the 1% level) for low-liquidity households and negative, but not significant, for high-liquidity households.

We extend our analysis to the samples split by income level and age. In addition to a liquidity constraint, low-income households or young households have more binding constraints than high-income households or older households. For income level, we split the sample as per the top and bottom 20% of household disposable income for low- and high-income households. Our estimation results are consistent with the theory's prediction. The effect of PHI on savings behavior is −1.182 (significant at the 1% level) for low-income households and −0.202 but not significant for high-income households. Our criterion for age group is an average age of 47 years.[13] For young households, the coefficient of PHI is estimated at −0.498 and statistically significant; however, for older households, the estimated coefficient is −0.224 but not significant. Our empirical findings confirm that the precautionary saving motive can stem from liquidity constraints, which we test under various specifications. Households with low liquidity or low-income level are more likely to have a binding constraint

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[13] This is the mean age in the pooled samples. Our sample is split into older households whose heads are older than 48 years and young households whose heads are 47 years of age or younger. The average value is marginally higher than that in other studies that conduct a representative household survey in different countries. In Parker (1999), the age group comprised those who were older than 44 years, which is based on the notion that behavioral change in typical households in the United States—that is, from a buffer stock-type behavior to permanent income or a lifecycle hypothesis type—occurs around the age of 43 years. Similarly, Ni and Seol (2014) split the sample for Korean households on the basis of those who are 43 years or younger.

than those with high liquidity or high income, as also younger households in comparison to older ones. This finding is in line with the permanent income and lifecycle hypothesis, in which households are cautious when making saving–consumption decisions in the case of unexpected future shock. The magnitude of an uncertainty effect is larger for constrained households than unconstrained households. Thus, our empirical findings suggest a complementary relationship between precautionary saving motive and liquidity constraints for Korean households, which is consistent with Deidda's (2014) results for Italian households.

Table 4 Results for liquidity constraint test

	Liquidity		Income		Age of household head	
	low	high	low	high	young	old
private health insurance	−0.905***	−0.254	−1.182***	−0.202	−0.498***	−0.224
	[0.283]	[0.224]	[0.230]	[0.207]	[0.134]	[0.158]
log permanent income	2.004***	1.606***	−0.164	−2.765***	4.073***	1.497***
	[0.740]	[0.553]	[0.626]	[0.553]	[0.411]	[0.382]
age	−0.271***	−0.287***	−0.133**	−0.224**	−0.247*	0.438***
	[0.096]	[0.085]	[0.064]	[0.101]	[0.136]	[0.129]
age*age/100	0.264***	0.268***	0.139**	0.218**	0.198	−0.287***
	[0.096]	[0.084]	[0.063]	[0.103]	[0.179]	[0.106]
ln (hhs)	−1.575***	−1.151***	−4.126***	−2.372***	−2.273***	−0.296
	[0.510]	[0.390]	[0.557]	[0.329]	[0.270]	[0.284]
non Seoul	0.400	−0.097	0.557**	−0.355**	0.203	−0.282*
	[0.286]	[0.214]	[0.234]	[0.182]	[0.143]	[0.167]
female	−0.203	−0.325	0.688**	0.184	−0.113	−0.127
	[0.414]	[0.428]	[0.272]	[0.631]	[0.265]	[0.269]
without partner	0.500	0.169	0.756**	−0.034	0.658***	0.199
	[0.442]	[0.422]	[0.345]	[0.485]	[0.246]	[0.285]
single household	−0.228	−0.387	−2.597***	−3.941***	−0.470	−0.151
	[0.759]	[0.616]	[0.645]	[0.970]	[0.410]	[0.420]
single parent	−0.245	−1.324	−0.718	−2.730	−0.656	−1.746***
	[0.668]	[0.993]	[0.512]	[1.519]*	[0.431]	[0.631]
college	0.104	−0.182	−0.298	0.406	−0.428**	−0.561
	[0.462]	[0.336]	[0.435]	[0.293]	[0.210]	[0.303]*
good health	−0.295	0.379	−0.242	0.176	0.351*	0.209
	[0.330]	[0.260]	[0.234]	[0.242]	[0.183]	[0.159]
poor health	0.275	−0.631	−0.340	−1.301***	0.072	−0.387
	[0.445]	[0.430]	[0.272]	[0.449]	[0.348]	[0.213]*
rented housing	0.126	−0.209	−0.053	0.124	0.054	−0.431**
	[0.338]	[0.242]	[0.258]	[0.204]	[0.154]	[0.179]
mortgage debt	1.261***	−0.261	0.135	−0.048	0.173	0.153
	[0.310]	[0.214]	[0.257]	[0.173]	[0.137]	[0.156]

	Liquidity		Income		Age of household head	
	low	high	low	high	young	old
constant	−9.465*	−1.198	6.957	36.92***	−22.16***	−24.70***
	[5.112]	[3.777]	[4.405]	[3.753]	[3.457]	[4.801]

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are given in parentheses.

4.4. Control Function Approach

To more explicitly reflect the existence of negative savings in the dataset and capture the endogeneity in PHI enrolment, we further investigate the saving decisions using the control function approach.[14] Thus, saving is modeled as

$$S_i = \gamma PHI_i + \beta_1' X_i + \varepsilon_i. \tag{3}$$

The endogenous decision for PHI enrolment is

$$PHI_i = 1[\beta_2 Z_i + u_i \geq 0]. \tag{4}$$

In this case, a simple two-step estimator is obtained as follows. First, we obtain the probit estimate, $\hat{\beta}_2$,[15] and calculate the generalized residual, $\widehat{gr}_i \equiv PHI_i \lambda(\hat{\beta}_i Z_i) - (1 - PHI_i)\lambda(-\hat{\beta}_i Z_i)$, where $\lambda(\cdot) = \phi(\cdot)/\Phi(\cdot)$ is the inverse Mills ratio. Second, we estimate the saving equation and include a generalized residual as a regressor:

$$S_i = \gamma PHI_i + \beta_1' X_i + \delta \widehat{gr}_i + \varepsilon_i. \tag{5}$$

In addition to the Tobit regression (Table 3), the control function approach allows us to confirm that the effect of PHI on savings behavior is significantly negative. In this section, as a robustness check, we test whether liquidity constraints persist under various specifications using the control function approach

To do so, we conduct a split-sample analysis, which is similar to the main regression. Columns (1) and (2) in Table 5 show the results for low- and high-liquidity households. The effect of PHI on saving in a low-liquidity household is significantly negative and that for a high-liquidity household is negative but not significant. Columns (3) and (4) are a comparison of the results by income group. The results show that the effect of PHI on low-income households is still significantly negative and that of high-income households is negative and significant at the 5% level. Columns (5) and (6) show the estimation results by age of household head. As expected, our results confirm that the effect of PHI on younger households is negative and significant, but that on older households is not significant. The magnitude of the effect on younger household heads is larger than that on older ones. Thus, the empirical results obtained from the control function approach show a clear pattern in supporting liquidity constraint.

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[14] When the model is nonlinear, such as a Tobit regression, and the endogenous variable is not continuous, the control function approach does not work, as documented in Imbens and Wooldridge (2009). This is called a "forbidden regression." In other words, the control function approach applies when the model is linear in parameters, with the endogenous variable being either continuous or discrete, or when the model is nonlinear and the endogenous variable is continuous. Therefore, we report the results of only the linear regression of savings for endogenous PHI decisions.

[15] For parsimoniousness, we do not report the results for the probit regression here. The regressors are treated as explanatory variables in the savings equation and dummy variables denote workplace size.

Table 5 Results for control function approach

	Liquidity		Income		Age of household head	
	low	high	low	high	young	old
private health insurance	−344.8***	−49.25	−220.6***	−416.3***	−329.0***	−88.46
	[113.8]	[120.8]	[29.89]	[189.7]	[52.03]	[58.69]
log permanent income	−0.479***	−0.250***	−0.118	−1.348	−0.683***	−0.247***
	[0.083]	[0.078]	[0.023]***	[0.124]	[0.040]	[0.040]
age	−1,239***	−746.1***	−85.51	−1,748***	−668.5***	−752.0***
	[62.91]	[63.03]	[17.26]***	[103.0]	[50.11]	[64.91]
age*age/100	1,469***	858.3***	104.6	2,054***	830.0***	814.9***
	[72.10]	[69.74]	[20.01]***	[112.5]	[65.86]	[60.62]
ln (hhs)	559.2***	−154.2	−515.7	16.83	9.345	44.41
	[205.4]	[197.0]	[69.87]***	[286.2]	[95.48]	[96.36]
non Seoul	−88.82	−184.1*	89.17	−551.7***	−264.3***	−165.9***
	[106.1]	[102.3]	[27.83]***	[147.4]	[45.94]	[52.63]
female	−4,839***	−2,424***	−328.9	−6,781***	−4,161***	−2,254***
	[267.1]	[279.7]	[75.74]***	[626.7]	[136.8]	[145.1]
without partner	3,765***	2,024***	386.7	5,252***	3,438***	1,827***
	[249.3]	[258.7]	[69.50]***	[482.8]	[124.9]	[131.6]
single household	−588.0**	−996.1***	−539.2	427.9	−1,455***	−562.3***
	[276.7]	[287.8]	[72.94]***	[855.8]	[133.3]	[136.2]
single parent	190.2	−431.1	−14.06	595.3	−319.9**	−357.8*
	[250.8]	[487.4]	[61.86]	[1,295]	[145.8]	[213.9]
college	572.9***	246.9	40.03	1,133***	580.0***	25.77
	[190.3]	[173.7]	[55.74]	[261.9]	[72.99]	[105.7]
good health	−893.4***	−92.36	−71.62	−811.2***	−703.8***	−268.2***
	[145.7]	[149.1]	[36.14]**	[234.2]	[77.82]	[66.57]
poor health	2,058***	1,043***	132.2	2,574***	1,712***	889.2***
	[208.9]	[248.3]	[47.36]***	[427.6]	[144.3]	[98.55]
rented housing	1,488***	729.7***	194.3	1,779***	1,056***	640.0***
	[141.8]	[133.2]	[37.35]***	[184.4]	[58.46]	[69.04]
mortgage debt	−209.2	−188.7	−61.50	−358.6**	−254.7***	−186.8***
	[127.6]	[114.7]	[34.86]*	[154.0]	[52.82]	[58.39]
constant	32,576***	19,794***	2,583	51,262***	21,858***	20,800***
	[1,563]	[1,600]	[425.4]***	[2,403]	[1,013]	[1,938]

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are given in parentheses

CONCLUDING REMARKS

This study provides empirical evidence in support of the existence of a precautionary savings motive for PHI in Korea. In other words, the purchase of supplementary PHI significantly reduces uncertainty regarding unexpected health expenditures, thus reducing households' precautionary savings motive. Further, the results reveal that PHI has a significantly negative effect on savings behavior in our benchmark model and the random effect Tobit model, which accounts for unobserved heterogeneity.

To explain the precautionary saving motive, we empirically test for the possibility of a liquidity constraint. We adopt a split-sample approach for liquidity, income, and age group and find that a precautionary saving motive may stem from liquidity constraints. These empirical results are robust for various estimation specifications. In addition, we confirm our empirical findings using a control function approach, which also provides a solution for the endogeneity problem regarding a PHI choice.

The linkage between precautionary savings and liquidity constraints is interpreted as complementary. Under the assumption of liquidity constraints, households facing uncertainty under the liquidity constraint have a stronger incentive to save compared to unconstrained households. In other words, if households have limited access to a credit market, these households have an incentive to subscribe to PHI, thus preparing for unprecedented health shocks.

Although the NHI functions as a mandatory and preventive safety net for almost the entire population in Korea, in 2013, the country's PHI service covered only 55% of all household medical expenses (OECD, 2013). In this case, additional PHI seems to work as an efficient buffer against uncertainty. This is in stark contrast to the United Kingdom, where 93% of medical expenditures are covered by the public sector, and PHI is a substitute for national health system (NHS) in terms of medical care. Moreover, in the United Kingdom, because co-payments in NHS are zero, except in the case of prescriptions and dental care, there is little scope for PHI to financially supplement public coverage. In fact, an individual can only substitute medical treatment funded by NHS with private insurance-funded treatment, as explained in Olivella and Vera Hernandez (2008). We presume that these differences produce contrasting results between Guariglia and Rossi's (2004) study and the present one, despite both countries having a similar mixed health system. In conclusion, we argue that PHI in Korea enhances household welfare through consumption smoothing, particularly under the current government fiscal pressure.

