Contents

Journal of Social Sciences (COES&RJ-JSS)
Volume 4, No.1, January 2015

Exploring private universities service quality in Kenya: A structural equation modeling technique

ric   Man 'un i
School of Management, IT and Governance,
University of KwaZulu-Natal, Pietermaritzburg, South Africa
Corresponding email: mangunyie@gmail.com

Abstract:
The Kenyan private higher education sub-sector is considered one of the fastest rising and as such, pivotal within the economy. Whereas achieving higher service quality is challenging among private universities, it is not easy to come up with extraordinary service delivery deliverables which will fully entice customers. Therefore, a university has to discern their customers well, and in turn, provide superior services in order to achieve significant customer satisfaction. The aim of the present research was to empirically investigate specific dimensions of service quality (SQ) that influence customer satisfaction with, service delivery in private universities and the consequent contribution towards internal custo ers' satis action in a enyan conte t. ne as ect e   asized is taking cognizant dimensions tested in intricate situations as well as the reality in a developing country which in itself is self-contradictory.

The study employed an adapted HEdPERF survey type with higher education service quality attributes namely; non-academic, academic, reputation, access, programme issues and understanding aspects, and structural equation modelling (SEM). The fit of the HEdPERF model to the data gained t roug strati ied rando   sa ling ro   internal custo ers'   students and employees was checked using SEM. Results claimed that in respect to private higher education, not all HEdPERF SQ variables are significant to internal customers. Two dimensions of SQ were identified and have the greatest predictive o er on internal custo ers' satis action ratings it regard to t e uality o service, and these were presented in model(s) to indicate their inter-relatedness in terms of service quality and customer satisfaction. This research presents significant insights towards better understanding o internal custo ers' attitudes. Private universities ill e a le to design and improve their internal services and/or internal marketing strategies as per their consu ers' re erences in a di erent cultural conte t. Finally, t e use o SEM in exploring the HEdPERF model is also a valuable contribution.

Introduction

Service quality and customer satisfaction are fundamental marketing constructs that have grown in prominence among service producing organizations in the business arena. For over three decades, the quality of service has been adopted as a superior operational goal all over the world. However, even with ever growing research in the higher education industry (Alaba & Olanrewaju, 2012; Calvo-Porall, Levy-Mangin & Novo-Corti 2013; Govender & Ramroop 2012; Khodayari & Khodayari 2011; Ong and Nankervis, 2012), the quality of service (SQ) and customer satisfaction (CS) have remained a great concern to many institutions in the service sector. Among private universities it is a subject that cannot be undervalued in management studies and the strategic planning processes. According to Zeithaml, Bitner & Glembler (2009), SQ and CS are inherent attributes that if rightly implemented will create positive customer experiences which would translate to good organizational performance, cost reduction, increased market shares and surpluses. Furthermore, for staying ahead of competition, researchers indicated that customer satisfaction and service quality is the significant predictors (Perez, Juan, Gema & Raquel 2007; Shahin & Samea 2010). The aforementioned attributes, no doubt, become the focus for any company regardless of the sector (public or private) in contemporary customer-oriented market and, service quality remains an important subject for consideration among leaders, managers and researchers (Zahari, Yusoff & Ismail 2008).

Researchers (Brown and Bitner, 2007) and practitioners in the marketing domains allude to the importance for organizations to measure and evaluate the quality of service encounters for the reason that, there is rapid development of and competition for service in both developing and developed realms. Kimani (2011) affirm that several aspects of service quality have cumulative outcomes on its perception, thus they complement each other and therefore cannot be treated in isolation. Therefore, by not paying attention to SQ, organizations may risk their competitiveness, since satisfaction and competitiveness are inter-related (Hishamuddin & Azleen, 2008). Thus, to be successful, companies must look at its service delivery performance as well as the needs and wants of their customers. The continuation of low quality services in a higher education institution (HEI) can have undesirable consequences to the organization for instance, dissatisfaction and customers switching to a competitor. That is the reason why many researchers have constantly emphasized the importance of service quality and customer satisfaction in higher education and beyond (Firdaus, 2006; Calvo-Porall, Levy-Mangin & Novo-Corti 2013; Govender and Ramroop, 2012; Ojo 2010; Quinn, Lemay, Larson and Johnson, 2009).

Service quality and customer satisfaction in educational institutions in the higher education industry in the developing nations remains a challenging task despite receiving varied treatment amid growing attention. For instance, the measurement of service quality and customer satisfaction in a majority of the available studies in higher education (HE) has leant towards the use of traditional SERVQUAL methodology (Rajasekhar, Muninarayanappa & Reddy 2009; Sunanto, Taufiquarrahman & Pangemanan 2007; Shekarchizadeh, Rasli & Hon-Tat 2011) as well as other various instruments to measure the impact of SQ delivery on customer satisfaction within HE (Firdaus 2006; Wang & Shieh, 2006; Calvo-Porall, Levy-Mangin and Novo-Corti, 2013; Govender & Ramroop, 2013). Furthermore, studies regarding the determination of higher education service performance variables have been elusive and, in actual fact, virtually non-existent (Kimani 2011), with no study employing the use of structural equation modelling technique to explore service quality and customer satisfaction in private higher education.

In light of the above, this paper put forward results of an empirical study which employed the methodology developed by (Firdaus, 2006; 2005) to measure service quality in higher education via non-academic, academic, reputation, access, programme and understanding aspects (HEdPERF) and, to determine the significance of each of the service quality dimensions and their influence on satisfaction.

Review of Literature

Conceptualizing Service Quality Concept

Conce tualization o service uality' in t e ig er education conte t as o ten, een shrouded by differing views and debates. According to Quinn et al. (2009), defining service quality in higher education institutions has proved to be an uphill task. This has presented higher education institutions (HEIs) with great challenges in the implementation of quality-based practices. The aforementioned researchers have defined service quality in higher education in terms of educational, administration and supporting services.

Service Quality and Customer Satisfaction – The Higher Education Perspective

Many researchers have addressed the association between service quality and customer satisfaction. For example, Zeithaml et al. (2009) assert that service quality and customer satisfaction are closely related, although conceptually they are distinct constructs. Firdaus study in ig er education in Malaysia a ong students osited t at students' perceptions of service quality are constrained within six dimensions namely non-academic aspects, academic aspects, reputation, access, programme issues and understanding. Ham and Hayduk (2003) who explored the relationship between the five dimensions of SERVQUAL found that every dimension of service quality had a positive relationship with satisfaction, with Reliability having the strongest relationship, followed by Responsiveness, Empathy, Assurance and Tangibility. In a study in Malaysian higher education institutions, it was determined that all the quality attributes had a significant relations i it students' satis action, and ig ly correlated it one anot er (Hishamuddin & Azleen, 2008). Trivellas and Dargenidou (2009) looked at the in uence of organizational culture and job satisfaction on the quality of services provided in higher education in Greece. The researchers drew on a sample of faculty and administration e ers to easure t e institute's culture, o satis action and t e uality in services and internal processes using different frameworks. The results indicated that speci c culture variables were linked with different dimensions of higher education service quality.

DeJager and Gbadamosi (2010) carried out a survey among 404 students from universities in South Africa in an attempt to examine the gap between students, perception and importance attached to service delivery, as well as possible predictors of overall satisfaction with their respective universities. Perceptions of willingness to change, students' intention to leave, trust in ad inistration and su ort, availa ility of accommodation facilities, and academic performance were found to be significant deter inants o students' overall satis action it t e university e laining u to er cent of its variance. An empirical research by Ravichandran, Kumar & Venkatesan (2012) using HEdPERF among professional engineering institutions in India using a sample of 106 respondents established eleven factors (11) loaded that surpassed original HEdPERF scale. sing t e EdPE F scale, u ar and ang's study o S in Malaysia among 275 international undergraduate students in a university found, four determining factors of satisfaction among students namely; reputation, access, programme issues and

career prospects and that satisfaction exerted positive significant effect on loyalty. In light o t e a ore entioned, t is a er ai s to e lore internal custo er's erce tions o rivate universities services in ter s o Firdaus's service uality di ensions namely: non-academic, academic, reputation, access, programme and understanding aspects (HEdPERF), and to outline strategies to improve HE service quality from the research results.

The Kenyan Private Universities Environment

Universities in Kenya have experienced a tremendous effect on the higher education sector because of the increase and development of private institutions of higher learning. In spite of the successes, Kenyan private higher institutions have continued to experience numerous challenges that may negatively impact on their performance of quality of service delivery hence affecting the perceptions of consumers of their services. Tremendous increase in competition especially from non-traditional sources including e-universities has put pressure on the higher education sector (Chen, Yang & Shiau 2006). Technological pressures have seen huge investments in higher education in many countries in the world in an effort to sustain global competition. According to Roostika (2009), the driving force of wealth creation is knowledge economy which has made access to higher education more and more significant. The aforementioned researcher further notes that although demand has come to exceed supply, it does not make things easier for higher learning institutions in terms of attracting students. Kenya as a developing country is encountering intense competition among local institutions.

An audit of the Kenyan education system indicates that individual private universities display unique sets of characteristics with regard to ownership, formation and structure (Onsongo, 2011). Each of these in turn backs the reputation and standing of the university. At the same time all private universities are accredited by the Commission for University Education (CUE), a body that was established through an Act of Parliament in 1985. This means that there is a level of equality across all players. Kenyan universities like other universities in a developing world have encountered challenges ranging from limited variety of programmes of study, student supply, inadequate physical facilities, financial constraints, increasing competition for university students and staff and attracting uali ied sta and students M iria, Ng'et e, Ngo e, u a-Odero, Wawire & Wesonga, 2007; Tuitoek, 2006; Ngome, 2010; Oketch, 2004; Otieno, 2007; Mutula, 2002; Wesonga, Ngome, Ouma-Odero & Wawire, 2007).

n lig t o t e a ove ackground, t e i act o co etition' a id ot er c allenges on private universities, especially in the Kenyan setting, can be seen as having widely applicable implications for these institutions. Private universities compete directly in the higher education market place for both school leavers and postgraduates. Private providers meeting specific customer criteria often deliver for instance, unique student experience as opposed to what is regarded as a standard student experience (Materu, 2007) emanating ro uality o service. ey ave also een ackno ledged to attract e loyee-custo ers' due to strategies suc as retention o skilled u an ca ital Materu, and unique experience, which has led to a reduction in professional emigration (Odhiambo, 2011). In view of the above mentioned, with increased global competition, quality of the service may play a bigger role in dictating consumer satisfaction. Furthermore, private universities must be aware of their own offerings and how these are perceived in the higher education marketplace for them to satisfy student requirements as well as employee desires. This research examines internal customers (employees and students) of HE with

the objective of exploring their perception of service quality, and service satisfaction. The perceived experiences of the internal customers are important since, it may provide more objective and practical information for assessing making service quality and customer satisfaction in the HE context.

The HEdPERF Measure of Service Quality and Hypothesis
Notwithstanding the large quantity of research on service quality (SQ) and consumer satisfaction (CS), inadequate empirical evidence exists regarding context specific situations, a case in point, customer satisfaction with the service of private universities bearing in mind how the state of affairs in different countries and cultural backgrounds might determine both the employee and student expectations, perceptions, experience and more so conceptualization of service quality. Since service quality is a construct that fits a specific context (Roostika, 2009) it is important that service quality dimensions are designed for a specific study suiting a specific context like the current one. Furthermore, HEdPERF Firdaus's odel as een tested ositively' in a e develo ed and developing world higher education contexts (Kimani, 2011; Ravichandran et al., 2012; Calvo-Porall et al., 2013; Kumar and Yang, 2014). However, it is apparent that conflicting results have been produced on how the concept of service quality was observed and measured or how institutions can use it to improve their service performance. The research therefore wanted to further test Firdaus's odel in a enyan ig er education conte t.

Higher education industry service quality studies have shown that SQ is a multidimensional construct. The most current and fast growing set of service quality dimensions reported in the last decade as measure for service quality in the context of HE has been proposed by Firdaus (2005), comprising a six factor structure with 41 items. Firdaus (2006) argues that HE has clear and distinct dimensions, namely; academic aspects, reputation, non-academic aspects, access, program issues and understanding. In our research, we empirically test this argument in a third world country context. The study therefore proposes that: *Each university (HEdPERF) service quality dimension (academic aspects, non-academic aspects, programme aspects, access, reputation and understanding) has a direct positive and significant relationship with customer satisfaction.*

Research Methodology
This study was accomplished by conducting a questionnaire survey. Structural equation modeling (SEM) was used to test the relationships between service quality and customer satisfaction in the context of private university services. While SEM has been utilized in studies in numerous fields, in general, it has gained prominence recently as a standard tool in various scientific disciplines and the HE field, as researchers have started to take cognizance the value of this new statistical approach. For example, SEM has become a preferred data analysis technique for empirical research in the field of higher education (Firdaus 2006; Govender and Ramroop, 2012, 2013; Calvo-Porall et al., 2013). A two-step approach under SEM advocated by researchers (Hair, Black, Babin & Anderson, 2010; Lee, Ooi, Tan and Chong, 2010) was employed, where; an assessment of the model fit was performed prior to evaluating structural model relationships. The fit of the hypothesized model can be ascertained by employing the maximum likelihood Chi-square statistics including other standard analysis of moment structures namely; Chi-square value to degrees of freedom (X2/df), Root mean square error of approximation (RMSEA), Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Tucker-Lewis Index

(TLI) and Comparative Fit Index (CFI) all provided for in the AMOS 21 output a software package for SEM. The aforementioned goodness-of-fit tests were used to measure the relationships between service quality and customer satisfaction.

In order to obtain a best fit model, the RMSEA must be less than 0.04, NFI, RFI, IFI and CFI must surpass 0.9 value and CMIN/DF (X2/df) must be smaller than 2 (Hair et al. 2006; Schumacker and Lomax, 2004). The probability value (p-value) was used to test the hypothesis that the fit of the model to the sample data fits perfectly, since the p-value in relation to the Chi-s uare ust e su erior t an . non-signi icant' t us sy olizing a better fit. The reliability of the constructs for maximizing internal consistency of multi-dimensional Likert-type questionnaires was analyzed using Cronbach alpha coefficient (Wille 1996 in Raubenheimer, 2004). The Cronbach alphas are greater than the recommended 0.7; this indicates good internal consistency for all the latent variables with respect to their adapted measurement items.

Measures
Through a thorough review of literature, the measures of service quality and customer satisfaction in the questionnaire were designed based on the measurement scale adapted from previous studies in the higher education context (Firdaus, 2006; Kimani 2011). Furthermore, some items conceived in the quality dimensions were included in order to measure customer satisfaction, perceived overall quality and general satisfaction. Due to the modification and adaptation of already existing scales, the researcher used a panel of experts to review the questions and content. In all the measures of the two constructs under investigation, respondents were asked to indicate their level of agreement with service quality items in higher education services on a 7-point Likert scale ranging from 1 = lowest value, while 7 the highest (Leedy and Omrod, 2005).

Data Collection, Sample and Sampling Procedures
This study employed a cross-sectional survey where stratified random sampling strategy was used. The data were collected through a self-administered questionnaire survey. The data were collected from September 2013 to January 2014. There were about five months in t is data collection eriod. e study's target o ulation as all e loyees acade ic and administrative) and students of four select private universities in Kenya. The sample target for the study was determined as 600 students and 250 academic and administrative employees. The four universities were selected based on geographical location and ownership thus faith- ased and co ercial' categories and ere included using a stratified purposeful random sampling technique. Sample size was determined using the $S = X^2 NP(1-P) \div d^2(N-1) + X^2 P(1-P)$ formula (Krejcie and Morgan, 1970, in Sekaran, 2006: 293) in the 95% confidence level. The researchers' ro ose a sa le size of 380 cases as this is satisfactory to derive adequate effect sizes for structural equation modelling (Kline, 2011).

e ore t e distri ution o t e uestionnaires, t e researc ers' rie y explained the purpose of the present study to respondents, and where necessary helped them to complete the questionnaires. It was also made obvious to the participants that participation would remain voluntary and that they were free to leave the study if they so wish, con dentiality and anonymity were also expounded. To ensure higher response and usable rates, questionnaires were distributed in equal proportion per university lled out and returned through a drop and pick' approach to students randomly in classrooms and they were

given about 15 to 20 minutes to fill them in. On the other hand, the majority of academic and administrative staff emphatically refused to participate in this study citing several reasons like timing of the study etc. for their complete refusal to participate in the study; some did not fill in the questionnaires distributed to them, while others lost the questionnaires. All in all, these did not affect the response rate thus a satisfactory response rate was achieved. Through these processes, about six hundred and seventy completed questionnaires were collected. After excluding missing data or incomplete response, 655 responses were used in the data analysis.

The socio-demographic characteristics of the final percentage of the sample were: the majority of the employee respondents were administrative (59.4%) while academics (40.6%). Most respondents were male (54.9%) and female (44.4%). With regard to age, the majority of the employees were middle aged or younger (47.4%) formed 30 to 39 years, (31.6%) were aged 40 to 49 years and (19.5%) were below 30 years. A majority (78.9%) had worked up to 10 years, with (77.8%) academics and (79.7%) administrative where PhD (27.8%). In terms of management 42.1% were middle managers, technical (9.8%) and senior managers (6.8%). In contrast, the students sample percentage profiles included; students aged between 18 and 23 years (66.3%), there were more female students (51.6%) in the full-time degree programme than there were male (48.4%) with those ursuing irst degree . and ostgraduate degree it irst year's . and second year (30.1%), third (20.3%) and a few (7.1%) in fourth year of studies.

Data Analysis
The researcher used the Statistical Package for the Social Sciences (SPSS) version 20 and AMOS 21 to conduct exploratory factor analysis (EFA), structural equation modeling (SEM) test the relationships, since Schumacker and Lomax (2004) asserted that SEM is clear and testable, and competing models can be analyzed, synthesized and understood and, their effect whether direct, indirect or both can be investigated.

Results of Empirical Analyses
Scale Reliability and Validity
The dimensions of the measurement constructs were tested by applying the Cronbach alpha coefficients using Stepwise Reliability Analysis and the following coefficients were produced for students: non-academic aspects 0.941; academic aspects 0.928; reputation 0.889; access 0.923; programmes 0.854; understanding 0.853 and overall satisfaction 0.933. Similarly, e loyees' coe icients ere non-academic aspects 0.758; academic aspects 0.763; reputation 0.87; access 0.853; programmes 0.817; understanding 0.807 and overall satisfaction 0.819. The aforesaid reliability coefficient alphas were acceptable (exceeds 0.7); this implying that the measurement instruments were fairly reliable. Furthermore, internally inconsistent items were sequentially deleted, therefore maximizing t e scales' relia ility at . Sekaran and ougie, .

This study employed various validity measures where the researchers ensured adequate coverage and representative set of items that capture the concepts, evaluated the questionnaire for relevance of the items that try to capture the targeted variables. Construct and discriminant validity were assessed through Exploratory Factor Analysis using Principal Component Analysis with oblique method rotation to summarize the factor loadings under study (Browne, 2001). A factor loading of 0.4 was employed to indicate that the structure was well defined (Hair et al., 2010).

Factor Analysis Results

Exploratory Factor analysis (EFA) was used to reduce all the measurement attributes in a large number into smaller sets of underlying dimensions in order to maximize the validity of the instruments (Hair et al., 2006). The use of Likert scale questionnaires prompted the researchers to opt for the EFA technique for the factor analysis. According to Hair et al. (2010) and Zikmund, Babin, Carr & Griffin (2010), the underlying purpose is to determine stronger linear combinations of many variables that aid in investigating the interrelationships effectively without pre-conceived hypotheses. Therefore, in order to clarify the pattern of relationships among the service quality dimensions, factor extraction was done by use of Principle Component Analysis (PCA) (Field, 2009), which was used to reduce the many factors to more manageable sets with strong correlations and also ena led understanding o varia les' structures air et al., . e o li ue rotation met od ro osed y ennric and Sa son as used to su arize t e construct's structures of the variables studied (Browne, 2001). The 0.4 was regarded as an acceptable factor loading cut-off point (Hair et al., 2010).