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THE IMPACT OF TEACHING AND LEARNING CIRCLE GEOMETRY USING GEOGEBRA ON GRADE 11 STUDENT'S ACHIEVEMENT

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ABSTRACT

Circle geometry a newly introduced topics in the South African school curriculum and its teaching seems to be a challenge to many teachers. Hence, the need to find better ways of teaching the topic and improve students' achievement led to this study on the impact of GeoGebra on grade 11 students' achievement on circle geometry. APOS theory was used as framework guiding the study. Following a non-equivalent group quasi-experimental design two secondary schools (experimental and control groups) located in a rural area in Limpopo province of South Africa were used as sample. The experimental and control groups were taught using GeoGebra and traditional 'teacher-talk-and-chalk' method respectively. The hypothesis tested is: There is no significant difference in achievements of a group instructed with GeoGebra software compared to a group instructed without the software. Data were collected using pre-test and post-test. Data analysis using the independent samples t-test that the experimental group students achieved better post-test scores (marks) than the control group students. The findings suggest that integrating GeoGebra can improve student's achievement in circle geometry.

Keywords: Achievement, APOS theory, Circle geometry, GeoGebra

INTRODUCTION

The South African school curriculum, in particular secondary school mathematics curriculum has undergone extensive transformation over the last few years. The National Curriculum Statement (NCS); the curriculum that came in place in 2002 was revised in 2009 and has been phased and replaced with the Curriculum and Assessment Policy Statement (CAPS) of 2012. These changes while desirable brought many instructional challenges to teachers. For example, in the NCS some topics including circle geometry were optional meaning that the topics were only offered by schools and candidates that wished to and they had to write a separate examination paper (paper 3) on them in addition to the compulsory papers 1 and 2. However, in the CAPS the topics were made compulsory implying that every student has to be tested on the topics. Hence, the paper 3 of NCS is combined with papers 1 and 2 in CAPS.

In the NCS, majority of the students that opted for paper 3 between 2009 and 2013 did not do well in the examination (Department of Education, 2013). Hence, most of the schools discouraged their students from opting for the paper 3. The poor achievement was not only in the paper 3. The mathematics achievements of the students in general at all levels have not been impressive and Limpopo province has been one of the least performing provinces in mathematics (National Senior Certificate Examination Diagnostic Report, 2014).

Given the poor state of mathematics education in the country in general and the province in particular, the inclusion of new topics in the CAPS, the new mathematics curriculum, was a curriculum change of a big magnitude to teachers and students alike. The majority of the mathematics teachers in the Further Education and Training (FET) band (Grades 10 – 12) are pedagogically ill-equipped to effectively teach the new topics as most of the teachers were never taught the topic in their schooling. Also, there is very little or no support in some education districts to teachers to help them cope with teaching the topics.

Technology in the teaching and learning of mathematics

Integrating technology software such as GeoGebra into the mathematics teaching and learning is supported by many studies. Bester and Brand (2013) argue that technology assists students to make meaning of the learning material. They also argue that educators must match appropriate technology usage in order to maximise students' potential of learning. The interactive effects of sound, animation, narration and additional definitions provided by technology (computers) appeal to today's learners, motivating them to concentrate better and to achieve higher average scores. An investigation by Trifonas (2008) showed that achievement can be improved in the classroom with the active involvement of the students making optimal use of technological innovations.

Willougby and Wood (2008) noted that learning takes place on computer software without the learners realising the amount of attention they are paying to the material. This could be because students seem to focus on their work longer when using technology (Bitter & Legacy, 2008).

Donevska-Todorova (2015), investigated on the role of Dynamic Geometry Systems on conceptual understanding of Dot Product of Vectors in a Dynamic Geometry environment by high school and university students. Her study exemplifies the role of Dynamic Geometry Systems utilizing students' understanding of concepts in Linear algebra in the transition between upper high school and university education. The study found that conceptual understanding of Dot Product of Vectors in a Dynamic Geometry environment significantly increased when compared to conceptual understanding of students instructed in an environment without Dynamic geometry Systems.

Segal and Stupel (2015) conducted an investigative study on the effect of incorporating computerized technology on pre- and in-service mathematics teachers. In their study, they revealed that computer technology stimulated investigative learning, and had improved the quality of teaching by the pre- and in-service teachers. The response to the use of the computerised technology indicated significant willingness by the teachers to utilize the technology in teaching and learning.

Integration of Computer Technology (ICT) has been found to be a powerful problem solving tool that provides an accurate and dynamic graphing and computational platform (National Council of Teachers of Mathematics [NCTM], 2003). ICT has been found to support and mediate the learning of mathematical concepts (Owston, Wideman, Ronda & Brown, (2009), Wei, Hung, Lee & Chen, 2011),motivate students to learn effectively (Ogbonnaya, 2010)and also enriches students' learning experiences in geometry (Jones, 2011).Similarly, we believe that the integration of Information Technology into the teaching and learning of secondary school mathematics will provide a scaffold on which changes and developments in curriculum can be better managed. This study specifically explored the effect of integrating GeoGebra software in the teaching and learning of circle geometry. The intention was to investigate whether it is worthwhile to integrate GeoGebra software into the teaching and learning process so as to narrow the instructional and knowledge gap created by curriculum change to both teachers and students.

THEORETICAL FRAMEWORK

In this study we adopted APOS theory as the theoretical framework. The acronym APOS stands for Action, Process, Object, and Schema. APOS Theory is a theory of how mathematical concepts can be learned based on the constructivist theory. The theory is rooted in the work of Jean Piaget, and its fundamental ideas were first introduced in the early 1980s (Dubinsky 1984a), and since then, extensive development and application has been carried out by researchers, curriculum developers, and teachers in many countries.

According to APOS theory all mathematical conception can be understood as actions, processes, objects and schemas (APOS). An action is a repeatable physical or mental manipulation that transforms objects. In this study any transformations resulting from dragging angles and lines in circle geometry are conceived as actions resulting from a reaction to external stimuli, (GeoGebra software is the external stimuli). In this study, for example, to prove the theorem that states; 'Angles subtended by the same arc/chord at the circumference are equal', the student can repeatedly drag the angles subtended at the circumference to various position on the circumference. Using GeoGebra feature of measuring angle sizes, the student can establish with relative ease that all angles subtended by the same arc/chord at the circumference are equal.

A process is an action that takes place entirely in the mind. As an individual repeats and reflects on an action, it may be interiorised into a mental process. A process is a mental structure that performs the same operation as the action, but wholly in the mind of the individual. The effect of using GeoGebra software in the above mentioned proof is to transform the physical angle dragging into a mental process, in which students can make the same conclusions when confronted by the same situations.

The distinction between a process and object is drawn by stating that a process becomes an object when it is perceived as an entity upon which actions and processes can be made, Maharaj (2013). In our example, students would achieve the cognitive object stage, as a result of mastery of the two preceding stages, action and process.

A schema is more or less a coherent collection of cognitive objects and internal processes for manipulating these objects. A schema could aid students to "… understand, deal with, organise, or make sense out of a perceived problem situation" (Dubinsky, 1991b, p.102). Arriving at a generalization such as a circle theorem, involves many actions, processes, and objects that need to be organised and linked into a coherent framework (schema). The theorem (schema) provides an individual with a way of deciding, when presented with a particular circle geometry situation, whether the schema (theorem) applies.

According to Sfard (1991) abstract mathematical concepts can be conceived in two fundamentally different ways: as processes (operationally) or objects (structurally). In APOS theory action and process can be regarded as operational conceptions, while object and schema are structural. The development of mathematical concepts often proceeds by taking processes as operators and then turning them into objects.

The four components, action, process, object, and schema have been presented by Dubinsky in hierarchical, ordered list. Although this is a useful way of talking about these conceptions, in reality, when an

individual is developing understanding of a concept, the conceptions are not actually made in such a linear manner.

METHODOLOGY

This study was a quasi-experimental study, of non-equivalent comparison group design. The study used experimental and control groups. The experimental group was taught using GeoGebra, while the control group was instructed using the traditional teacher talk and chalk method. This study adopted the quasi-experimental research design because it is not possible to conduct 'true' experiments with students, hence quasi-experimentation provided the best approach to investigate cause and effects relationships (Castillo, 2009). Researchers argue that quasi-experiments are empirical studies that can be used to estimate the causal impact of an intervention on its target population (Castillo, 2009).

Participants

Two schools from one circuit, but with distinct student catchment area were used in this study, as the control and experimental groups. The control group had 25 participants (10 girls and 15 boys), while the experimental group had 22 participants (9 girls and 13 boys). Each group was taught by a different teacher. The teachers were holders of university degrees in mathematics and had over twenty years of experience in teaching high school mathematics.

Teaching in the experimental group

The 22 experimental group participants had laptops each, with GeoGebra software installed on them. Before instruction began, a pre-test was administered to the experimental group, whose aim was to check on prior knowledge and establish whether the group was comparable to the control group. The teacher then instructed and demonstrated with a laptop connected to an overhead projector. After two days of GeoGebra and computer introductory lessons and one day of topic introduction, (2 hour lesson per day), content development worksheets were used during lessons delivery. Each lesson was 1 hour long. The worksheets had 'open ended' questions to allow students to explore different solution strategies and/or skills of answering circle geometry questions. The content development worksheets had the same content for both the control group and the experimental group, although the teaching and learning approaches were different. Each worksheet covered one or two circle theorems depending on the length of the procedures required to prove the theorem(s).No data was analysed from the worksheets.

Teaching in the control group

Before instruction began, a pre-test of the same content and aims to that of the experimental group was administered on the same day and at the same time as that of the experimental group. The 25 participants in the control group were taught by their own teacher using the traditional 'teacher-talk-chalk' teaching method. Only one day was used for the introduction of the topic since no computer introduction was needed. Four content development worksheets similar in content to the experimental groups were used. Each lesson was one hour long, and teaching was done for seven days.

Data Collection Instruments

Data were collected by means of pre-test and post-test. All the questions in the pre-test and post-test were based on the topic of circle geometry as specified in the grade 8 to 11 mathematics CAPS documents.
The pre-test of 15 multiple choice questions was administered to both the control group and the experimental group. It was based on basic concepts on circles and geometry in general, such as angle properties on parallel lines and plane shapes. It was assumed that all the learners will use their past experience to answer the pre-test, since the content covered was that for grade 9 and lower grades. The pre-test was used to determine if the classes were comparable at the outset by determining the baseline knowledge or preparedness for the learning of circle theorems topic.

The post-test was a comprehensive summative 30 questions test based on the principles of Van Hiele's theory on levels of geometrical understanding. The allocation of marks for this test was dependent on the level at which the question belonged according to the Van Hiele's theory of geometrical understanding, as indicated in the table 1 below.

Table 1 Allocation of Post-test Marks According to Van Hiele levels

Van Hiele's Levels of Geometrical Understanding	Question number	Marks per question	Total Marks
Visualization	1-7	1	7
Analysis	8-14	2	14
Abstraction	15-21	3	21
Deduction	22-28	4	28
Rigor	29-30	5	10
Total			80

Validity and reliability of the tests

To examine how the tests questions covered the grade 11 CAPS circle geometry content, the test items were evaluated by five experienced mathematics teachers and two mathematics subject advisors in the district. They judged the tests' coverage of the curriculum in terms content and level of difficulty by rating each item as being essential or not. Using Lawshe (1975) formula, the CVR for each item in the test and the mean CVR across all items were calculated. The mean CVR for both the pre-test and post-test for this study was +1, an indication that all the panellists agreed that these tests were valid (Wynd, Schmidt & Schaefer, 2003).

The Kuder-Richardson Formula 20 (KR20) was used to calculate the reliability coefficient (internal consistency) of the pre-test. A value of 0.81 was obtained which showed that the pre-test had high reliability.

The post-test's reliability was tested using Spearman-Brown formula (Stanley, 1971) because the test items were polytomous (comprised of multiple choice questions, short answer questions and long mathematical proofs). The test was split into two halves, each with 15 questions (even numbered items making the first half and the odd numbered questions forming the other half). A reliability value of 0.98 was obtained which implied that that the post-test was very reliable.

Data Analysis

To analyse the data, descriptive and inferential statistics were used. Descriptive statistics were used to describe the basic features of the data obtained in this study. The major descriptive characteristics calculated were (i) the distribution of the data (ii) the central tendency and (iii) the dispersion of the data. Inferential statistics - independent samples t-test, was used to test if there was a significant difference between the average post-test score of experimental group and the control group.

Findings

The major descriptive characteristics calculated in this study were (i) the distribution of the data (ii) the central tendency and (iii) the dispersion of the data.

Using the Department of Basic Education (DoBE) performance levels, the descriptive characteristics were summarised as shown in the frequency distribution table 2.

Table 2 Frequency Distribution of Pre-test and Post-test Results

Level	Mark Range (DoBE performance level)	Control Group Pre-test Frequency	Experimental Group Pre-test Frequency	Control Group Post-test Frequency	Experimental Group Post-test Frequency
1	0-29	7	5	7	1
2	30-39	2	3	3	3
3	40-49	5	5	4	2
4	50-59	3	2	3	6
5	60-69	4	3	5	3
6	70-79	1	3	2	1
7	80-100	2	1	1	6
TOTAL		25	22	25	22

The table shows the mark distribution of learners according to performance per test (Pre-and Post-tests). The mark distribution was summarised in table 3 below.

Table 3 Groups' statistics: Dispersion and central tendency of the data

Test and Group	Minimum	Range	Mean	Standard Deviation	Maximum
Pre-test Control Group	8	(88-8) = 80	45.84	23.56	88
Pre-test Experimental Group	11	(79-11) = 68	46.77	21.11	85
Post-test Control Group	10	(78-10) = 68	44.76	20.78	80
Post-test Experimental Group	26	(89-26) = 63	61	19.20	98

From Table 3, the post-test results for the experimental group have the smallest range. This study used the t-test for significance of the difference between the means of two independent Samples using SPSS. For the purpose of this paper, two independent samples t-tests results are presented, the independent samples t-test for the pre-test and post-test.

The independent samples t-test for the pre-test was done in order to check whether the two groups were comparable before the main study was carried out. The null hypothesis tested was:

There is no significant difference in geometry understanding between the experimental group and control group.

The results of the test are illustrated in tables 4(i) and 4(ii) bellow.

Table 4 (i) Group statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-test	Experimental Group	22	46.7727	21.60673	4.60657
	Control Group	25	45.8400	24.03241	4.80648

Table 4 (ii) Independent samples t-test of Pre-test results

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
Pretest	Equal variances assumed	.384	.539	.139	45	.890	.93273	6.70373	-12.56928	14.43474	
	Equal variances not assumed			.140	44.974	.889	.93273	6.65753	-12.47645	14.34191	

The two tables above shows the group statistics and the independent t-test results of the pre-test. Comparison of the mean scores of experimental and control group indicates that there is no statistical difference in the mean scores of the experimental group ($\bar{x}$= 46.8) and control group ($\bar{x}$ = 45.8). The independent samples t-test for pre-test results for experimental and control groups, indicates that at 0.05 level of significance t = 0.14, df =45, p > 0.05. There was no significant difference in learner' pre-test scores between the experimental and control groups. This means that the experimental and control groups could be assumed to have equal academic ability before the instruction was started. This shows that, the null hypothesis is accepted.

In the second t-test, post-test results were t-tested in order to answer research question 2. The groups were subjected to different teaching methods (GeoGebra instructed and 'teacher-talk and-chalk' instructed). Because the two groups were of mixed ability and of comparable ability as indicated by the groups' average performances, any differences between the groups could be explained by the independent t-test of the post-test results.

The Null Hypothesis of the research question 2 (What is the difference in achievements of students exposed to GeoGebra software compared to students taught without the software?) was:

There is no significant difference in achievements of a group instructed with GeoGebra software compared to a group instructed without the software.

Table 5 illustrates the independent samples t-test for post-test results.

Table 5 Independent Samples T-Test for Post-test Results

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post-test	Equal variances assumed	.315	.578	2.710	45	.009	16.24000	5.99258	4.17033	28.30967
	Equal variances not assumed			2.724	44.867	.009	16.24000	5.96289	4.22914	28.25086

The independent samples t-test comparison of the post-test mean scores of the experimental and control group showed that the calculated t-value (t-calc = 4.17, df = 45. P □ 0.05) absolute value is higher than the t-value (t-crit = 2.71). This indicated that there was a statistical significant difference in the mean scores of experimental group ($\bar{x} = 61$) and control group ($\bar{x} = 44.8$) at 0.05 level of significance (t-calc = 4.17, df = 45, P □ 0.05). Therefore, the null hypothesis was rejected; meaning that there was a significant difference between the experimental and control group results.

These results suggested that the use of GeoGebra in the teaching and learning of circle geometry can result in improvement of students' performance in circle geometry.

DISCUSSION

The findings from this study show that GeoGebra software enhanced the students' achievement on circle geometry. The fact that the experimental group students achieved better than the control group students in the test suggests that they likely had better understanding of circle geometry concepts than the control group students. The difference in achievement could be because the experimental group students had a better coherent collection of circle geometry **objects** that aided their understanding of the concepts and consequently their achievement as Dubinsky (1991) suggested. The results of the analysis of t-test on the achievement of students taught using Geogebra software and those taught using conventional method of instruction indicate a significant difference in favour of the students taught with Geogebra. The students exposed to Geogebra achieved higher scores compared to the control group students. The findings of this study agree with Okoro & Etukudo (2001), Paul & Babaworo (2006), Egunjobi (2002), Karper, Robinson, & Casado-Kehoe (2005) that students taught with Computer Assisted Instruction (CAI) packages in chemistry, mathematics and Education in general respectively performed better than those taught with normal classroom instruction.

There are several reasons that can explain the differences in achievement by students after instruction by the two different teaching methods. The process of controlling of their own learning pace and carrying out their ideas and actions on a computer screen can positively affect students' learning. In the GeoGebra learning environment, students can easily change the positions of angles subtended by arcs/chords and make instant observations that quickly give the insights into the meaning of various circle theorems. This interactive feature of GeoGebra, enabled the students to understand and interiorise the circle theorems, this we call an APOS theory inspired learning process.

The findings of this study are consistent with conclusions reached by Hollebrand (2003), who found that, when students integrate technology in their learning process, over time they interiorise the acts they perform on a computer screen in an APOS theory inspired way. Hollebrand (2003) revealed that the use of the computer contributed to students' ability to construct explanations about transformation geometry. In the present study, the experimental group students were able to identify their mistakes by observing, while the control group had to wait for the teacher to explain to them their mistakes. GeoGebra software in this study offered the experimental group academic independence that the control group did not have. The experimental group's opportunity to have feedback on their computer screens may have been a major factor in the difference in achievement between the experimental group and the control group. Baki et al. (2011) found that using Dynamic Geometry Software (DGS) and generating their feedback made a crucial contribution to pre-service

teachers' cognitive development. A similar contribution to younger students' cognitive development is an implication for this study.

CONCLUSION AND RECOMMENDATIONS

The findings of this study suggests that integration of GeoGebra software in the teaching of circle geometry to grade 11 students will likely lead to improvement in student's achievement. The results of this study are similar to other studies that indicate that the use of technology in classroom instruction enhances student outcomes.

This study recommends that mathematics teachers should be encouraged to use this software and many others in the mathematics classes. Teachers should be introduced to various mathematical software's in order to experience their effects on themselves and their students.

Future studies should be carried out on the effect of integration of GeoGebra software on students' problem solving skills, achievement and motivation for longer periods, using much larger randomised sample sizes, and at different schools with different ethnic composition, and socio-economic status that reflects the entire South African economy.

This study further recommends qualitative research to investigate in depth the roots and causes of the effects obtained in this study. Anderson & Arsenaut (1998) argue that the "fundamental assumption of qualitative research paradigm is that an insightful understanding of the world can be gained through observation and conversation in natural settings rather than through experimental manipulation under fabricated conditions" (p. 119). While quantitative researches seek causal determination, prediction, and generalization of findings, qualitative researchers seek instead illumination, understanding, and extrapolation to similar situations (Strauss & Corbin 1990, p. 17).

Future researches should extend this study to other mathematics topics and grades in order to establish whether the same technology integration will yield positive results such as obtained in this study. Such studies might help to improve the quality of mathematics teaching and learning in South Africa.

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INVESTIGATING THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON BRAND LOYALTY: A STUDY OF HSBC IN HK

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ABSTRACT

Companies have realized the importance of CSR, and the possibility of using CSR strategies to help build their brand reputation and competitive advantage. CSR was evidenced to have positive contribution to loyalty and profitability. With relatively less empirical research of CSR in the service industry, the author aim to fill the research gap with this study. It aimed to find out the strength of causal relationships between CSR, perceived quality, trust and loyalty in the banking industry in HK. HSBC was used as the basis of study as banking industry is the key contributor to the service industry that constitute the biggest part of HK's GDP. Also, HSBC is the largest bank in HK and it has been expending tremendous effort in CSR initiatives in the past. A quantitative approach was used with data collected using a structured questionnaire. A total of 100 completed questionnaires were used for data analysis. SmartPLS 3.0, a statistical software for path modelling statistical analysis, was used to measure the associations among the key constructs as proposed in the model in this study. Results showed that CSR has a significant influence on perceived service quality and trust, and also has an impact on both attitudinal and behavioural loyalty. Hence, bank marketers are suggested to consider these antecedents when designing their strategic marketing strategies, and there is a need to distinguish the effectiveness of different types of CSR initiatives.

Keywords: Corporate Social Responsibility, Loyalty, Perceived Service Quality, Trust

1. INTRODUCTION

Corporate Social Responsibility is a concept that was introduced around 70 years ago by scholars who began to realize the importance of corporations' responsibility to the well-being of the society, and Bowen was the first scholar to define CSR (Bowen, 1953; Clark, 1939). Empirical research followed suit with more scholars, consultants and corporations realizing the importance of the topic (Sage Publication, 2012). Multinational corporations are putting a great deal of emphasis and resources on CSR in the past few decades. For example, McDonald's has established a Global Sustainability Framework Stakeholder team in 2011; Marks and Spencer has a well-known CSR program called Plan A which covered 100 commitments in environment, community, employees, suppliers and customers; and IKEA has established a foundation for cause marketing initiatives (IKEA Foundation, 2014; Marks and Spencer, 2014; McDonald's, 2013).

Hong Kong's service sector has expanded rapidly in recent years. Service industry is the key contributor to developed economy, like United Kingdom (79% of GDP) and HK (93% of GDP), and in HK, "financing and insurance" is the largest (9.7%) and fastest growing (7.6%) industry (Central Intelligence Agency, 2013; HKSAR Government, 2014b). With the government aiming to "build Hong Kong as an international financial centre", the banking industry is of utmost importance in Hong Kong (HKSAR Government, 2014b). The Hong Kong and Shanghai Banking Corporation Limited (HSBC), established in 1865, is HK's largest bank and it operates in all five regions with the headquarter located in London (HSBC, 2015). The liberalization of Hong Kong's banking sector in 2001 has resulted in influx of foreign and China banks, which has reinforced HK's international financial centre

position, and at the same time resulted in more serious competition in the market (HKSAR Government, 2014a). Bank marketers are hence keen to know how to establish customer relationship, build loyalty and achieve higher profitability, and HSBC, like many larger banks, is spending a considerable sum on CSR activities (HSBC, 2013, 2014).

Like many strategies, CSR is believed to be contributing to competitive advantage and hence create strategic value for organizations. Empirical research showed that companies are reducing cost, attracting better personnel, retaining customers, improving financial performance and protecting its reputation when they do CSR right (Goyal & Santa-Clara, 2003; Hart, Milstein, & Caggiano, 2003; Luo & Bhattacharya, 2009). Therefore, the author would like to understand if CSR really has positive influence on loyalty, and if it induces emotional value or cause customers to buy more from the company.

This paper consists of five sections. First, there is an introduction in relation to banking industry and the importance of CSR. This is followed by a literature review and hypothesis development section which will discuss the constructs in the theoretical framework. Then there will be a section on data collection and analysis, which includes research design and data collection method. Subsequently, a discussion on the relationships between the constructs in the research model and recommendations for practitioners will follow. Finally, the limitation and future research directions are introduced.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Corporate Social Responsibility
Introduced in the early 20th century, the concept of Corporate Social Responsibility signified the importance businesses and society have placed on the societal value contributed by profit-making organizations. Scholars defined the concept and highlighted that businesses have the obligation in their business operations to do things that are beneficial and create value for the society (Bowen, 1953). Scholarly effort was evidenced in understanding the concept and also developing related models. Corporations also realized the strategic value brought about by CSR, and many believed CSR can be used to build sustainable competitive advantage and position a brand (Azmat & Ha, 2013; Hart, 1995). The ability to build competitive advantage is said to help organizations reduce cost and threats from competition, and also maximize opportunities in the market (Barney, 1991). Companies have made significant amount of investment in CSR. For example, HSBC has contributed US$227 million to support community investment and educational projects (HSBC, 2013, 2014).

2.2 Perceived Service Quality
Perceived service quality is the result of the perceived service as compared to the expected one (Caceres & Paparoidamis, 2007). The concept of service quality was introduced in the 1980s together with the SERVQUAL measurement model, and it was believed to be of great importance in a highly competitive marketplace like the banking industry (Parasuraman, Zeithaml, & Berry, 1985; Reichheld & Sasser, 1990). Good service quality perception is a key reason why customers purchase a service and also explains how a brand distinguishes itself from its competition (Aaker, 1996; Zeithaml, 1988). Empirical research has found that consumers' perception of a company's CSR effort has a direct impact on their service quality perception, and that service quality has direct influence on trust and customer loyalty (Poolthong & Mandhachitara, 2009).