As illustrated in Table 1 (student sample) and Table 2 (employee sample) below, four factors have been extracted for student sample while five factors were extracted for employee sample that loaded on each factor. As given in Table 1, the four factors were labelled and described as Factor 1 non-academic (administration quality), Factor 2 was named health quality (understanding), Factor 3 programme quality, and Factor 4 was named satisfaction. Similarly in Table 2, the five rotated factors were described as follows: Factor 1 - Satisfaction, Factor 2 - Quality of Academic Programmes, Factor 3 - Academic Quality, Factor 4 - Health Quality, and Factor 5 - Credibility. These factors have been identified in previous studies (DeJager and Gbadamosi, 2010; Firdaus, 2006; Kumar and Yang, 2014; Ravichandran et al., 2012).

a e otated actor ana sis or odi ied students' ser ice ua it attri utes

Quality Attributes	Factor Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Understanding 1	--	.738	--	--
Understanding 2	--	.737	--	--
Understanding 3	--	.780	--	--
Programme 1	--	--	.743	--
Programme 2	--	--	.705	--
Programme 3	--	--	.785	--
Programme 4	--	--	.655	--
Non-academic 1	.711	--	--	--
Non-academic 2	.722	--	--	--
Non-academic 3	.817	--	--	--
Academic 1	.773	--	--	--
Academic 2	.792	--	--	--

Quality Attributes	Factor Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Reputation 1	.482	.613	--	--
Reputation 2	.610	.457	.417	--
Access 1	.576	.450	--	--
Access 2	.574	.505	--	--
Satisfaction 1	--	--	--	.868
Satisfaction 2	--	--	--	.751
Overall quality	--	--	--	.579

Table 2 Rotated factor analysis for modified employee service quality attributes

| Quality Attributes	Factor Loading				
	Factor (1)	Factor (2)	Factor (3)	Factor (4)	Factor (5)
non-academic 1	.607	--	--	--	--
non-academic 2	--	--	--	--	--
non-academic 3	.727	--	--	--	--
non-academic 4	.844	--	--	--	--
Academic 1	--	--	.786	--	--
Academic 2	--	--	.652	--	--
Academic 3	--	--	.739	--	--
Academic 4	--	--	.823	--	--
Reputation 1	.758	--	--	--	--
Reputation 2	.662	.468	--	--	--
Access 1	.794	--	--	--	--
Access 2	.678	--	--	--	--
Access 3	.668	--	--	--	--
Satisfaction 1	.544	.422	--	--	--
Satisfaction 2	.755	--	--	--	--
Programme 1	--	.714	--	--	--
Programme 2	.414	.657	--	--	--
Programme 3	--	.831	--	--	--
Programme 4	--	.769	--	--	--
General quality	--	--	--	--	.873
Understanding 1	--	--	--	.813	--
Understanding 2	--	--	--	.778	--
Understanding 3	.474	--	--	.567	--

Structural Equation Modelling Results and Hypotheses Verification
Structural Equation Modelling with latent variables (SEM) is a process that is used to analyze relationships among variables, was used to predict the variance in the dependent variables through regressing (CS) against the independent variable (SQ) (Sekaran, 2006: 406). According to Kline (2011), SEM is a combination of statistical techniques which allow a set of relationships between independent variable(s) and dependent variable(s) to be examined. In this study SEM was preferred because it enables clarity and testability of competing models therefore enhancing the potential to further understand the analysis (Schumacker and Lomax, 2004). Through SEM quality of results are enhanced since various linear models in an integrated manner fit and their effect whether direct, indirect or both effects can be explored. Confirmatory Factor Analysis (CFA) was performed to purify the proposed models before testing the structure model and thereafter examine the underlying relationships between the two constructs under study (Lee et al., 2010; Schumacker and Lomax, 2004). By using Analysis of Moment Structures (AMOS) research data was fitted to the observed data and a critical ratio (CR) estimate value $> = 1.96$ suggested significance of the causal path between the latent variables (Kline, 2011; Hair et al., 2010).

The structural models for the student and employee samples were assessed in terms of: their structural and measurement fit measures, the contribution of every assessed path coefficient, the extent of each expected path coefficient measurement and the bearing of each structural path coefficients. To assess the fit of the model to the data, Chi-Square value, Chi-square per degrees of freedom, RMSEA, CFI, CMIN/DF and the p-value were computed. An acceptable fit for the student sample was found ($X2 = 33.5$, $df = 28$, RMSEA $= 0,021$, CFI $= 0.998$, CMIN/DF $= 1.20$) and, the p-value was 0.215, which is non-significant at the 5% level, implying that the proposed conceptual model for student sample (Figure 1) fitted to the research data was indeed a good one. Furthermore, the aforementioned results show that the required values for the goodness of fit indices for the proposed factor structures from the student sample for private higher education (PHE) service quality and customer satisfaction are all supported (Hair et al., 2010; Kline, 2011; Browne and Cudeck, 1993; Hu and Bentler, 1999).

On the employee sample, the fitted model (Figure 2) had a Chi-square test statistic of 37.9 with a p-value 0.384, which is non-significant at the 5% level, thus the employee conceptual model (Figure 2) fitted to the research data as well (Hair et al., 2010). Furthermore, the CFI was 0.997, the RMSEA was 0.019, x2/df was 1.052 with a p value of 0.384 and the NFI, IFI, TLI were greater than 0.9, all confirming a good fit of the model (Hair et al., 2010; Hu and Bentler, 1999).

Fig 1 A model of the relationship between private university service quality and student satisfaction toward a university
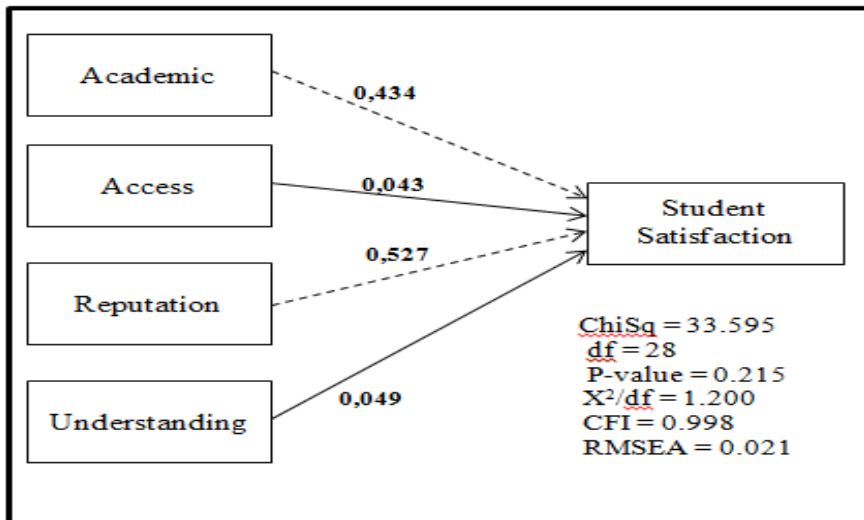
Source   ut or's own e a oration

Fig 2 A model of the relationship between private university service quality and employee satisfaction toward a university
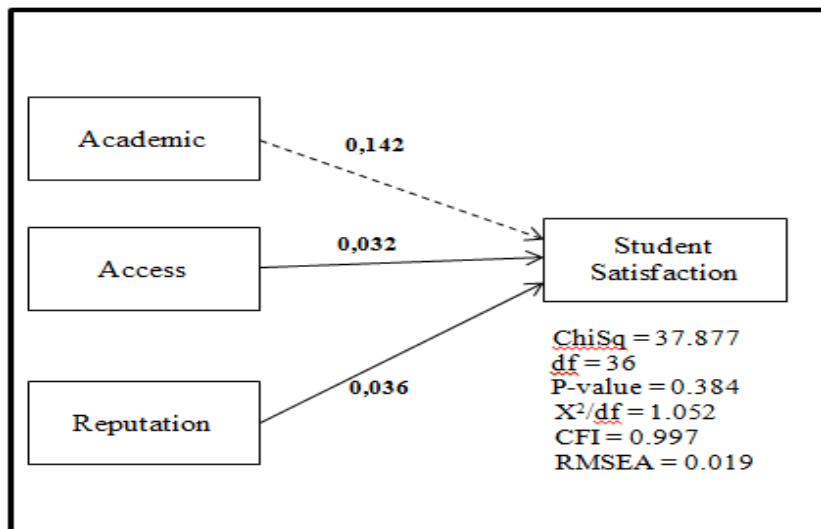
Source   ut or's own e a oration

Whereas structural model results showed that the academic, reputation understanding and access have positive relationship with satisfaction among the students, going by the regression weights (Table 3), it is evident t at only   understanding' and   access' signi icantly   level o signi icance in luenced t e students' satis action o   rivate universities services. t   as also ound t at e   loyees' satis action   as signi icantly in luenced y access' and re utation' di ensions o   rivate universities service uality.

It is also interesting to note that the academic aspect (employee sample) has a negative coefficient estimate, whilst access and reputation have positive coefficients.

Table 3 Regression weights   private university services

Quality dimension	Student Result				Employee Result			
	Esti mate	SE	t-value	p-value	Estimate	Standard error	t-value	p-value
Academic	0.072	0.093	0.782	0.434	-0.055	0.037	-1.468	0.142
Reputation	0.085	0.135	0.632	0.527	0.494	0.236	2.092	0.036
Understanding	0.115	0.062	1.852	0.049	-	-	-	-
Access	0.258	0.129	2.002	0.043	0.438	0.204	2.146	0.032

Source: 2013 fieldwork by author

Discussion and Study Implication

The SEM model results, including standardized path coef cients and t-values, shown in Table 3 above revealed that the direct' effect of the student-customer understanding' quality (= 0.115; p<0.05) and access' quality (= .258; p<0.05) were significant. Regarding the employee-custo ers, access' uality   .   .   and re utation' uality   .   .   ere also signi icant. ese results indicate t at service quality is positively related to customer satisfaction. In addition, Table 4 indicates that access' uality and re utation' uality are the most important constructs affecting customer satisfaction in private university services (De Jager and Gbadamosi, 2010: 4; Firdaus, 2006; Owlia and Aspinwall, 1996). The other service dimensions, programme and non-academic, were found not to fit the model.

Understanding specifically student needs with reference to counselling and health quality services will lead to greater satisfaction (Watson, 2003). The aforementioned also emphasizes the importance of understanding the service quality dimensions in explaining student satis action. us, it is suggested t at access' and understanding' di ensions should be incorporated when examining student satisfaction. Accordingly, service quality anagers at universities s ould e asize irstly understanding' and later t e ot er dimensions. Firdaus (2006) also found that access and understanding qualities of service were among the top six variables that positively correlated with service satisfaction from student viewpoint in tertiary education.

In HE environments, the importance of access and reputation as factors that may influence the perception of quality of university service in turn increase satisfaction has been accredited (DeJager and Gbadamosi, 2010; Marx and Erasmus, 2006). Employees in service organizations have been widely acknowledged for organizational efficiency, considering their responsiveness and understanding (Parasuraman, Berry & Zeithaml, 1988), allegiance (Farber and Wycoff, 1991), satisfaction (Voss, Tsikriktsis, Funk, Yarrow & Owen, 2005), contact (Soteriou & Chase, 1998), motivation (Hays & Hill, 2001) and competence (Parasuraman et al., 1988). In an attempt to explore the extent to which the service quality and customers satisfaction are interrelated, DeJager and Gbadamosi, (2010) assert that employee expectations of a university depend on their experiences and individual preferences (DeJager and Gbadamosi, 2010), and this therefore

determines their decision-making process for instance, for maximum commitment. If processes and personnel crucial to service quality are well implemented, then, the organization would experience superior service quality which will in turn, enhance loyalty (Marx and Erasmus, 2006). Therefore, university service providers (administration support) need to be cognizant of drivers of service quality and should work and implement plans that would improve customer satisfaction.