2.3 Trust
Trust is the willingness to depend on another party and it is not ungrounded. The positive expectation of another party's good intention is based on previous experience on their ability, reliability and benevolence (Ganesan, 1994). The trust in a brand is believed to be conducive to building of behavioural and attitudinal loyalty (Berg, Lidfors, Mostaghel, & Philipson, 2012; Chaudhuri & Holbrook, 2001; Morgan & Hunt, 1994). CSR is proven to

induce trust and loyalty, and trust was evidenced to induce purchase intention and purchase decisions (Berg et al., 2012; Gefen & Straub, 2004; Harris & Goode, 2010).

### 2.4 Attitudinal and Behavioural Loyalty

Loyalty has been considered as one of the most important factors that contribute to the profitability of a business, and researchers and marketers have been keen to find out how to develop loyalty (Mandhachitara & Poolthong, 2011). Attitudinal loyalty is believed to have captured both the affective and cognitive components of brand loyalty and it represents a long term commitment of customers, and hence it involves the building of relationship between a brand and its customers (Anisimova, 2007; Chahal & Bala, 2010; Howkins & Vel, 2013). Behavioural loyalty is regarded as repeat patronage which may or may not mean any emotional tie between the customers and the company (Howkins & Vel, 2013). Trust is said to be the basis for attitudinal loyalty (Howkins & Vel, 2013). Corporate brand image and associations are said to influence attitudinal and behavioural loyalty, while the link with cause-related activities are not always clear (Anisimova, 2007). Quality service, value, and satisfaction are believed to contribute to both attitudinal and behavioural loyalty (Howkins & Vel, 2013). As customers who have high attitudinal loyalty tend to spread positive word-of-mouth, it is believed that attitudinal loyalty has greater contribution to higher market share as compared with behavioural loyalty (Howkins & Vel, 2013).

2.5 The proposed theoretical framework

Based on the above discussion, the following hypotheses are developed:

H_1: CSR reputation is positively associated with perceived service quality.
H_2: Perceived service quality is positively associated with trust.
H_{3a}: Trust is positively associated with behavioral loyalty.
H_{3b}: Trust is positively associated with attitudinal loyalty.
H_4: CSR is positively associated with trust.
H_{5a}: CSR is positively associated with behavioral loyalty.
H_{5b}: CSR is positively associated with attitudinal loyalty.

The overall research framework for this study is depicted in Figure 1 below:

Figure 1
The Research Framework
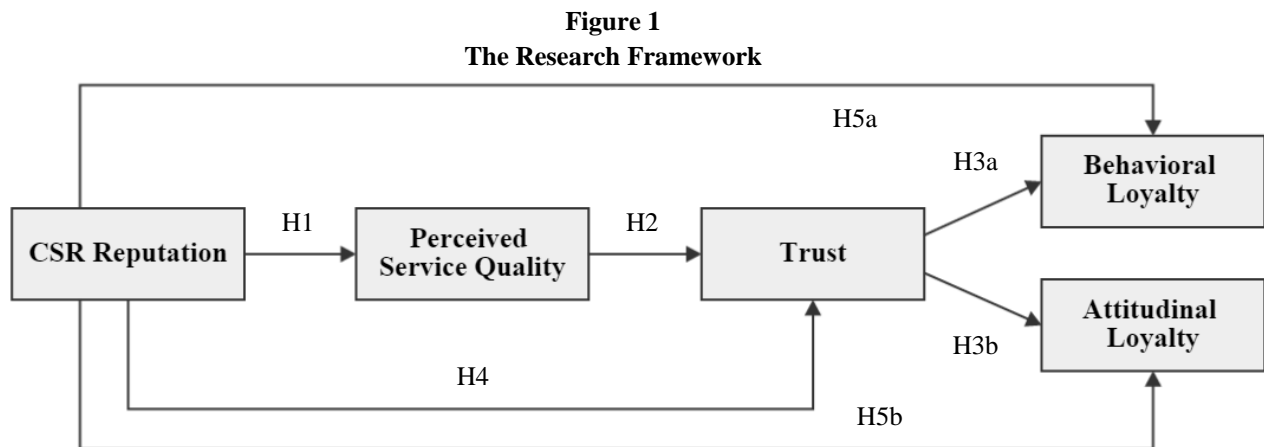
3. DATA COLLECTION AND ANALYSIS

3.1 Sampling and data collection

A survey was conducted using a sample of 100 respondents who have a bank account that they have patronized for over a year and have used their services most frequently in the last 6 months upon the date they completed the questionnaire. The questionnaire was designed to cover the items relating to the constructs developed from the research framework for this study. For each variable relating to these measures, the respondents were asked to indicate the agreement of each statement using the seven-point Likert scale ranging from "1-strongly disagree" to "7-strongly agree". The finalized questionnaire was posted online for data collection. Convenience sampling was used in this study and invitations were sent to a total of around 250 participants and 100 completed questionnaires were successfully collected for data analysis.

3.2 Demographics of Respondents

Of the 100 valid responses, 49 (49%) and 51 (51%) were from male and female respectively. This shows the survey observed a slightly higher percentage of women than men. This survey is partially skewed to the young adults with 57% observed respondents aged between 18 and 29, followed by those aged 45+ (25%), and between 30 and 44 (18%). Results showed that most respondents have a high level of education with 58% completed a degree or above. Majority of respondents (66%) earn a monthly income at a level HK$14,999 or below. As the median personal monthly income of HK people is $14,800 (HKSAR Government, 2015), the rest of the respondents (34%) are higher income group, and amongst which 16% earned a salary of HK$30,000 and above.

3.3 The Measurement Model

The partial least squares (PLS) technique was used for data analysis, which is a Structural Equation Modelling technique that helps to analyse and measure latent, unobserved concepts with multiple observed indicators, and help to confirm the validity of the constructs of a particular instrument and assess the structural relationships among constructs. PLS was used because its premises are less limiting than LISREL, and the sample size was relatively small. The statistical software SmartPLS 3.0 was used. The PLS measurement model for the reflective constructs was evaluated by examining the convergent and discriminant validity of individual indicators and the composite reliability of a block of indicators. Convergent validity, which tests the relationships among indicators in the same construct, was assessed by examining the correlation (loading) between the indicators, and construct scores were computed using PLS. The measurement scales were evaluated using the following three criteria suggested by Fornell and Larcker: (1) All indicator factor loadings should be significant and exceed 0.5; (2) Composite reliability should exceed 0.7; (3) Average variance extracted (AVE) from each construct should exceed 0.5. (Fornell & Larcker, 1981).

Convergent validity also shows the degree to which the items of a certain instrument are related. Table 1 shows the loadings of the model. All the reflective measures met the recommended levels for composite reliability and AVE. The Cronbach's alpha scores ranged from 0.938 to 0.976, as shown in Table 1, indicating that the constructs have Cronbach's alpha scores greater than the recommended minimum level of 0.7, and that they display strong internal reliability. In addition, confirmatory factor analysis of the measurement model showed that all the standard factor loading values exceeded 0.5 and were significant at the 0.001 level. The composite reliabilities of constructs ranged from 0.939 to 0.976, with all values above the recommended level of 0.7. The AVE values, ranging from 0.630 to 0.915, were greater than the variance due to measurement error. Therefore, all three conditions for convergent validity were met.

Table 1
The Measurement model

Constructs	Indicators	Factor loadings	*t*-value	Average Variance Extracted (AVE)	Composite Reliability (CR)	Cronbach's alpha (α)
CSR Reputation	CR1	0.799	20.175	0.630	0.939	0.938
	CR2	0.847	23.059			
	CR3	0.799	20.393			
	CR4	0.740	14.767			
	CR5	0.713	14.473			
	CR6	0.852	20.955			
	CR7	0.819	21.465			
	CR8	0.773	16.518			
	CR9	0.792	16.440			
Perceived Service Quality	PSQ1	0.926	31.508	0.805	0.961	0.961
	PSQ2	0.912	28.422			
	PSQ3	0.909	30.179			
	PSQ4	0.893	38.165			
	PSQ5	0.934	35.402			
	PSQ6	0.803	21.345			
Trust	TR1	0.967	54.052	0.874	0.976	0.976
	TR2	0.966	49.997			
	TR3	0.905	64.797			
	TR4	0.922	55.476			
	TR5	0.872	35.317			
	TR6	0.971	42.141			
Behavioural Loyalty	LT_BL1	0.973	50.373	0.915	0.970	0.970
	LT_BL2	0.951	50.233			
	LT_BL3	0.946	66.105			
Attitudinal Loyalty	LT_AL1	0.937	35.033	0.888	0.959	0.959
	LT_AL2	0.955	49.603			
	LT_AL3	0.934	48.248			

Table 2
Correlation matrix

	Pearson Correlation				
	CR	**PSQ**	**TR**	**AL**	**BL**
CSR Reputation (CR)	1				
Perceived Service Quality (PSQ)	.866**	1			
Trust (TR)	.870**	.916**	1		
Attitudinal Loyalty (AL)	.790**	.783**	.849**	1	
Behavioural Loyalty (BL)	.816**	.802**	.863*	.974**	1

*Note: **. Correlation is significant at the 0.01 level (2-tailed).*

Table 3
Regression analysis

| Hypothesis / Path	β	*t*-value	Sig.	R²	Hypothesis Supported
H₁ : Corporate Social Responsibility → Perceived Service Quality	0.89	17.15	***	0.75	Yes
H₂ : Perceived Service Quality → Trust	0.70	8.65	***	0.86	Yes
H₄ : Corporate Social Responsibility → Trust	0.34	4.05	***		Yes
H₃ₐ : Trust → Behavioural Loyalty	0.75	6.27	***	0.76	Yes
H₅ₐ : Corporate Social Responsibility → Behavioural Loyalty	0.36	2.68	**		Yes
H₃ᵦ : Trust → Attitudinal Loyalty	0.77	6.24	***	0.73	Yes
H₅ᵦ : Corporate Social Responsibility → Attitudinal Loyalty	0.27	2.00	*		Yes

Remarks: Path coefficients (Note: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.)

Table 3 summarizes the hypotheses (denoted by "H") set in this study and the corresponding regression test results including the path coefficients and their significance.

All hypotheses set in this study were tested and supported. CSR reputation was found to have strong positive influence on perceived service quality, supporting H₁. CSR reputation and perceived service quality were found to have a strong positive association with the level of trust, supporting H₂ and H₄. Trust and CSR reputation were found to have positive association with the behavioural loyalty and attitudinal loyalty, supporting H₃ₐ and H₅ₐ as well as H₃ᵦ and H₅ᵦ. CSR reputation has a comparatively weaker influence on attitudinal loyalty than behavioural loyalty.

Perceived service quality was predicted by CSR reputation, and it explained 75% ($R^2 = 0.75$) of the variance in perceived service quality. The trust construct was determined by perceived service quality and CSR reputation, and these variables together explained 86% ($R^2 = 0.86$) of the variance in trust, indicating a high overall *R*-squared value. Behavioural loyalty was determined by CSR reputation and trust, and these variables explained 76% ($R^2 = 0.76$) of the variance in behavioural loyalty, showing a high overall *R*-squared value. Finally, attitudinal loyalty was determined by CSR reputation and trust, and these variables explained 73% ($R^2 = 0.73$) of the variance in attitudinal loyalty, indicating a high overall *R*-squared value.

Figure 2
Result of the tested theoretical framework
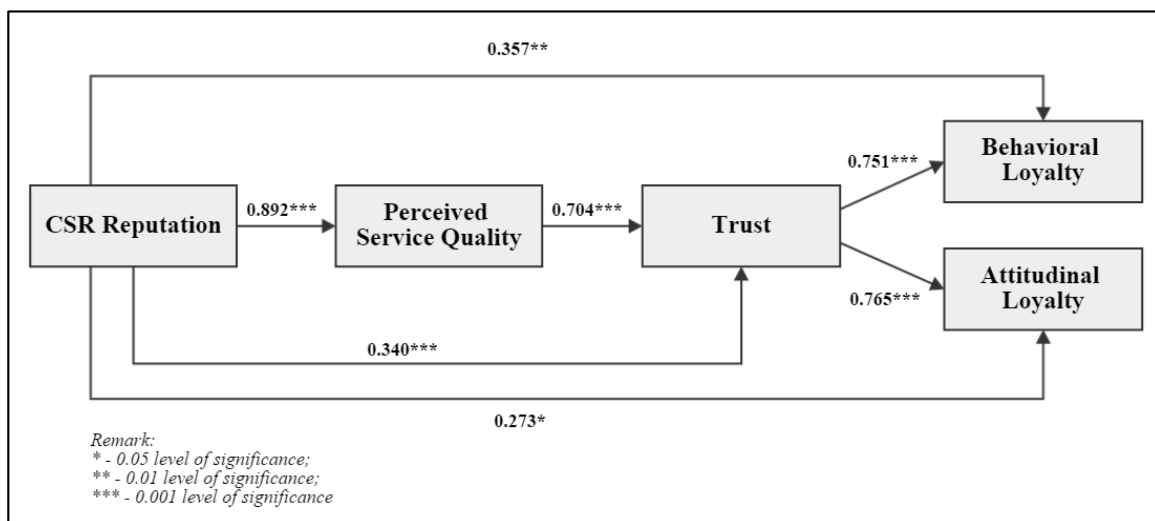
4. CONCLUSION AND FUTURE RESEARCH

The findings of the research are consistent with other research in the same area (Berg et al., 2012; Chaudhuri & Holbrook, 2001; Gefen & Straub, 2004; Harris & Goode, 2010; Howkins & Vel, 2013; Morgan & Hunt, 1994; Poolthong & Mandhachitara, 2009). It has demonstrated that CSR reputation is contributing positively to perceived service quality, trust and loyalty. The research has confirmed the importance of CSR and this would inform corporations to put more resources in CSR initiatives. Such findings echoed the increasing CSR investments of many multinational corporations such as HSBC, McDonald's, Standard Chartered Bank, to name just a few (HSBC, 2014; McDonald's, 2013; Standard Chartered Bank, 2014). Based on the above findings, corporations should be exerting more effort in CSR and investigate how to use CSR to create better financial results. In order to do so, they would need to understand the effectiveness of different types of CSR initiatives, such as charity programs, protecting consumer rights with quality products, fair employee treatments, or environmental conservation, etc. Marketers should avoid using CSR as a gimmick for building brand image, instead, the company should be creating real value for the society and its key stakeholders in order to create sustainable competitive advantage for the organization.