By empirically exploring the relationships between service quality and customer satisfaction in the HE context, through data collected from survey conducted in Kenya, the importance of this findings is evident. A number of theoretical and managerial implications for various stakeholders such as universities, government, higher education stakeholders and university service managers are explained. The rapid expansion of university education and demand for quality are compelling universities to devise ways to enhance quality service so as to sustain stiff competition in the HE industry. Given the competition, an understanding of the factors influencing custo ers' erce tions o service is useful for universities so they can prioritize their resources in an effective way. For e a le, access' uality and re utation' uality ere ound to e t e ost signi icant dimensions that have a strong impact on custo ers' satis action it university services. n addition, acade ic' uality and understanding' uality ere ound to e related to satisfaction. In order to increase customer satisfaction, universities need to ensure they understand the needs and expectations of their customers in order to improve HE services. This could lead to a multiplicity of effects in that greater service quality and customer satisfaction will lead to higher customer allegiance.

This study employed structural equation modelling (SEM) using the AMOS statistical package to test the measurement and structural models. Employing complex statistical methodological tools has been limited in previous studies and more so those done in a developing economy context i.e. Kenya. Therefore, this study sets precedent on the research in higher education sector. It also contributes to identifying measures for the private universities higher education that can derive the different perceived service quality and customer satisfaction by employing the exploratory factor analysis and confirmatory actor analysis to evaluate t e service uality o enya's rivate ig er education services ro t e students' and e loyees' stand oints. Moreover, it also atte ts to a ate t e scarcity of the studies in the domain of HE from the emerging countries context.

Concluding Remarks and Recommendations
Considering that not all HEdPERF dimensions fitted into the sample data sets, this study bears testament that further studies are necessary to explore the primary reasons to be able to provide more concrete generalizations. It is vital that university service providers focus on improving academic and understanding qualities by implementing strategies that will effectively enhance these services among employees and students.

it res ect to increasing to relia ility o t eir custo ers', service roviders s ould e more customer-focused and furthermore come up with ways to positively manage and in luence t eir custo ers' relations i s y ado ting use ul et ods. Out of the mutual influence within the customers themselves this will translate to increased satisfaction. Researchers (Becket and Brookes, 2008; Trivellas and Dargenidou, 2009) have shown that efficient and effective internal communication and embracing a service culture within

service processes are crucial in improving SQ within HE, and a lack thereof will decrease custo ers' ait in ad inistration and su ort.

Another important factor that may influence the perception of the quality of university service is by regularly evaluating the SQ through data collection. Embracing the data collection activity ill ake ot t e e loyees' and students' eel art and arcel o t e institutional decision making process. This will enable HE institutions to get to know their customers, the needs of the market and, align services to suit these market needs thereby, offering superior quality to all their customers which should then translate to customer satisfaction. In short, service providers need to include satisfaction surveys in their quality frameworks.

The quality of services is typically accredited to teamwork and support of the administrative staff as well as the academic staff with the students. If students realize that the staff is not concerned with and caring of them they become demoralized, consequently leading to displeasure.

Some form of continuous training and development is paramount. Such training should help contribute especially to employee satisfaction. Hence, efforts should be directed towards i roving e loyees' a areness and skills ecause de enda ility and ro ise have a direct relationship with employee competence. Knowledge and skills training are a never-ending process, hence without refresher sessions and advanced training there is a risk o t e e loyee eco ing stale' and slo y less attention o uality and detail eventually becoming demotivated. Management can enhance the competence and/or knowhow and develop capacity by involving both operational staff and experts in sessions, socialization and good training programmes.

Limitations and Avenues for Future Research
High data collection costs limited the study to be conducted in two regions namely; Nairobi and Central. Even so, the sample justifies the results of the study and could be duplicated to other regions in Kenya. This research is also limited to assessing private university services ro t e erce tions o internal custo ers'. t ould e ort ile to examine perceived differences of private and public university services from the point of view both of internal customers and by extension the external customers. Future research could adopt the HEdPERF framework and consider a mixed method approach to enrich such a study employing SEM to investigate other service related variables for instance, demographic variables to ascertain the generalizability of the model. A longitudinal study could el ollo c anges in custo ers' erce tions o university service er or ance and customer satisfaction attributes over time.

Acknowledgements

References

la a, ., . and lanre a u, ., . Service uality di ensions and t esis writing among postgraduate students in sout est Nigeria niversal ournal o Education and General Studies Vol. 1, No.7, pp. 188-194.

ecket, N. and rookes, M. Evaluating uality anage ent in university de art ents *Quality Assurance in Education* Vol. 14, No.2, pp. 123-142.

Brown, S. ., and itner, M. . Mandating a service revolution or arketing in The service-dominant logic of marketing: dialog, debate and directions by R. F. Lush and S. L. Vargo, Eds., Armonk, NY: M.E. Sharp, pp. 393-405.

Browne, M. W., and Cudeck, . lternative ays o assessing odel it in Testing structural equation models by K. A. Bollen and J. S. Long, Eds., Newbury Park, California: Sage, pp. 136-162.

ro ne, M. . n overvie o analytic rotation in e loratory actor analysis Multivariate Behavioral Research Vol. 36, pp. 111-150.

Calvo-Porall, C., Levy-Mangin, J. P., and Novo- orti, . Perceived uality in ig er education n e irical study Marketing ntelligence and Planning, Vol. 36, No. 6, pp. 601-619. http://www.emeraldinsight.com/journals.htm?articleid=17099899. doi: 10.1108/MIP-11-2012-0136, Viewed February 12, 2014.

en, S., ang, ., and S iau, . Scorecard in t e erformance evaluation of ig er education M Magazine ol. , No. , . -205.

De ager, . and ada osi, . S eci ic re edy or s eci ic ro le easuring service uality in Sout rican ig er education ig er Education ol. , No. , pp. 251 267.

Field, A. (2009) Discovering statistics using SPSS (3rd ed.), Sage Publications Ltd: London.

Firdaus, . e develo ent o EdPE F ne easuring instru ent o service uality or t e ig er education sector nternational ournal of Consumer Studies Vol. 30, No. 6, pp. 569-581.

Firdaus . Measuring service uality in ig er education EdPE F versus SE PE F Marketing ntelligence Planning ol. , No. , . 47.

ovender, . . Service Per or ance and Service Quality: Exploring the Post-graduate esearc Students' Perce tions o t e Service Encounter ournal o Social Sciences Vol. 37, No. 3, pp. 217-224.

ovender, . . e relations i et een t e ostgraduate researc cli ate and supervisor researc service uality ournal o Social Sciences ol. , No. , . -158.

ovender, . . and a roo , S. Managing ostgraduate researc service uality Develo ing and assessing a conce tual odel Sout rican ournal o Economic and Management Sciences Vol. 16, No. 2, pp. 154 169. http://www.sajems.org/index.php/sajems/issue/view/34, Viewed May 9, 2014.

ovender, ., and a roo , S. elations i et een t e ostgraduate researc students' erce tion o t eir role, researc cli ate and service uality rican ournal o Business Management Vol. 6, No. 4, pp. 1642-1651.

air, . F., lack, . ., a in, . . and nderson, . E. Multivariate Data nalysis lo al Pers ective Pearson Prentice all Ne ork.

Ha , ., and ayduk, S. aining co etitive advantages in ig er education nalyzing t e ga et een e ectations and erce tions o service uality nternational Journal of Value-Based Management Vol. 16, No. 3, pp. 223 242.

Hays, J. and Hill, . reli inary investigation o t e relations i s et een e loyees' otivation vision, service learning, and erceived service uality ournal o Operations Management Vol. 19, No. 3, pp. 335-349.

is a uddin, F. . ., and zleen . Service quality and student satisfaction: a case study at rivate ig er education institutions nternational usiness esearc ol. , No. 3, pp. 163 175.

u, ., and entler, P. M. ut-off criteria for fit indexes in covariance structure analysis conventional criteria versus ne alternatives Structural E uation Modelling Multidisciplinary Journal Vol. 6, No. 1, pp. 1-55.

ennric , . ., and Sa son, P. F. otation or si le loadings Psyc o etrika Vol. 31, No. 3, pp. 313 323.

odayari, F., and odayari, . Service uality in ig er education Interdisciplinary Journal of Research in Business Vol. 1, No. 9, pp. 38 46.

i ani, . S. usiness students' erce tion o service uality in enyan rivate and public universities, CUEA Press: Nairobi.

Kline, R. B. (2011) Principles and practice of structural equation modelling (3rd ed.), Guilford Press: New York.

u ar, ., and ang, . . Service uality and loyalty o international students studying in t e ield o os itality and touris Malaysian nline ournal o Educational Management Vol. 2, No. 3, pp. 97-118.

ee, . ., oi, . ., an, . ., and ong, . . structural analysis o t e relationship between TQM practices and product innovation sian ournal o Technology Innovation Vol. 18, No. 1, pp. 73 96.

Leedy, P. D., and Ormrod, J. E. (2005) Practical research: planning and design, Merrill Prentice Hall: Upper Saddle River, NJ.

Mar , . M. M. N. and Eras us, . . n evaluation of the customer service in su er arkets in Pretoria East, s ane etro olis, Sout rica Journal of Family Ecology and Consumer Sciences Vol. 34, pp. 56 68.

Materu, Peter . ig er education uality assurance in Su -Saharan Africa: Status, c allenges, o ortunities and ro ising Practices e World Bank working paper number. 124.

Mutula, S. M. niversity education in enya urrent develo ents and uture outlooks e nternational ournal o Educational Manage ent ol. , No. 3, pp. 109-119.

M iria, . Ng'et e, N., Ngo e, ., u a-Odero, D., Wawire, V., and Wesonga, D. Pu lic and rivate universities in enya Ne c allenges, issues and ac ieve ents in ig er education in rica . http://www.eldis.org/go/home&id=35863&type=Document, Accessed 15, 2011.

Ngo e, . . , cto er Massive gro t o university education in East rica and the challenges facing the sector between 2000- e ase o enya . Paper Presented at the 10th Anniversary Celebrations of the Revitalization of the Inter-University Council for East Africa (IUCEA), Kampala, Uganda. Available online at: http//:www.iucea.org/downloads/Massive_Growth.pdf, Accessed 15 June 2011.

d ia o, ., . ig er education uality in enya critical reflection of key c allenges uality in ig er Education ol. , No. , . 315.

o, . e relations i et een service uality and custo er satis action in t e teleco unication industry Evidence ro Nigeria road esearc in Accounting, Negotiation, and Distribution Vol. 1, No. 1, pp. 88-100.

ketc , . . e e ergency o rivate university education in enya trends, ros ects and c allenge nternational ournal o Educational Develo ent ol. , . 119-136.

ng, . M., and Nankervis, . Service uality in ig er education Students' erce tions in ustralia and Malaysia evie o ntegrative and usiness esearc ol. 1, No. 1, pp. 277-290.

Onsongo, J. K. (2011) Promoting gender equity in selected public universities of Kenya, OSSREA Publications: Addis Ababa, Ethiopia.

tieno, . Private rovision and its c anging inter ace it u lic ig er education e case o enya E ES ol. , No. -3, pp. 173-176.

Owlia. M.S. and Aspinwall, E. M. ra e ork or t e di ensions o uality in ig er education uality ssurance in Education ol. , No. , . 20.

Parasura an, ., erry, . ., and eit a l, . . SE ulti le-item scale for measuring consumer perce tions o service uality ournal o etailing Vol. 64, No. 1, pp. 12 40.

Perez, M. S., uan, . . ., e a, M. M. ., and a uel, S. F. E ects o service quality dimensions on behavioural purchase intentions: A study in public sector transport Managing Service Quality Vol. 17, No. 2, pp. 134-151.

uinn, ., e ay, ., arsen, P. and o nson, D. M. Service uality in ig er education otal uality Manage ent ol. , No. , . 152. Available online at: doi: 10.1080/14783360802622805, Accessed February 8, 2012.

a asek ar M, Muninarayana a, M. and eddy, S. . S. e P odel analysis o service uality in ndian ig er education ournal o Social Sciences ol. , No. 2, pp. 214-229.

au en ei er, . n item selection procedure to maximise scale reliability and validity Sout rican ournal o ndustrial Psyc ology ol. , No. , . 64.

avic andran, ., u ar, S. ., and enkatesan, N. Students' erce tions on service uality nternational Academic Research Journal of Business and Management Vol. 1, No. 1, pp 23-38.

oostika, . e role o custo er value it in t e service uality, custo er satisfaction and behavioural intentions relationships: An empirical examination in the ndonesian ig er education sector P D t esis - Business Management program, Swinburne University of Technology, Melbourne, Australia. Available online at: http//www. researchbank.swinburne.edu.au/vital/access/services/, Accessed 8 February 8, 2012.

Schumacker, R. E. and Lomax, R. G. (2004) A beginner's guide to structural equation modelling, Lawrence Erlbaum Associates: Mahwah, New Jersey.

Sekaran, U. (2006) Research methods for business: A skill building approach (4th ed.), John Wiley & Sons, Inc: New York.

Sekaran, U., and Bougie, R. (2010) Research methods for business: A skill building approach (5th ed.), John Wiley & Sons, Inc: New York.

S a in, ., and Sa ea, M. Develo ing t e odels o service uality ga s critical discussion usiness Management and Strategy Vol. 1, No. 1, pp. 1-11.

Shekarchizadeh, A. Rasli, A. and Hon- at, . SE in Malaysian universities ers ectives o international students usiness Process Manage ent ournal Vol. 17, No. 1, p. 67.

Soteriou, A. and ase, . inking t e custo er contact odel to service uality Journal of Operations Management Vol. 16, No. 4, pp. 495-508.

Sunanto, S. au i uarra an, . and Pange anan, . n analysis o university services quality gap and student satis action in ndonesia e nternational ournal o Know, Culand Change Management Vol. 7, No. 7, pp. 1-10.

rivellas, P., and Dargenidou, D. rganisational culture, o satis action and higher education service quality: The case of Technological Educational Institute of arissa e M ournal ol. , No. , . 399.

oss, ., sikriktsis, N., Funk, ., arro , D. and en, . Managerial c oice and performance in service management a comparison of private sector organizations it urt er education colleges ournal o erations Manage ent ol. , No. , . 179-95.

atson, S. losing t e eed ack loo Ensuring e ective action ro student eed ack ertiary Education and Manage ent ol. , No. , . 5 157.

Wesonga, D., Ngome, C., Ouma- dero, D. and a ire, . Private rovision o ig er education in enya rends and issues in our universities in Pu lic and rivate universities in enya y . M iria, N. Ng'et e, . Ngo e, D. u a-Odero, V. Wawire and D. Wesonga, Eds., James Curry Ltd: Oxford.

a ari, ., uso , ., and s ail, M. FM-SERVQUAL: A new approach of service uality easure ent ra e ork in local aut orities ournal o or orate eal Estate Vol. 10, No. 2, pp. 130 144.

Zeithaml, V. A., Bitner M. J., and Grembler, D. D. (2009) Service marketing: integrating customer focus across the firm (5th ed.), McGraw-Hill Publishing Company: New Delhi.

Zikmund, W. G., Babin, B. J., Carr, J. C., and Griffin, M. (2010) Business research methods (8th ed.). Cengage Learning: South-Western.

●●●

**Students' perceptions and attitudes towards entrepreneurs ip
a cross- program and cross- cultural comparison**

Anna Olszewska
The Department of Management at Kozminski University
Warsaw, Poland
aolszewska@kozminski.edu.pl

Abstract

Background: It is definitely crucial to develop a spirit for entrepreneurship amongst young people since new business development supports prosperity of any country on the planet, especially developing ones. Yet, there seems to be a generally prevailing trend for students to pursue corporate careers despite declaring a strong willingness to open a business.

Aim: The purpose of this study is to examine which factors, perceptions and attitudes ave t e ost signi icant i act on t e students' intention to start u t eir o n co any and how it changes according to educational level and study programs across countries.

Methods: The empirical research was conducted on 193 students between 18-40 years old, across 16 nations, who provided answers for the survey on their perceptions of entrepreneurship- related issues. The 24 question survey covered the following areas: demographic data, students actual entrepreneurial experience, motivations, impact of studies and family, attitudes towards entrepreneurship, perceived success factors, best sources of financing and barriers.

Findings: First, it is surprising that an extremely small group of students (9.84%) have their own business, 26.9% works for a corporation, and nearly one in four students already tried to open a firm and failed. The intent to establish a company in the future is declared by 161 students although a greater number of students consider themselves entrepreneurial. Second, my study shows that bachelor students are highly influenced by family when showing entrepreneurial intentions and consider family as the best source of financing future business; master students on the contrary declare not to be influenced by family and indicate EU funds as well as own savings as the best business financing options. Importantly, nearly 80% of students from Western European countries consider entrepreneurial personality as something that can be developed, on the contrary students from the Middle East in almost 70% treat it as an inborn trait. Third, this paper highlights that the most desirable characteristic in an entrepreneur are differently perceived by law students, management students and finance students- being creativity, leadership skills and diversity management skills respectively. Lastly, when starting a company lawyers regard the team as the decisive factor, management students see the window of opportunity as the prerequisite and finance students- the resources.

Value is a er indicates students' entre reneurial intention atterns and suggests t e most common perceptions of entrepreneurship by the young generation.

Keywords: entrepreneurship, students, perceptions, attitudes

JEL classification number: L26, I23

1.Introduction
The research on entrepreneurship has grown extensively over past decades and continues to be of a great importance. It is proven that entrepreneurial activity improves the invest ent cli ate and su orts a country's overall econo ic develo ent la er, it, et al., , akarevicius, u erka, . ence, kno ing t e ers ective o students is use ul ot in acade ia and t e usiness orld' in many ways. First of all it is an indication of the challenges that universities face with creating encouraging and practical courses that would make more students turn to the entrepreneurial-, instead of corporate- career path. A second remark relates to the overall climate of doing business in a particular country and may highlight the scopes of improvement for governments and related institutions. The influence of the education process on entrepreneurial intentions has been widely discussed however it still remains unclear how to address the uncertainties and perceived barriers. Why in the times when it is so hard to find a good job fit, graduates tend to seek unemployment benefits rather than building up their own company? A better understanding of their uncertainties, main drives, perceived success factors and elements influencing intentions for entrepreneurial action can help stimulating successful business development.

2. Theoretical perspective
What it takes to be an entrepreneur?
An entrepreneur is often defined as a person who takes initiative, gathers resources, and takes risks to act in an innovative way (Hisrich, Peters & Shepherd, 2010). Others go one step further by seeking success factors of an entrepreneur in passion for business, consumer or service ocus, erseverance des ite ailures and e ecution intelligence', adaptability, persuasiveness, honesty, vision, desire to achieve, ability to organize and leadership skills (Barringer & Ireland, 2008; Mariotti, DeSalvo et al., 2000; Henry, Hill et al, . e de initions can e uite si le descri ing an entre reneur as so eone o creates a ne enter rise o , . t er de initions are uite co le - one o is self- employed and who initiates, organizes, manages and takes responsibility for usiness aguz Matic, . t is still unclear o students in di erent rogra s and at different levels of education define being an entrepreneur.

Entrepreneurial intentions and motivation for entrepreneurship
As much as intentions towards entrepreneurship are personal and complex (Bagheri, Akmaliah, et al. 2011), there are many theories developed, which aim at explaining and exploring this phenomenon. Jang (2013) defined entrepreneurial intention not as psychological desire to achieve one's o n goal, nor as sel - decision or the theory of planned behaviour, but as purposefully planning to start a business. It is doubtful if intentions in fact predict the actual company creation (Douglas & Shepherd, 2002), however Krueger et al (2000) believe it is more precise to study intentions than personality traits. What can help developing entrepreneurial intentions are student organizations acting as incubators for business by investing, mentoring and supporting it (Zamcu, 2013). The author also stresses t e i ortance o suc an entre reneurs clu as a business network platform for student- entrepreneurs. Intention towards entrepreneurship is often correlated with entrepreneurial education and it is suppose to differ significantly across countries. Students in New Zealand strive for entrepreneurial education because they believe an entrepreneurial personality can be made and further developed (Roudaki, 2009). A very important factor when intending and pursuing entrepreneurial activity is mentoring and role models, together with top education they minimize uncertainty

connected with a lack of knowledge. Entrepreneurial intentions can result in entrepreneurial behaviour, which is reflected in a decision to start a business (Staniewski & Szopinski, 2013). An overall level of interest in the entrepreneurial activity can additionally trigger intentions, however the element of motivation in terms of giving a chance and concrete support boosts it.