There are some limitations in this study which needs to be considered and they might mean possibility for future research opportunities. First, the sample size of this research is relatively small, and future research with bigger sample size and respondents from varied background could aid understanding of the generalizability of the model. Since the research results can only be generalized to banking industry in the HK context and for multinational banks, perhaps a cross-cultural study could be used to identify cultural differences, with respondents from both the east and the west. Consumers from other Chinese communities could also be invited to express their opinion towards CSR of banks. Secondly, as research in CSR's influence on loyalty in Asia and in service industry is rather limited, some also believed that the relationship between CSR and business performances in the financial industry is under-researched (Bouvain, Baumann, & Lundmark, 2013). Hence, more empirical research in banking industry and other service industries will be beneficial for management and marketers in deciding how to use CSR to create strategic value for the corporation.

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MOBILE DISTANCE LEARNING WITH TABLET PC AND APPS IN PRIMARY AND SECONDARY SCHOOLS IN EASTERN THAILAND

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ABSTRACT

This paper presents the implementation and development of Mobile Distance Learning in Eastern Thailand, 110 primary schools in Chachoengsao Primary Educational Service Area Office 1 and 44 secondary schools in the Office of Secondary Educational Service Area 7 in Distance Learning Information Technology (DLIT) and Distance Learning Television (DLTV) environment. The purpose of this trial is to assess the app's didactic use and potential to enhance student learning in learning area of occupations and technology subjects in ubiquitous environments and developing generic competencies according to Basic Education Core Curriculum B.E. 2551 (A.D. 2008) of Thailand. To this end, a scale has been developed and validated to identify these factors based on the participation of 200 students from the class "Information and Communication Technologies (ICTs)" within the "DLIT and DLTV" program. This study has been developed through two perspectives; the first being through a descriptive methodology in which the current researcher has detailed the creation process of an app. The second perspective being through a quantitative methodology in which students' perceptions regarding the capabilities of Tablet PC and apps for improving learning processes in primary and secondary schools subjects were assessed. The conclusions indicate that the use of apps developed specifically for following learning area of occupations and technology subjects is highly valued by students as a new format which both supports and enhances learning practices while also providing not only further opportunities to establish connections and relations with their subjects, but also fostering collaborative work among students and teachers. Therefore, it is recommended that Office of the Basic Education Commission of Thailand continue developing new didactic strategies to connect schools in countryside and ubiquitous learning settings.

Keyword: Mobile learning, m-learning, distance learning, ubiquitous learning

INTRODUCTION

The Blueprint for ASEAN Socio-Cultural Community (ASCC Blueprint) has focused on narrowing the Development Gap and enhancing the well-being of the peoples of ASEAN by promoting and investing in education and life-long learning. The Ministry of Education (MOE) has announced a strategic plan to follow the ASCC Blueprint to enhance Thai people's lifelong learning by using ICT, and creating equitable learning opportunity [1].

In Thailand, education management, curricula adjustment, improvement of teachers and learners' capacities, improvement of learning gains, disbursal of budget and de-

centralization of authority will all be pursued by this administration. The emphasis is on producing both quality academics and practitioners. Implementation guidelines from abroad, adjusted for appropriateness, will be used. Relevant agencies and individuals will see to these undertakings and report to me in the future. This effort is aimed at improving the country's quality of education, and concretely heeding the expectations of the public. At the committee's meeting, members agreed that development of education had to be of relevance to other developments in the respective localities, in order for disparities to be lessened and in order for advancements to reach all areas – not just large cities or Bangkok. Coordination has to be made with relevant agencies in order for education to catch up to rapidly changing circumstances. Evaluations will be made on Thai education, and the results will be compared to countries that have been successful. We are entering an era of digital economy, and we will exploit this development in developing our education system. We will use experienced teachers whose teaching methods are favored by students. Many of them are currently teaching at tutoring schools, and they will be invited to help out by using their ability to relay knowledge, albeit augmented by information technology. This would likely be of interest to people at home. Parents and children might watch the lessons together – this would help to build family relations [2].

Teaching through digital media will play an important part in expanding opportunities for quality education into all locales, and reducing disparities in education. The first phase had already been implemented, by means of the Ministry of Education, Thailand utilizing the Distance Learning Information Technology (DLIT) center as a center for production of teaching mediums by popular teachers. The lessons can then be dissipated to various schools. These lessons would supply additional content for the lessons provided by His Majesty the King's Distance Learning via the Satellite Foundation, allowing for diversity of contents.

We presents the implementation and development of Mobile Distance Learning in Eastern Thailand, 110 primary schools in Chachoengsao Primary Educational Service Area Office 1 and 44 secondary schools in the Office of Secondary Educational Service Area 7 in Distance Learning Information Technology (DLIT) and Distance Learning Television (DLTV) environment. The purpose of this trial is to assess the app's didactic use and potential to enhance student learning in learning area of occupations and technology subjects in ubiquitous environments and developing generic competencies according to Basic Education Core Curriculum B.E. 2551 (A.D. 2008) of Thailand.

The Evolution of Mobile Learning

Mobile learning refers to the use of mobile or wireless devices for the purpose of learning while on the move. Typical examples of the devices used for mLearning include cellphones, smartphones, palm-tops, and hand-held computers. Tablet PCs, laptops and personal media players can also fall within this scope [3]. The first generation of truly portable information has been integrated with many functions in small, portable electronic devices [4]. Recent innovations in programme applications and social software using Web 2.0 technologies (e.g., blogs, wikis, Twitter, YouTube) or social networking sites (such as Facebook and MySpace) have made mobile devices more dynamic and pervasive and also promise more educational potential.

However, it has been widely recognised that mLearning is not just about the use of portable devices, but is also about learning across contexts [5]. Winters [6] reconceptualised the nature of mLearning and addressed "mediated learning through mobile technology" (p. 9). Pea and Maldonado [7] used the term "wireless interactive learning devices," or WILD, an acronym created at SRI International's Center for Technology in Learning, to define technology that made it possible for learners to work at unique activities in ways that were previously impossible. Peters [4] viewed mLearning as a useful component of the flexible

learning model. Peters [4] also stated that it was a subset of eLearning, a step towards making the educational process "just in time, just enough and just for me" [4] (p. 15). Finally, Pea and Maldonado [7] stated that mLearning incorporates "transformative innovations for learning futures" (p. 437).

The Evolution to Ubiquitous Learning

As Weiser [8] stated, "the most profound technologies are those that disappear" (p. 94). He was the first scholar to define ubiquitous computing as an environment where the computer is integral but embedded into the background of daily life. Applying this concept to the education field, ubiquitous learning (uLearning) involves learning in an environment where "all students have access to a variety of digital devices and services, including computers connected to the Internet and mobile computing devices, whenever and wherever they need them" [9] (p. 6).

In the education field, "ubiquitous computing allows us to envision a classroom in which the teacher remains focused on his or her field of expertise (e.g., math or social studies) while still utilising technology to enhance student learning" [10] (p. 129). Although technological tools used for uLearning can be numerous, Crowe [10] identified hand-held computers as a key component of uLearning. Many researchers whose investigations involve hand-held and mobile devices are referring to their research as uLearning [11]. As the similar terms "pervasive computing" and "context-aware computing" emphasise, "smaller and lighter laptops free us from the confines of the single desk . . . the distinction between communication and computation is blurring . . . on a different scale, wall-sized displays allow us to get and interact with information in an inherently social manner."

Distance Learning in Thailand

As of 2012, there were 79 public and 71 private higher education institutions and 19 community colleges in Thailand. Most of them have established some sorts of online learning system and have policies to develop their systems further [12]. The first university in Thailand that offered formal distance learning program was Ramkhamhaeng University (RU) in 1971 [13]. Sukhothai Thammathirat Open University (STOU) was established in 1978 as the first distance learning university in Southeast Asia that offers only distance learning programs [14] while Ramkhamhaeng University offers both distance and classroom-based learning [13].

All except two universities offer distance learning only in Thai. The Office of the Higher Education Commission (OHEC) approved international online programs of only two universities in Thailand. In these universities, there are 6 programs accredited by the Office of the National Education Standards and Quality Assessment (ONESQA). All of them are graduate programs [15].

Basic Education Core Curriculum B.E. 2551 (A.D. 2008) of Thailand

The Basic Education Core Curriculum (BECE) is aimed at the full development of learners in all respects - morality, wisdom, happiness, and potentiality for further education and livelihood. The following goals have consequently been set for achievement upon completing basic education [16]:

1. Morality, ethics, desired values, self-esteem, self-discipline, observance of Buddhist teachings or those of one's faith, and applying principles of Sufficiency Economy Philosophy;

2. Knowledge and skills for communication, thinking, problem-solving, technological know-how, and life skills;

3. Good physical and mental health, hygiene, and preference for physical exercise;

4. Patriotism, awareness of responsibilities and commitment as Thai citizens and members of the world community, and adherence to a democratic way of life and form of government under a constitutional monarchy; and

5. Awareness of the need to preserve all aspects of Thai culture and Thai wisdom, protection and conservation of the environment, and public-mindedness with dedication to public service for peaceful and harmonious coexistence.

The Basic Education Core Curriculum is aimed at inculcating learners with the following five key competencies:

1. Communication Capacity

Capacity to receive and transmit information; linguistic ability and skills in expressing one's thoughts, knowledge and understanding, feelings and opinions for exchanging information and experience, which will be beneficial to oneself and society; negotiation for solving or reducing problems and conflicts; ability to distinguish and choose whether to receive or avoid information through proper reasoning and sound judgment; and ability to choose efficient methods of communication, bearing in mind possible negative effects on oneself and society.

2. Thinking Capacity

Capacity for analytical, synthetic, constructive, critical and systematic thinking, leading to bodies of knowledge creation or information for judicious decision-making regarding oneself and society.

3. Problem-Solving Capacity

Capacity to properly eliminate problems and obstacles, based on sound reasoning, moral principles and accurate information; appreciation of relationships and changes in various social situations; ability to seek and apply knowledge to prevent and solve problems; and ability for judicious decision-making, bearing in mind possible negative effects on oneself, society and the environment.

4. Capacity for Applying Life Skills

Capacity for applying various processes in daily life; self-learning; continuous learning; working; and social harmony through strengthening of happy interpersonal relationships; elimination of problems and conflicts through proper means; ability for self-adjustment to keep pace with social and environmental changes; and capacity for avoiding undesirable behavior with adverse effects on oneself and others.

5. Capacity for Technological Application

Ability to choose and apply different technologies; skills in application of technological processes for development of oneself and society in regard to learning, communication, working, and problem-solving through constructive, proper, appropriate and ethical means.

Observance of the principles of development of the brain and multiple intelligence is required to achieve learners' balanced development. The Basic Education Core Curriculum [16] has therefore prescribed the following eight learning areas: 1.) Thai Language 2.) Mathematics 3.) Science 4.) Social Studies, Religion and Culture 5.) Health and Physical Education 6.) Art 7.) Occupations and Technology 8.) Foreign Languages.

For each learning area, the learning standards serve as the goals in developing learners' quality. These standards prescribe what the learners should know and should be able to perform. They also indicate moral and ethical values as well as desired characteristics upon completing education at basic level. Besides, the learning standards serve as essential mechanisms in advancing the whole education system, as they inform us of the contents and teaching and evaluation methods. They also serve as instruments for quality assurance and are adopted for both internal quality assurance and external evaluation, practiced at both educational service area and national levels. Monitoring for internal quality assurance is essential, as it indicates the extent of success in achieving the quality as prescribed in the pertinent standards.

Thai Language: knowledge, skills and culture in language application for communication; delight in and appreciation of Thai wisdom; and pride in the national language

Mathematics: application of knowledge, skills and scientific process for problem-solving, way of life and further education; reasonableness; favourable attitude toward mathematics; development of systematic and constructive thinking

Science: application of knowledge and scientific process for study and search for knowledge and systematic problem-solving; logical, analytical and constructive thinking; and scientific-mindedness

Foreign Languages: knowledge, skills, attitude and culture in foreign language application for communication, seeking further knowledge and livelihood

Bodies of knowledge, significant skills and characteristics in the Basic Education Core Curriculum

Social Studies, Religion and Culture: peaceful coexistence in Thai society and the world community; good citizenship; faith in religious teachings; appreciation of resources and the environment; and patriotism and pride in Thai nationalism

Occupations and Technology: knowledge, skills and attitude towards work; management; way of life; livelihood and application of technology

Art: knowledge and skills for initiation; inspiration and imagination in creating works of art; aesthetics and art appreciation

Health and Physical Education: knowledge, skills and favourable attitude towards strengthening one's own health and that of others; prevention and proper treatment of various things affecting one's health; and life skills
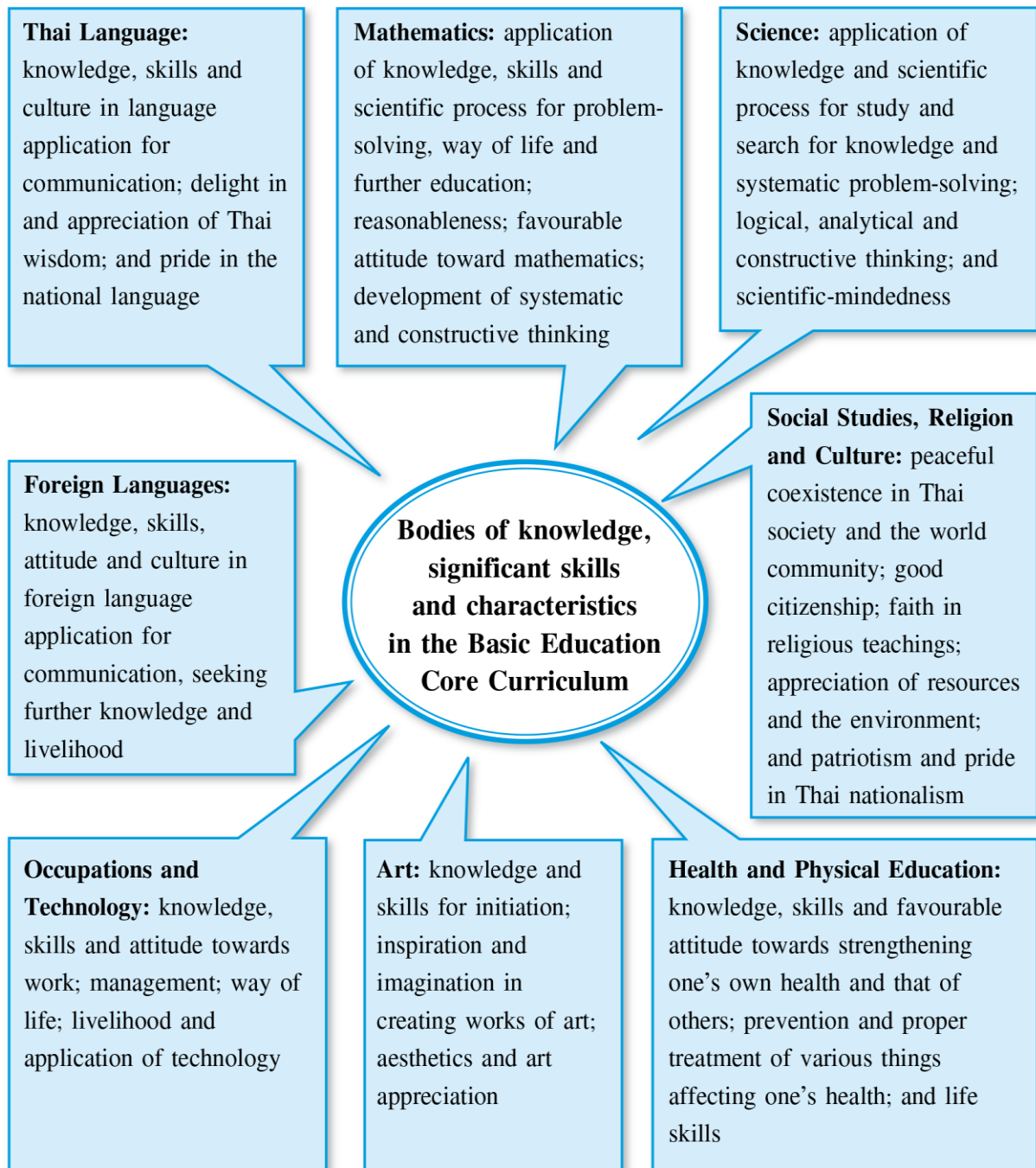
Figure 1 Bodies of knowledge, significant skills and characteristics in the Basic Education Core Curriculum
(Source: Office of the Basic Education Commission of Thailand, 2008)

PURPOSE OF STUDY

The purpose of this trial is to assess the app's didactic use and potential to enhance student learning in learning area of occupations and technology subjects in ubiquitous environments and developing generic competencies according to Basic Education Core Curriculum B.E. 2551 (A.D. 2008) of Thailand [16]. To this end, a scale has been developed and validated to identify these factors based on the participation of 200 students from the class

"Information and Communication Technologies (ICTs)" within the "DLIT and DLTV" program.

The research has two specific objectives:

1. To determine whether Tablet PC and Apps have a positive impact on students' academic learning by assessing students' opinions and experiences with the use of this device in a occupations and technology subjects.

2. To determine which app features are regarded by students as contributing significantly toward the learning process (text files, images, videos, social network).

SCOPE OF THE STUDY

Scope of this research is identified as follows;

1. To study the expectation of Educators and Students towards a Mobile Distance Learning Model in Thailand's Eastern Provinces. The results of this study will be used as guidelines for strategic development and mobile distance learning model.

2. Population and sample: There were 60 educators (administrators, teachers, educational officers) and 200 students working or studying in Thailand's four Easternmost Provinces; Chachoengsao, Prachin Buri, Nakhon Nayok, and Sa Kaeo. Educator's participants were working in Education Science, Information Technology, and Educations Management for cultural diversity, and mobile distance learning. Student's participants were primary and secondary school students in Eastern Provinces.

MANAGEMENT OF MOBILE DISTANCE LEARNING

Management of Distance Learning Information Technology (DLIT)

Figure 2 presents a model of management of Distance Learning Information Technology (DLIT) in Eastern Thailand.
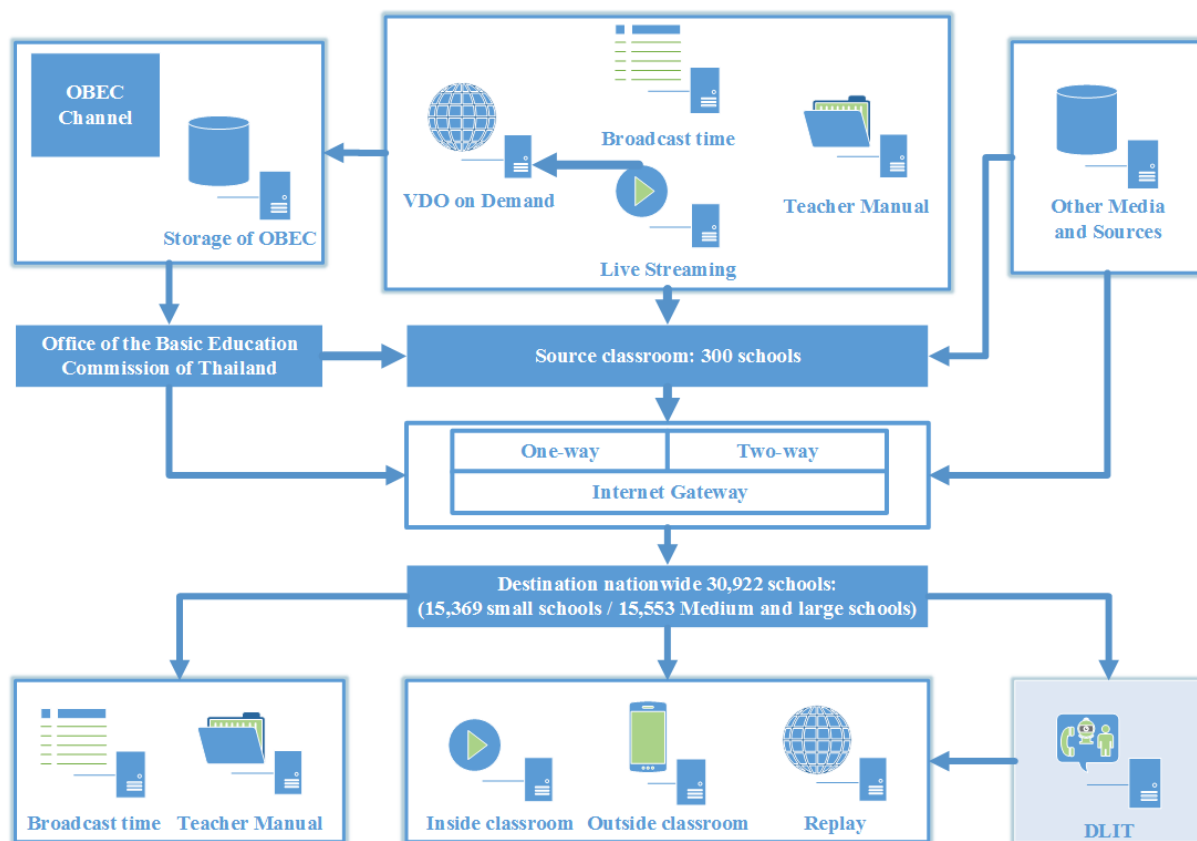
Figure 2 Distance Learning Information Technology (DLIT) in Thailand

Management of Distance Learning Television (DLTV)

In 1996, in commemoration of the 50th anniversary of His Majesty King Bhumibol Adulyadej's accession to the throne, the Thai Distance Learning Foundation (TDLF) was established with the goal of providing education to every child in the country, including those in remote areas where teachers and resources are scarce. TDLF brings live lessons from Wang Klaikangwon School in Hua Hin to schools throughout Thailand through distance learning equipment, installed without charge by the Royal Thai Army, and toll-free telephone lines, provided by the Telephone Organization of Thailand (TOT). Twelve channels carry live broadcasts directed to grades 1–12 at some 13,000 schools. An additional three channels carry vocational, language training, international documentaries, and technical college educational content. Live broadcasts are also provided asynchronously via satellite, conventional, and internet broadcasts throughout Southeast Asia, reaching Myanmar (Burma), Laos, Cambodia, Vietnam, Malaysia, and southern China.

HRH Princess Maha Chakri Sirindhorn supports our firm's commitment to use the information technology to enhance the quality of life and enhance educational opportunities for the people. His Majesty King Bhumibol Adulyadej also supports several forms of information technology in development projects, aiming to bring peace to the people of Thailand.