Potential entrepreneurs are mainly motivated by: achievement, need for affiliation, need for power, independence, risk- taking urge, feeling of control, own innovativeness, need for decision- making, commitment, vision and drive (Henry, Hill & Leitch, 2003). Intention on the other hand includes entrepreneurial potential, the trigger for setting up a firm, credibility, desire for entrepreneurship, self- efficacy and credibility (Chell, 2008). The author complements the theory by adding goal- orientation, economic situation, analytical thinking and envisioning of possible scenarios. In literature the factors affecting the entrepreneurial interest among students have already been identified in many countries. Hence, what tend to matter in entrepreneurial intentions are low uncertainty avoidance and collectivist culture. Therefore it can be concluded that entrepreneurial intentions vary across cultures (Bae, Qian, Miao et al., 2014). Some other major motives identifies by literature are to pursue financial rewards, recognition, independence, being one's o n oss, creativity, pursue innovative ideas, knowledge about business, satisfaction, (Barringer & Ireland, 2008; Gartner, Shaver, et al. 2004, Staniewski and Szopinski, 2013). Venesaar, Kolbre and Piliste (2007) listed need for freedom, self-realisation and better income desire as the main reasons for student entrepreneurship. Need for approval is rather a characteristic of people who show no entrepreneurial intentions, while need for control supports the intention to become an entrepreneur (Sinclair, 2008). The same author stands in opposition to other researchers, claiming that neither financial success nor personal development is appropriate to use in the context of entrepreneurial intentions and motives.

Perceptions on motives and intentions across nations

As mentioned before- perceptions, intentions and motivations differ across countries. For example Finnish students as a very individualistic people are highly entrepreneurship-oriented, which is also correlated with democratic rights (Rantanen & Toikko, 2013). Finns chose to be entrepreneurs pragmatically as a career option, but not necessarily perceived as an attractive one. According to the authors entrepreneurial personality is not embedded is social values of Nordic culture, therefore the authors suggest that promoting it does not re uire social narrative'. n Poland t e entre reneurial intentions are very ig (5th place in Europe), however Poles tend to have a low capability of catching business opportunities and they fear failure (2nd in Europe), nonetheless entrepreneurship is the nu er one desired career c oice in t is country arna a, c a ska, et al. . e authors highlight that Poles main motivation to start up business is necessity. Staniewski and Szopinski (2013) indicated that the intention to open business could be also due to unstable employment and the economic situation. However, in some post- communist countries like Ukraine and Russia, being an entrepreneur was for a long time not associated positively, as under the regime it was often illegal or shady business (Danis & Shipilov, 2002). The authors suggest that the burden of historical connotations continues to have a negative impact on entrepreneurial initiatives. In fact that is still reflected in new business density ratios.

Comparison of students intentions between Greece and Germany shows that German students are more interested in becoming entrepreneurs and express this ambition, while Greek students have more ideas and are risk-takers (Ruda, Martin, et al. 2013). This might be due to good climate for entrepreneurship in Germany and the less stable economic and political situation in Greece. Greek students are motivated by a need for power, whereas German strives for self-actualization. The authors give advice that entrepreneurial education in both countries should be more individualized. Another comparative study was dedicated to French versus American student- entrepreneurs, which reveals that Americans are more matured in their entrepreneurial intentions, compare to French students, who are negative towards this idea (Boissin, Branchet, et al. 2009). The authors underline the importance of cultural background and economic heritage as they have significant impact on entrepreneurial intentions. Those intentions are also very personal, age, gender and experience dependent. The entrepreneurial exposure and environment is crucial for intentions to open a company for both nations. Also this career path perception by the general public is different and highly influential: in the US it is associated with dynamism, innovativeness and risk taking, which makes it exciting (Boissin, Branchet, et al.   . n France on t e contrary an entre reneur is erceived as e er o old oys net ork' seeking to strengt en arket s are.

In Singapore the motivating factors are gender, family business background, its level of income, ethnicity, nationality and level of education (Wang and Wong, 2004). The authors state that there are patterns according to gender, education level and family business experience ic ig ly i act t e interest o conducting one's o n usiness. ey also claim the following reasons for this situation: females in Singapore show less entrepreneurial intentions because of the Asian social roles they are expected to fulfil, family business gives young people exposure and the better they are educated, the better corporate position they will be offered so they tend to avoid uncertainty connected with running their own firm. On the contrary, according to the research ethnicity, nationality and inco e level ave no or little i act on students' intentions. Educational level and nationality were found to have a slight impact on the interest in entrepreneurship. Wang and Wong (2004) suggest that although Singaporean students show clear interest in entrepreneurship they do not succeed due to business knowledge shortages. A similar study on Malaysian students shows that extraversion, openness and perceived support have great impact on entrepreneurial intentions (Ismail, Khalid, et al 2009). However Malaysian students tend to have low self- esteem when it comes to their knowledge and entrepreneurial abilities (Bagheri, Akmaliah, et al. 2011). The authors suggest that environmental support is of a huge importance for entrepreneurial intentions, however it is rooted in understanding of the sources of entrepreneurial behaviour.

That suggests that there are some nations less skilled or having lower aptitude towards entre reneurs i . ere ore, students' intentions to o en a ir in t ose countries are low. Reasons are lack of opportunity, creativity, no risk tolerance, missing resources, hostile environment, poor education, poor network, no family- business tradition and overall lack of human skills (Sial & Chudry). This situation leads to almost unnoticeable self-employment and corporate career choice. Therefore development of strong culture and climate for entrepreneurship is desired. New Zealand can serve as a role model as it seems to be the leader in entrepreneurial intentions amongst students and top entrepreneurs exporter (Roudaki, 2009). Motives of students in New Zealand are to combine work with passion and being their own boss.

Recent research shows that education in the field of entrepreneurship has a statistically significant yet very small influence on intentions to become an entrepreneur (Bae, Qian, Miao et al., 2014). The same study indicates that neither gender, nor entrepreneurial family background influence the entrepreneurial intentions. On the contrary there is also a theory existing, ic elieves t at o en's desires o ersonal c allenge and ork li e alance , are di erent ro en's o eing o n oss , oreover it is suggested t at women, because of handling many responsibilities, deal with their own firm better (Scott, 1986; Fagan, 2001).

Student entrepreneurship characteristic and perceived success factors

Elizabeth Chell (2008) recalls several studies, which are very relevant to my attempt of finding patterns for student entrepreneurial intentions, depending on the program. Sagie and Elizur (1999) suggest that small business students are more entrepreneurial oriented and have a stronger motivation than business or economics students. Those students are prepared to find solutions to the problems and willing to take personal responsibility for the results (Sagie & Elizur, 1999). Another study compares eight entrepreneurial programs offered in Europe, which differ in content, structure and objectives, yet all the graduates perceived the program as helpful in terms of gained confidence and network, business skills, knowledge and their business implementation progress (Henry, Hill & Leitch, 2003). The authors managed to actually check the outcomes of the programs in terms of new business creation and jobs generation, which were significant. However, it has to be mentioned that the majority of the program participants were male over 30 with third level qualification and prior work experience.

Literature stresses that success in entrepreneurship can be achieved by strengthening individual traits such as achievement drive, need for control, willingness to take risk, self-reliance, ability to control emotions and set values are important to student entrepreneurs akarevicius, u erka, . Personal c aracteristics as ell as e aviour ere identified to have impact on entrepreneurial intentions (Venesaar, Kolbre, & Piliste, 2007). The authors conclude that the more entrepreneurial personality traits a student has, the more intention for setting up a business s/he shows, which is half way to success. However, what remains a significant problem is that even though students show interest in opening a company, they rarely do after graduation (Venesaar, Kolbre, & Piliste, 2007). So e aut ors suggest t at students' entre reneurs i re uires e otional intelligence, t at born- of an entrepreneur students are more likely to show entrepreneurial intention and e aviour, si ilarly i t e students riends are entrepreneurial. Education has been recognized as one of the crucial factors of creating entrepreneurial attitude and fostering it (Wang, Wong, 2004).

Success however does not come without overcoming problems and barriers. Amongst the most common ones are the lack of a business idea and insufficient knowledge about innovativeness (Venesaar, Kolbre, & Piliste, 2007). Some barriers mentioned by Staniewski and Szopinski (2013) for Poles, are that female have less financial assets, are treated less favourably and show less readiness for self- employment due to lack of confidence. The same conclusions come from Aidis, Welter, et al. (2007), who focused on Lithuania and Ukraine. The authors suggest that in those countries the main obstacle is the stereotypical role to perform, as well as lack in informal networks originating from Soviet times. The problem of education and insufficient skills set remains significant in the

601

Middle East and South Asia (Sial & Chudry, 2007) and in many other developing countries.

Sources of motivation and entrepreneurial intention vary across different nations. Some of them perceive entrepreneurship as best career choice, others as the least preferable one. The education offered to students can only implement the right skills set and knowledge into the process. However without addressing educational challenges of developing countries together with boosting confidence of students from developed ones, mentoring and supporting them financially the entrepreneurial intentions and spirits will surely decrease.

3. Methods

is study ocuses on understanding atterns o young international student's erce tions of entrepreneurship and that is why Kozminski University offered an excellent environment to conduct the survey. This University is the only one, which attracts so many international students by the wide range of courses offered, which makes the sample a really diversi ied one. e uestions asked covered t e res ondent's ackground and demographical data, his/her attitude towards opening new business and perceived barriers, main motivations for students to pursue entrepreneurial career; his/her perception of key success factors in entrepreneurship and challenges and opportunities that entrepreneurship has to offer.

The questionnaires have been distributed among students from France, Poland, Germany, Vietnam, China, Taiwan, Mexico, USA, Russia, Moldova, Ukraine, Belarus, Belgium, Denmark, Kingdom of Saudi Arabia and United Arab Emirates. Due to the fact that USA and Mexico was significantly under- represented (only 3 students) they have been excluded for the purpose of this study, however the rest of the countries (193 students) were grouped into Central & Eastern Europe (132 students), Western Europe (27 students), Asia & Pacific (26 students) and The Middle East (8 students) clusters.

Out of 193 students, who provided answers for the survey, 19 are running their own firm already, 52 are employed in a corporation (both half time and full time), which makes 122 students solely dedicating to their studies. The majority of respondents were female students- 106, male 87, from which there were 62 law students, 39 finance and accounting students and 92 management students both from Polish and English programs. 44 students declared that t ey tried to o en a usiness already ut didn't succeed. e survey as answered by 105 Bachelor (BA) students and 88 Master (MSc/MA) students.