Management of Distance Learning Television (DLTV) and Distance Learning Information Technology (DLIT)
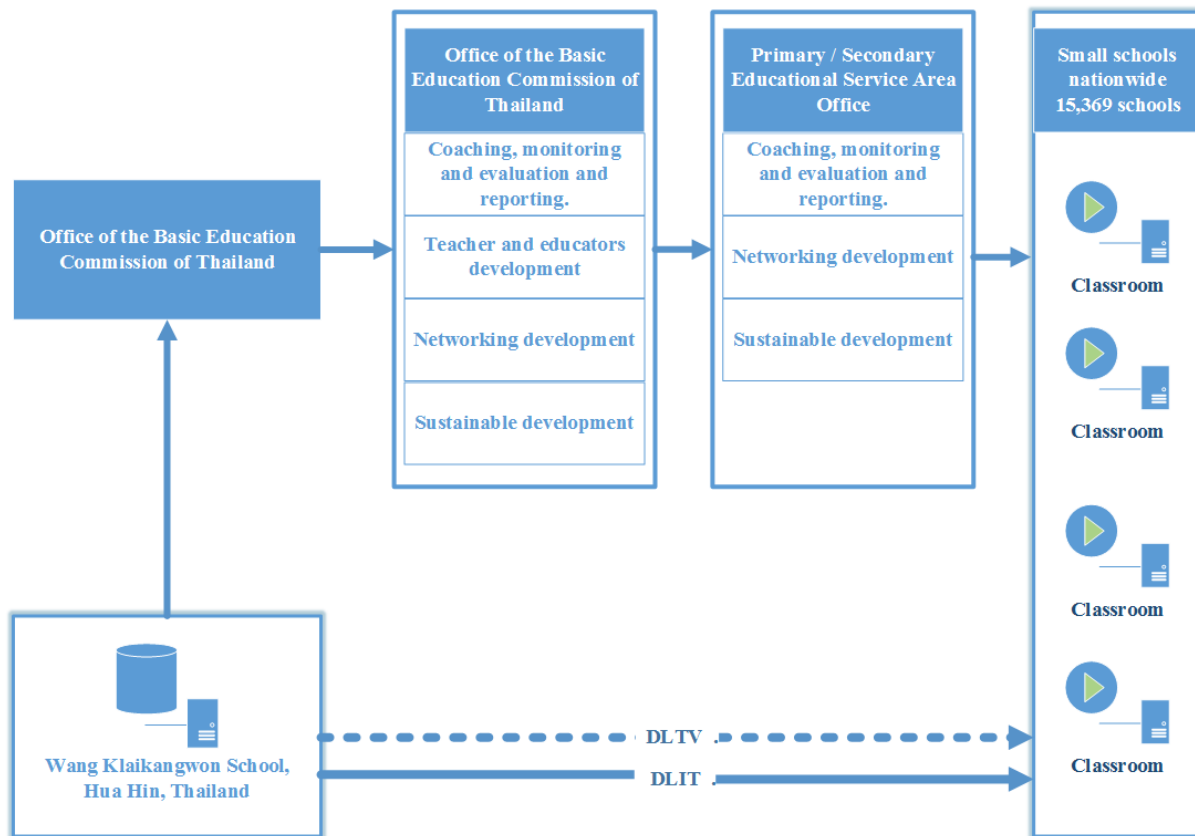
Figure 3 Management of Distance Learning Television (DLTV) and Distance Learning Information Technology (DLIT) in Eastern Thailand

Figure 3 presents a model of management of Distance Learning Television (DLTV) and Distance Learning Information Technology (DLIT) in Eastern Thailand.

Pursuant to an order of the head of the National Peace Keeping Council (NPKC). About the need to expedite action on the issue of education about the shortage of teachers in rural schools as well. Increase educational opportunities for children. Therefore considered to have an education and extension programs, distance education via satellite to other areas by the use of distance education via satellite (DLTV) in small schools nationwide 15,369 schools from the district office. Suphanburi Primary Educational Service Area Office 1 operated continuously and effectively.

The implementation of Distance Learning Television (DLTV) and Distance Learning Information Technology (DLIT) in a small school across the country to achieve that objective and effective. There is a need to develop distance education via satellite grilled continuity and sustainability. Has driven it into practice both at the Board of Education for the basic level of education and the school district office.

CONCULSION

The conclusions indicate that the use of apps developed specifically for following learning area of occupations and technology subjects is highly valued by students as a new format which both supports and enhances learning practices while also providing not only further opportunities to establish connections and relations with their subjects, but also fostering collaborative work among students and teachers.

Therefore, it is recommended that Office of the Basic Education Commission of Thailand continue developing new didactic strategies to connect schools in countryside and ubiquitous learning settings within the Distance Learning Information Technology (DLIT) and Distance Learning Television (DLTV) environment.

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THE ENHANCEMENT OF COMMUNITY TOURISM LEARNING CURRICULUM AND TRAINING TO SCHOOL LEVEL AND RURAL COMMUNITY IN THAILAND

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ABSTRACT

Education and training of community tourism in schools and communities will enhance the development of responsible practices of tourism management at the same time producing environmentally conscious citizens who are empowered to develop their tourism and communities. This study postulates a model for development of a community tourism learning curriculum for the education of primary and secondary school learners in Thailand and for the training of rural communities living within or neighboring tourism resorts and attractions. Such a curriculum should equip school learners and people involved tourism with the requisite of knowledge of community research to preserve and protect their environment effectively via mobile apps. The researcher introduces tourism and hospitality education at the classes and community level augment benefits for teaching in the classroom, community learning and more information for visitors.

Keyword: Sustainable tourism, community tourism, education curriculum, curriculum development model

INTRODUCTION

This article conceptualizes a model / framework for the development of an education curriculum for primary and secondary schools on the one hand and development of sustainable tourism in communities on the other hand. Other variables investigated in the model are: Tourism growth and sustainability; Community empowerment and ecotourism; Biodiversity consumption and heritage preservation; Biodiversity and protection of natural resources; Ownership of fauna and flora and game management; Tourist attractions management and community involvement; and Tourism resources utilization and visitor management.

The basic objectives of the Thailand national curriculum ought to be premised on the strength of the curriculum to provide an opportunity for pupils and communities to learn and achieve as well as promote the learners' spiritual, moral, social and cultural development. The fundamental aim is to prepare all learners for the opportunities, responsibilities and experiences of life.

The objective of this study is to develop a model or framework that should link education at primary and secondary school level and community training to benefit sustainable tourism development in Thailand and empower local communities with skills to cope with challenges resulting from the ever increasing presence of tourists in their region. It is also the focus of this study to advance the frontiers of knowledge thereby providing frameworks for further academic research for use by the academic community, policy makers and development partners.

Curriculum Development

Curriculum generally specify the main learning content expected to take place during a course or programmed of study in terms of knowledge, skills, attitudes, teaching methodologies and assessment methods. This means that the curriculum outline what all children must learn in accordance with their special interests and circumstances. The national curriculum provides

for the intellectual, moral, physical and social training of the child based on the existing and future essentials, goals and objectives of the nation or society at large. Specifically, the curriculum assures individual and national achievement via the acknowledgement and appreciation of the different capabilities and requirements of learners [1]. This explanation assumes that learning is planned and guided and curriculum theory and practice emerged in the school in relation to other schooling ideas such as 'subject' and 'lesson'.

In the wider sense, curriculum development prepares individuals and communities for future employment. This implies the need for the curriculum to encompass industry values and objectives. The foremost objective of model of curriculum development takes as its major premise the idea that all learning should be defined in respect of what students should be able to do after studying the programme, in terms of learning outcomes or learning objectives [2]. It forms part of what is generally believed to be the outcomes-based education. Here educators concentrate on what their learners will do and as a result they organise their curricula accordingly. On the other hand, the process model assumes that content and learning activities have an intrinsic value and are not just a means of achieving learning objectives. Stenhouse [3] argued in favour of four fundamental processes of education: Training - involving skills acquisition; Instruction - enhancing information acquisition; Initiation - fostering familiarisation with social norms and values; and Induction - based on thinking and problem solving.

Basic Education Core Curriculum A.D. 2008 of Thailand

The Basic Education Core Curriculum is aimed at the full development of learners in all respects - morality, wisdom, happiness, and potentiality for further education and livelihood. The following goals have consequently been set for achievement upon completing basic education [4]:

1. Morality, ethics, desired values, self-esteem, self-discipline, observance of Buddhist teachings or those of one's faith, and applying principles of Sufficiency Economy Philosophy;

2. Knowledge and skills for communication, thinking, problem-solving, technological know-how, and life skills;

3. Good physical and mental health, hygiene, and preference for physical exercise;

4. Patriotism, awareness of responsibilities and commitment as Thai citizens and members of the world community, and adherence to a democratic way of life and form of government under a constitutional monarchy; and

5. Awareness of the need to preserve all aspects of Thai culture and Thai wisdom, protection and conservation of the environment, and public-mindedness with dedication to public service for peaceful and harmonious coexistence.

Learning Standards

Observance of the principles of development of the brain and multiple intelligence is required to achieve learners' balanced development. The Basic Education Core Curriculum [4] has therefore prescribed the following eight learning areas: 1.) Thai Language 2.) Mathematics 3.) Science 4.) Social Studies, Religion and Culture 5.) Health and Physical Education 6.) Art 7.) Occupations and Technology 8.) Foreign Languages.

For each learning area, the learning standards serve as the goals in developing learners' quality. These standards prescribe what the learners should know and should be able to perform. They also indicate moral and ethical values as well as desired characteristics upon completing education at basic level. Besides, the learning standards serve as essential mechanisms in advancing the whole education system, as they inform us of the contents and teaching and evaluation methods. They also serve as instruments for quality assurance and are adopted for both internal quality assurance and external evaluation, practiced at both educational service area and national levels. Monitoring for internal quality assurance is

essential, as it indicates the extent of success in achieving the quality as prescribed in the pertinent standards.

Thai Language: knowledge, skills and culture in language application for communication; delight in and appreciation of Thai wisdom; and pride in the national language

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Art: knowledge and skills for initiation; inspiration and imagination in creating works of art; aesthetics and art appreciation

Health and Physical Education: knowledge, skills and favourable attitude towards strengthening one's own health and that of others; prevention and proper treatment of various things affecting one's health; and life skills
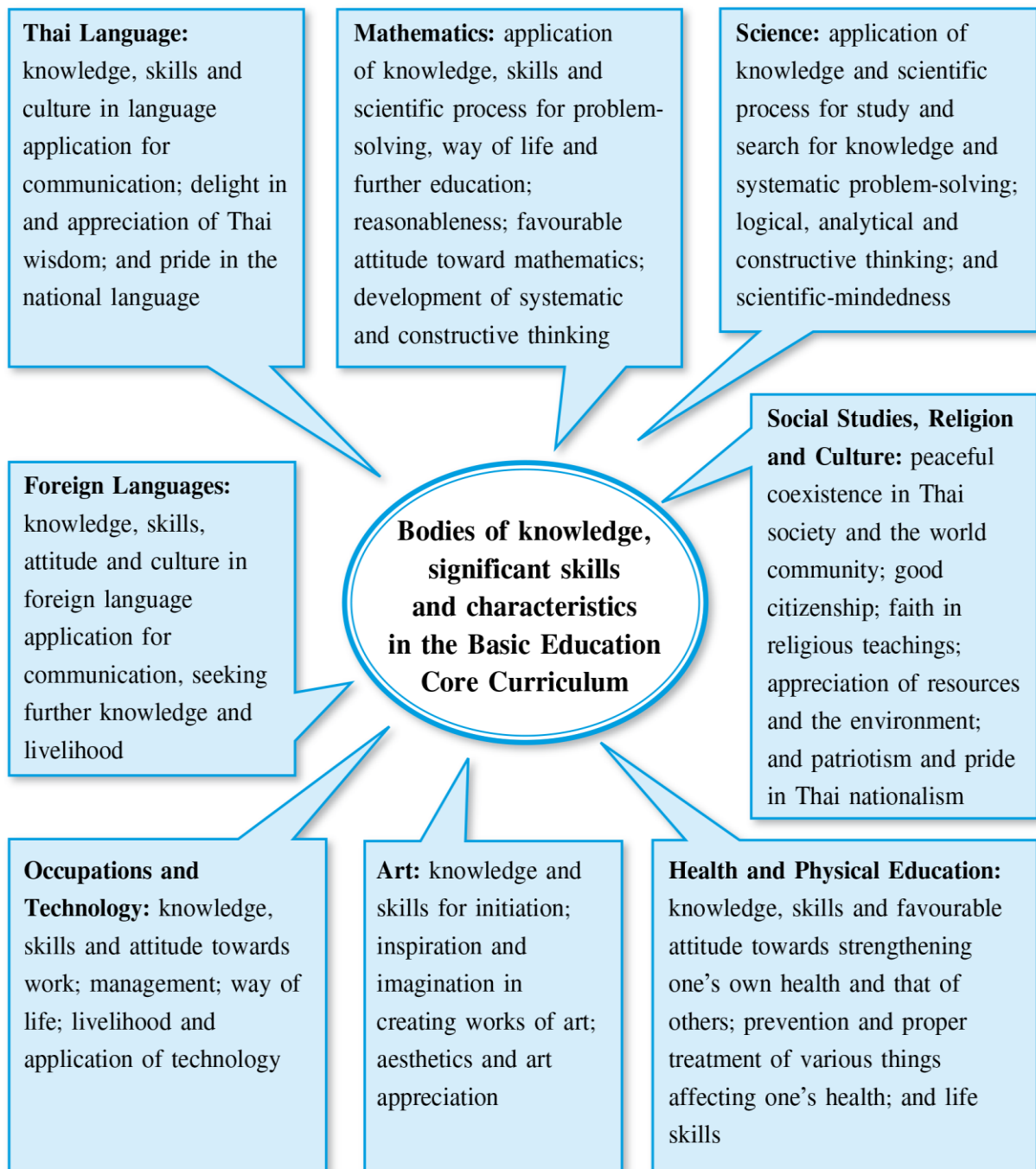
Figure 1 Bodies of knowledge, significant skills and characteristics in the Basic Education Core Curriculum
(Source: Office of the Basic Education Commission of Thailand, 2008)

PURPOSE OF STUDY

This study postulates a model for development of a community tourism learning curriculum for the education of primary and secondary school learners in Thailand and for the training of rural communities living within or neighboring tourism resorts and attractions. The

research has a specific objective to development of a community tourism learning curriculum for the education of primary and secondary school learners in Thailand.