4. Discussion

The majority of survey respondents (161) show intention to develop their own business and only slightly above 6% self- perceive themselves as non- entrepreneurial. Therefore I would like to start the discussion on results by showing the sources of motivation behind this fact. Table 1 depicts what would be the sources of motivation and drive for students to open a company. Students from Asia and Pacific region in majority are motivated by own families- either encouraged (and supported financially to develop new business) or inheriting a family firm. For them the important motivator is also money and need to find solutions to unsolved problems. Asian students do not consider being own boss and passion as sources of motivation. Western European students state that their motivation would simply be an opportunity for a start up. Independence, feeling of achievement and

being own boss comes in as second in importance, whereas none of the students voted for motivation in terms of money and passion. The most money- oriented are students from Central and Eastern Europe, who would only consider doing business for high financial rewards and independence. The Middle East representatives show only three sources of motivation for founding a company- being own boss, self- realisation and need to solve problems. That shows the differences in motivations across regions, which are strongly culturally, economically and historically correlated.

When students were asked about the source of financing for their future business the iggest di erence as noticed et een ac elor and Master students' ans ers. ence, for Bachelor students the 2 most popular sources of financing were family 28.57%, followed by bank loan 24.76%, whereas those two options were the least popular among Master students, who would seek financing in EU funds 30.68% or own savings 25%. The reason for that might be the that Bachelor students declare their parents play an important role in their career planning (43.8%), on the other end 43.18% of Master students disagree with the very same statement. In both groups crowd funding was almost rejected as a good source for initial investment. Who or what plays an important role in business idea creation process is illustrated in Table 2.

The comparison between sources of entrepreneurial ideas in the theory and the results of survey differ in all the resented areas. For students main business inspirations come from ability to catch the opportunity, from hobby or something seen abroad, which is not present on their home market.

Considering different traits of entrepreneurial personality and key abilities to achieve success, every program appeared to have a different top 3 skills needed. 36 management students think leadership skills are the single most important trait of an entrepreneur, which makes almost 40% of the total responses, second in importance- communication skills were chosen by 13 management students and the last place was creativity (10 students). Finance and accounting group has totally different perception- 25.6% indicated crucial importance of diversity management skills, followed shortly by communication abilities, placing leadership and creativity at the last position. While, law students identify clearly identify creativity in 54.83% of answers as the key factor, and communication as the second most important. Such entrepreneurial traits as: intuition, luck, perseverance, passion, charisma, generating ideas, emotional intelligence, opportunity taking, determination, network building, analytical thinking, team management, honesty, ability to plan and organize, experience, education, competences, belief, personality, patience, time- management and self- disci line ere to e ound in student's ans ers.

Interestingly 6 out of 8 students from the Middle East perceive entrepreneurial personality as something that is inborn, whereas almost the same ratio, 77.8% of Western European students, think just the opposite that it can be developed. Also Asian and Easter European students seem to agree on this dimension thinking in nearly 62% that they can develop an entrepreneur within themselves. Master students more clearly than Bachelors see that being an entrepreneur is not an inborn trait, and there is fairly even perception across different study programs only one third considers it inborn.

What would be the most important when establishing a company? This question attracts attention as it varies both across study programs and nations significantly. Lawyers would be more willing to start their own law firm or enterprise if they have good partners

(30.6%). To them also know- how is crucial for their operations (29%), whereas none of the respondents indicated money as a prerequisite. The opportunity (33.3%) and resources (25.6%) are the prerequisite for Finance and Accounting students, whereas Management students identify opportunity as crucial (30.4%), followed by right business partners (23.9%), but resources, money and know- how are treated as almost equally important in third place. For students from the Middle East what counts is opportunity and know- how, for Asian students first comes money as a precondition for a new venture establishment, followed closely by team. Western- and Eastern- European students point out the very same mix: opportunity and team, they differ as to the importance of money and know- how (Western European students do not consider them important), while know- how is considered by Easter European as even more important than resources, leaving money in the last place but also significantly considerable. For bachelor students money and resources are perceived as the staring point for business, which is at least important to Master students, who consider opportunity and team as the key for starting- up a company. Students had an opportunity to express their opinions about what stops them form opening the business and what problems they see. I found confirmation of the theory by Danis and Shipilov (2002) because in the majority of answers given by students from Ukraine, Belarus and Russia the issue of government inflation, corruption and an unstable market came to light.

Asian students see more of the barriers in lacking skills and experience as well as money. Western European respondents see obstacles in idea creation, money and missing network, while Middle Eastern in competition, know-how and connections. Most interesting however are the differences in barriers perception by male and female respondents depicted in Chart 1. Females are preoccupied with financial issues of starting a company as well as lack of experience. Males confessed that they have little motivation and lack of innovative ideas for the potential business. Answers depict that females are more concerned with the absence of a business partner, lack of network and market competition than males. Males on the other hand perceive formal- legal procedures and missing governmental support and lack of confidence as their barriers. Generally only 14 students declared they do not see any barriers to become an entrepreneur, from which males were more convinced about this fact; 3 women declared openly that they see their own gender as a barrier to entrepreneurship.

It is generally hard to conclude which cultures are more entrepreneurial and which are less. However the data gathered in Table 3 indicates some trends and the ranking showing the ease of doing business by The World Bank Group. Average Business Density is the ratio of entities registered to active population between 15-64. The data is not available for all the countries included in my survey but an average for the region was calculated to depict the general trend. This data co   ined it students' assess ent on t e scale a -5 (1- very easy, 5-impossible) gives an idea of the real situation. It can be concluded that when it comes to student perceptions the easiest start up climate is in The Middle East, followed by Western Europe, whereas students from Asia see it more difficult. Students from Central and Eastern Europe rated doing business as very hard- 4.5 on the scale of 5.

For students being a successful entrepreneur means preliminarily having financial stability and in those terms for one third of respondents success is measured financially. Success is also described (by 16% of students) as personal satisfaction, feeling of achievement and   aving leasure ro   one's o n usiness activity. For ust over   , success is being a market leader, having authority and being the best. Nearly 10% believe that success can be

translated into the social status, ability to influence others and having a position of power. eing a E , so eone recogniza le and listed in For es t is response occurred as often as achieving balance between work and private life (both above 9%). Success of entre reneurial activity as also descri ed in students' ans ers as dedication to usiness and unlimited self- development (together nearly 9%) as well as creating value and improving something in the world, creating work for others and developing a network of connections (together 6%).

5. Limitations

As with all research, this study has some limitations. The primary limitation was the student sample itself, it would have been much more interesting to enlarge the sample and conduct the very same survey at other universities in different countries. Second, it would have been preferable to also study other levels of education, including MBA, PhD and postgraduate students, as the perceptions on many factors examined by the survey tend to change with age. I recommend future research on a wider range of study programmes to discover students' erce tions and e and understanding o di erent needs, ro le s to help finding the right solutions.

6. Conclusion

Entrepreneurship is with benefit to everyone- a county's legal syste and ureaucracy improvement, economic dynamism and market growth, increases competition and creates new job places, creates knowledge and supports innovations, tighten networks and develops the private sector. However if already twice as many students choose corporate career over entrepreneurial, the intentions to be self- employed are not matching the real life. It can be because students are less mature than graduates and not really considering the possible future career paths. The reason may also be that depending on the background they have less confidence, motivation and skills. And last but not least maybe some programmes like law or accountancy are more entrepreneurial than management, which is more corporate oriented.

What emerges from the presented results is that not only the governments shall put more emphasis on student- entrepreneurs support but also the university programs must be more individualistic in their nature. Due to different perceptions, the course of entrepreneurship s ould e atc ing t e students' rogra e. Di erent levels o education and di erent profiles must be taken into consideration when developing a course scenario. Not only knowledge and skills development should be implemented in the entrepreneurial courses, but also active business idea search, mentoring and guidance could be offered. Personal traits can be developed during the course of studies and attitudes can be modified to encourage entrepreneurial behaviour. Actions to increase entrepreneurial activity have to be culturally sensitive to reflect social values.

However this paper does not aim at developing a ready scenario for an entrepreneurial program, rather it seeks to understand the sources of motivation, intentions and behaviours towards entrepreneurship together with perception of success and barriers. The presented results suggest that education is not the prerequisite for student- entrepreneur, just on the contrary. But what seem important are: the unique personal traits development, emotional intelligence, leadership skills and communication excellence. As Krueger and Brazeal stated e ore t ere can e entre reneurs i t ere ust be the potential for entre reneurs i . e student sa le de initely as t e otential, all t ey need is to e given a chance and good environment for company development.

Appendix

a e Students' oti ation its source and eo rap ic re ion

Motivation	Asia & Pacific	Western Europe	Central & Eastern Europe	Middle East
Family	34.61%	7.4%	3%	-
Need to change/ improve or solve problem	19.23%	11.1%	7.57%	12.5%
Chance/ opportunity	7.7%	26%	10.6%	-
Independence	11.53%	18.5%	16.66%	-
Money	23%	-	26.5%	-
Self- realisation/ achievement	3.84%	18.5%	11.36%	37.5%
Being own boss/ developing own business	-	18.5%	15.1%	50%
Passion/ inspiration	-	-	9%	-

Table 2. Sources of new business ideas- theory versus practice.

Source of idea	Percentage	Sources by students	Percentage
Prior job	47%	Innovative idea	8%
Hobby/Personal Interest	16%	Hobby	19%
Chance event	8%	Opportunity	27%
Education/ Courses	7%	Education	3%
Activity of friends/ relatives	7%	Creating social trend	6%
Family business	6%	Family business	12%
Someone suggested it	6%	Own unique skills	7%
Other	3%	Something seen abroad	18%

Source: Cooper et al 1990

Table 3. Economic indicators versus students perceptions.

Ease of doing business	Students perception on ease of doing business*	Country	Region	New business density	Access to financial services
5	2	Denmark	Western Europe	4.36	99%
21		Germany		1.29	97%
36		Belgium		2.48	97%
38		France		2.88	96%
45	4.5	Poland	Central & Eastern Europe	0.53	66%
63		Belarus		1.14	16%
78		Moldova		1.63	13%

92		Russia		4.3	69%
112		Ukraine		0.92	24%
16	3	Taiwan		-	-
96		China	Asia & Pacific	28.12	42%
99		Vietnam		-	29%
23	1	UAE	Middle East	1.38	-
26		Saudi Arabia		-	62%
4	-	USA	North America	-	91%
53	-	Mexico	Latin America	0.88	25%

Source: doingbusiness.org

* Assessment based on the scale

Chart 1. Perceived barriers according to gender.