SCOPE OF THE RESEARCH

Scope of this research is identified as follows;

1. To study community tourism in Bangkhla District, Chachoengsao Province in Eastern Thailand to development of a community tourism learning curriculum for the education of 21 primary school learners in Chachoengsao Primary Educational Service Area Office 2 and 1 secondary school learner in the Office of Secondary Educational Service Area 6 and for the training of rural communities living within or neighboring tourism resorts and attractions. The results of this study will be used as guidelines for strategic curriculum development community tourism learning model.

2. Population and sample: There were 30 educators (administrators, teachers, educational officers) and 210 students working or studying 21 primary schools in Chachoengsao Primary Educational Service Area Office 2 and 1 secondary school in the Office of Secondary Educational Service Area 6. Student's participants were primary and secondary school students in Bangkhla district, Chachoengsao province in Eastern Thailand.

RESEARCH METHODOLOGY

The researchers has designed model / framework for the enhancement of community tourism learning curriculum and training to school level and rural community in Thailand based on with the Basic Education Core Curriculum implementation and management.

Implementation and Management of the Community Tourism Learning Curriculum for the Basic Education Core Curriculum

An education system that promotes decentralization of authority to local areas and local educational institutions so as to participate in curriculum development, the relevant agencies at different educational levels, i.e., national, local and educational institution levels, play important roles, and have duties and responsibilities to develop, provide support and encourage efficient curriculum implementation. These measures will ensure the highest efficiency in preparation of the education institutions' curriculums as well as educational provision by these educational institutions, resulting in enhancing learners' quality so as to attain the learning standards prescribed at the national level. (Office of the Basic Education Commission of Thailand, 2008)

At the local level, offices of the educational service areas and other parent agencies play important roles in improving quality of educational provision. They provide the connection between the Basic Education Core Curriculum prescribed at the national level and the local situations and needs, leading to preparation of the educational institutions' curriculums, the implementation of which will be strengthened to ensure success. Their main tasks are: setting the goals and areas of to develop learners' quality at the local level, and meet the national requirements; developing local learning contents; evaluating quality of education provided at the local level; increasing the quality of curriculum implementation through research and development, personnel development, support provision, promotion, evaluation monitoring, and analysis and reports on learners' quality.

Educational institutions play important roles in developing their own curriculums, planning curriculum implementation, increasing quality of curriculum implementation through research, improving the curriculum, and preparing regulations for measurement and evaluation. In preparing their own curriculums, educational institutions must attach prime importance to attuning to the Basic Education Core Curriculum and other details provided by educational service areas or other parent agencies at the local level. Respective educational institutions can

also add various aspects of problems and concerns of the community and the society, local wisdom, and learners' needs, with participation and contribution of all sectors in the preparation of their curriculums.

The Community Tourism Learning Curriculum Model

Figure 2 presents a model of the tourism curriculum development for primary and secondary school education in Thailand.
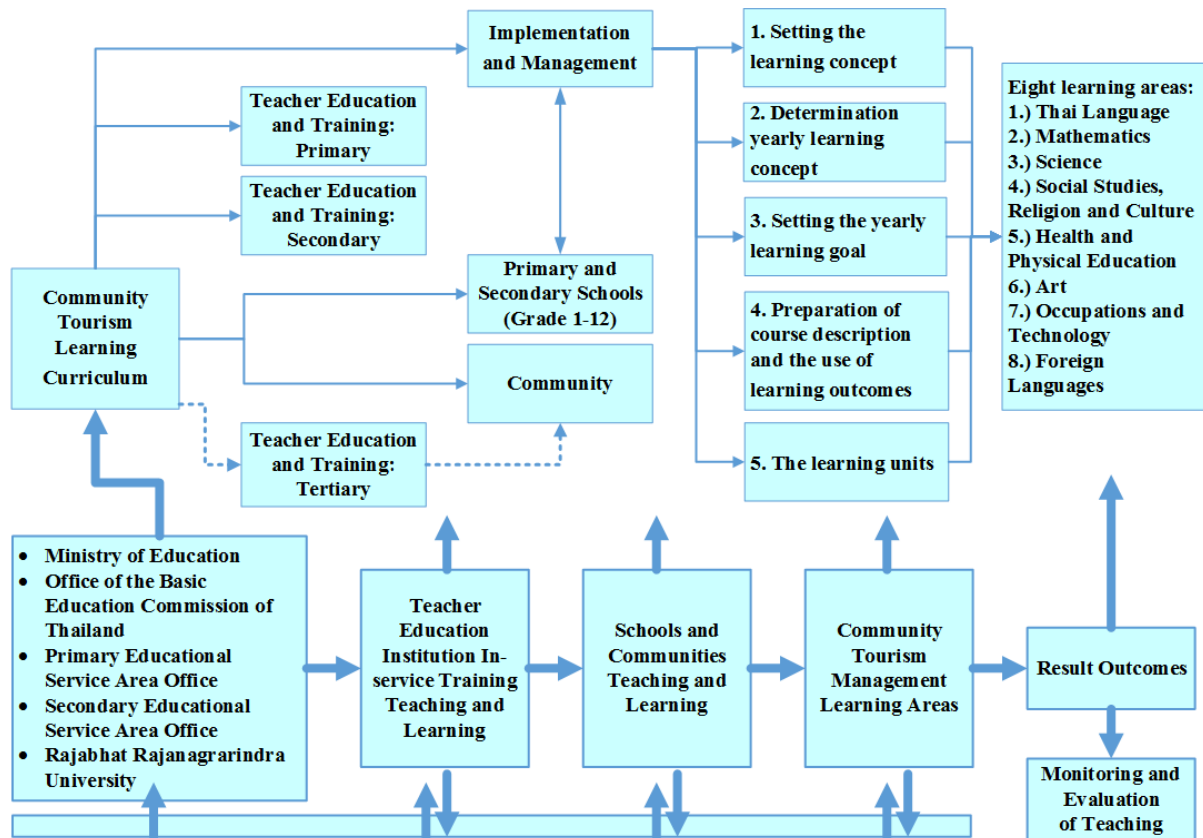

Figure 2 Model of the tourism curriculum development for primary and secondary school education in Thailand

In an education system that is distributed to local authorities and schools to have a role in developing the curriculum. All level from national level, local Level till school level have role and the responsibility to develop and promote the curriculum effectively for the purpose of arranging the curriculum and the teaching performance efficiency. This will contribute to improving the quality of the students meet learning standards at the national level. Local education offices and the related agencies have roles in driving to the quality of education by linking to the national curriculum.

Basic education defined in accordance with national and local needs leads to the preparation of the school curriculum. It promotes the use and development of curriculum in schools to reach its mission that focus on improving the quality of learning at the local level by considering what is in accordance with national requirements. There must be learning concept development, educational evaluation at the local level. As well as enhance the quality of the curriculum with research and development to develop and promote monitoring, evaluation, analysis and reporting the progress of learners.

Schools have an important role in curriculum development, planning and implementation of the curriculum, enhancement of the quality of the curriculum with

researching, Improving the course preparation and evaluation procedures. In curriculum development, there must be consistent with the national curriculum for basic education and details of the districts or other agencies at the local schools can have more topic, in part, about the problems in the community and society. Local wisdom and the needs of learners all sectors have to involve in curriculum development.

Sample units: The study of sugar palm prepared in the enhancement of community tourism learning curriculum and training to school level and rural community in Thailand: A case study of Bangkhla district, Chachoengsao province in Eastern Thailand. The process is shown below;

1. Setting the learning concept

Setting the learning concept for grade 5 base on the 4th learning agenda strands 4 which was defined as a subject to go with the needs of schools and students. The contents are Sugar Palm Introduction, The importance of Sugar Palm, Raw materials and equipment used in making Sugar Palm. Processing of Sugar Palm preserved products, designed to add value to products, the cost of managing and pricing. The exhibition and sale of sugar palm products, also benefits and value of sugar palm.

2. Determination yearly learning concept

Using the analysis of the issues which are in annual schedule of the subject keeping with the needs of community, schools and students. The contents are Sugar Palm Introduction, The importance of Sugar Palm, Raw materials and equipment used in making Sugar Palm. Processing of Sugar Palm preserved products, designed to add value to products, the cost of managing and pricing. The exhibition and sale of sugar palm products, also benefits and value of sugar palm.

3. Setting the yearly learning goal

Analysis of the standards of learning in elementary education. The result based on the specific knowledge and ability of learners. This will happen after learning.

4. Preparation of course description and the use of learning outcomes

Learning concept and learning period are analysis to set the course description which contains the name of the course, learning period and outcomes. The course of Sugar Palm Grade 5, with 20 learning periods. The courses provide learners with a focus on functional skills, professional ethics. Management skills, working systematically and strategically. Collaborate with others the value of the profession of faith the guidelines for the use of information technology professionals to work properly and correctly, morality in work. Creating and developing products or new ways of working. Work with diligence, honesty, responsibility, commitment, patience, frugality, saving energy resources and environmental value and right. The students have to study Sugar Palm Introduction, The importance of Sugar Palm, Raw materials and equipment used in making Sugar Palm. Processing of Sugar Palm preserved products, designed to add value to products, the cost of managing and pricing. The exhibition and sale of sugar palm products, also benefits and value of sugar palm.

In the course, the students will be trained on Occupations and Technology to provide the students with a comprehensive understanding of the meaning and importance of the principles, methods and procedures for responsible work. Management and technology as well as cultivate the habit of working.

5. The learning units

It is set from the course description to facilitate the 10 learning units to study.

A Case Study of Palm Sugar in Bangkhla, Chachoengsao, Thailand

There are 4 steps of the enhancement of community tourism learning curriculum and training to school level and rural community in Thailand: A case study of Bangkhla district, Chachoengsao province in Eastern Thailand.

First step General information studying for arrange The enhancement of community tourism learning curriculum and training to school level and rural community in Thailand the details are as follow.

(1) Analysis of the Core Curriculum for the elementary education A.D.2008 found the ability of community to provide the curriculum based on the related problem in the community and also the local wisdom which is a unique distinctive feature of that community. This con lead the community youngster realize the importance of community wisdom in terms of applying in everyday life, linking to the occupation, and gaining self of belonging in the environment

(2) Study show that the local schools are available to provide the enhancement of community tourism learning curriculum and training to school level and rural community in Thailand in to the studying timetable. Building, materials, equipment, and learning center with in the schools were prepared in order to realize the local wisdom. Special activities were also provided to fulfill the national education policy of life learning Adding.

(3) Exploring the need in the community found the leaders, the executive member and the tourists were attracted the destination of Chachoengsao so it could be the place of field trip learning.

(4) From the data collecting and analysis by unstructured interview within 20 days with 10 community leaders, 10 executive members and 10 tourists, the answered about the need of the community tourism management from the record can be analyzed that there are unique destination in Bangkhla District by these name 1) Sugar Palm Village 2) Gui-Lei Hat Village 3) Suan Palm Farm Nok 4) Bangkhla Floating Market 5) Kohlad 6) Koom Wimarndin and 7) The Holy Temples. Then there was the tourism theme report setting.

Step 2 the curriculum creation: The researcher used the content from the first step to creation the studying concept under the need of the schools, community executive board and the tourists. The course description and the 7 units of the course were set. The 7 units are 1) Sugar Palm Village 2) Gui-Lei Hat Village 3) Suan Palm Farm Nok 4) Bangkhla Floating Market 5) Kohlad 6) Koom Wimarndin and 7) The Holy Temples, then there were the preparation of the lesson plan with the teaching strategies, also teaching activities guide.

Step 3 the curriculum trial: The curriculum was improved by the advise of the experts. Then there was the trail with the 5th grade students with in the first semester of academic year 2015 (May - October)

Step 4 the revision and improvement of the curriculum: The researcher used the information from the trial step to modify by adding the student discussion activity, self-research, and group activities.

CONCLUSION

This article presented a model on the development of an education curriculum for primary and secondary schools on the one hand and development of sustainable tourism in communities on the other hand. Education and training of tourism in schools and communities surrounding tourism resorts will enhance the development of sound, responsible practices of tourism management at the same time producing environmentally conscious citizens who are empowered to develop their tourism and hospitality industry viably. Such a curriculum should equip school learners and people involved tourism with the requisite of knowledge of community research to preserve and protect their environment effectively via mobile apps. The researcher introduces tourism and hospitality education at the classes and community level augments benefits for teaching in the classroom, community learning and more information for visitors.

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