607
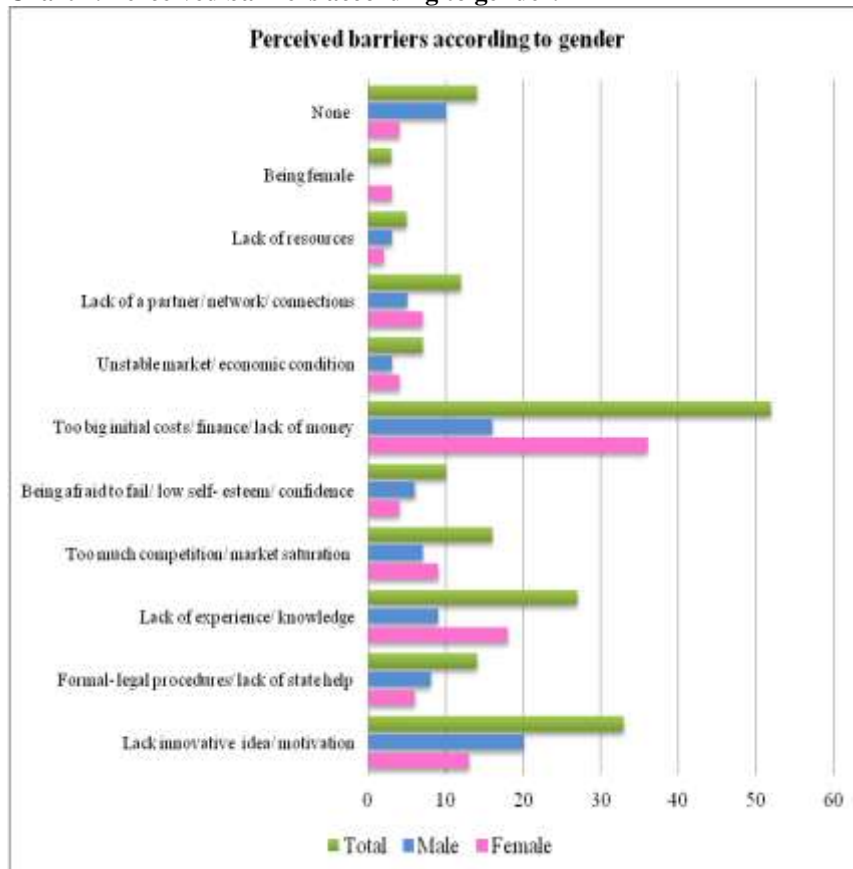
Bibliography

Aidis, R., Welter, F., Smallbone, D., & Isakova, N. (2007). Female entrepreneurship in transition economies: the case of Lithuania and Ukraine. Feminist Economics, 13(2), 157 183.

Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The Relationship Between Entrepreneurship Education and Entrepreneurial Intentions: A Meta-Analytic Review. Entrepreneurship Theory and Practice, pp. 217 255.

ag eri, ., k alia , ., Pi ie, . . Factors n luencing Students ' Entrepreneurial Intentions : The Critical Roles of Personal Attraction and Perceived Control Over Behavior. International Conference on Innovation & Entrepreneurship (pp. 1 9).

Barringer, B.R & Ireland, R.D. (2008). Entrepreneurship. Successfully Launching New Ventures. Pearson Education Inc: New Jersey, pp. 9-25.

Boissin, J. P., Branchet, B., Emin, S., & Herbert, J. I. (2009). Students and Entrepreneurship : A Comparative Study of France and the United States. Journal of Small Business and Enterpreneurship, 2(2), 101 122.

Danis, W. M., & Shipilov, A. V. (2002). A Comparison of Entrepreneurship Development in Two Post-Communist Countries: The Cases of Hungary and Ukraine. Journal of Developmental Entrepreneurship, 7(1), 67 94.

Douglas, E.J. & Shepherd, D.A. (2002). Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. Entrepreneurship Theory and Practice, 26(3), 81 90.

Fagan, C. (2001). The temporal re-organization of employment and the household rhythm of work schedules. American Behavioral Scientist, 44(7), 1199-1212.

Gartner, W.B., Shaver, K.G. Carter, N.M. & Reynolds, P.D. (2004). Handbook of Entrepreneurial Dynamics. The Process of Business Creation. Sage Publications: California, pp.131-151

Henry, C., Hill, F. & Leitch, C. (2003). Entrepreneurship Education and Training. Ashgate Publishing Limited: Aldershot, UK, pp. 27-187.

Hisrich, R.D., Peters, M.P & Shepherd, D.A. (2010). Entrepreneurship. McGrawHill: Singapore

Ismail, M., Khalid, S. A., Othman, M., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial Intention among Malaysian Undergraduates. International Journal of Business and Management, 4(10), 54 60.

Jang, Y. (2013). Modelling student entrepreneurship: a longitudinal study. Journal of Entrepreneurship Education, 16(Special Issue), 93 115.

Klapper L., Amit R., Guillen M.F. & Quesada, J.M. (2007) Entrepreneurship and Firm Formation Across Counteries. The Wharton School- SMU Research Paper 2007/9-1

Krueger, N. F., & Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*.

Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, *15*, 411 432.

Low, M. B. (1988). Entrepreneurship: Past Research and Future Challenges. Journal of Management, 14(2), 139 161.

aguz, . ., Matic, M. . Student's erce tions and intentions towards entrepreneurship: the empirical findings from the University of Dubrovnik- Croatia. International Journal of Management Cases, 13(3), 38 49.

Rantanen, T., & Toikko, T. (2013). Social values , societal entrepreneurship attitudes and entrepreneurial intention of young people in the Finnish welfare state. Poznan University of Economics review, 13(1).

Roudaki, J. (2009). University Students Perceptions on Entrepreneurship□: Commerce Students Attitudes at Lincoln University. Journal of Accounting Business & Management, 16(2), 36 53.

Ruda, W., Martin, T. A., Tecnológica, U., Utn, N., Rafaela, F. R., Danko, B., Dresden, T. U., et al. (2013). Analyzing Entrepreneurial Potential A Comparison of Students in Rubén Ascúa. Journal of Marketing Development and Competitiveness, 7(3), 96 112.

Sagie, A., & Elizur, D. O. V. (1999). Achievement motive and entrepreneurial orientation□: a structural analysis. Journal of Orhanizational Behavior, 20, 375 388.

Scott, C.E. (1986). Why more women are becoming entrepreneurs. Journal of Small Business Management, 24(4), 37-44.

Sial, M.S., & Chudry, A. (n.d.). What factors are responsible for low inclination towards entrepreneurship in the business students of Islamabad? The Journal of Commerce, 3(4), 24 32.

Sinclair, R. F. (2008). The first step toward a theory of the entrepreneurial career. USASBE Conference Proceedings, 773 797.

Staniewski, M. W., & Szopinski, T. (2013). Influence of socioeconomic factors on the entrepreneurship of polish students. Business & Economics, 12(3).

arna a, ., c a ska, D., ratnicki, P., iero ski, M. . lo al Entrepreneurship Monitor Poland. Polska genc a oz o u Przedsi iorczo ci.

Venesaar, U., Kolbre, E., Piliste, . . Students ' ttitudes and ntentions to ard Entrepreneurship at Tallinn University of Technology. Working Paper in Economics of Tallin University of Technology, School of Economics & Business Administration, (154), 97 115.

Wang, C. K., & Wong, P. (2004). Entrepreneurial interest of university students in Singapore. Technovation, 24, 163 172.

World Bank. 2013. Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises. Washington, DC: World Bank Group

Zakarevicius, P., u erka, . . E ression o e otional intelligence in develo ent o students' entre reneurs i . Economics and Management, 15, 865 874.

a cu, E. . Study a out students'entre reneurs i s irit. The USV Annals of Economics and Public Administration, 13(2(18)).

....

A Moderated Mediation Model of Internet Use for Health Information

Saeed Pahlevan Sharif
aylor's usiness Sc ool, aylor's niversity, Malaysia
Ashraf Sadat Ahadzadeh
Faculty of Modern Languages and Communication, Universiti Putra Malaysia, Malaysia
Khong Kok Wei
aylor's usiness Sc ool, aylor's niversity, Malaysia

ABSTRACT
Background: Using technology acceptance model (TAM), prior studies revealed that attitude towards Internet use for health information differently affected behavioral intention to use the Internet for health information. In other words, some results showed a smaller influence of attitude on Internet use for health information as compared to results of other researches. The level of health consciousness could explain the differences in the existing literature on magnitude of the influence of attitude towards Internet use for health information on the Internet use.

Objectives: The main objective of the study is to examine the moderating effect of health consciousness on the influence of attitude towards using the Internet for health-related information on Internet use for health information seeking in TAM framework. Furthermore, the study aims to test the mediating role of attitude towards Internet for health information in the effect of cognitive beliefs (i.e. perceived usefulness and perceived ease of Internet use) on Internet use for health information seeking.

Method: Data for the present study were collected using convenience sampling. The sample consisted of female Internet users living in the state of Selangor, Malaysia. Partial Least Squares-Structural Equation Modeling method was used to test the research hypotheses based on the response from a total of 303 participants.

Results: The results of this study showed that when there is a high level of health consciousness (i) attitude partially mediates the influence of perceived usefulness on Internet use for health information and (ii) perceived ease of Internet use has an indirect effect on Internet use for health information through attitude towards using the Internet for health-related information.

Keywords: Technology acceptance model, health consciousness, moderation mediated effect, PLS

Introduction

People are increasingly using the Internet to obtain the variety types of information to make decisions for and get involved with different aspects of their daily life including health (Fox & Fallows, 2003; Fox, Rainie, & Horrigan, *et al*., 2000). A fair amount of evidence suggests that women have more online health information seeking behavior as compared to men (Fox, 2006; Fox & Duggan, 2013; Ybarra & Suman, 2006). In Malaysia, using the Internet to manage health and to learn more about diseases has become increasingly important due to the increase in the prevalence of chronic diseases (Hashim, 2003), in particular among women (Ministry of Health, 2011). Although the number of male Internet users is higher than female users, women are and this is also true for Malaysian women (Komathi & Maimunah, 2009).

Using technology acceptance model (TAM), several studies found that attitude towards Internet usage for health information is the key factor influencing Internet usage for health-related information (Lim*, et al.*, 2011; Wong, Yeung, Ho, Tse, & Lam, 2012; Yun & Park, 2010).

However, the magnitude of this influence is varied in different studies. Wong *et al.*'s (2012) study, for instance, showed that attitude towards Internet for health information has a smaller influence on intention to use the Internet (= 0.36) as compared to Yun and Park's study . and i and Park's study = 0.92).

It is strongly argued that attitude can have a strong impact on the behavior, but this influence could occur only under certain conditions or for certain type of individual. In other words, the degree to which attitude influences behavior could be assumed to depend on factors closely related to the person and characteristics of the person performing the behavior (Ajzen & Fishbein, 1977).

ee ing t is in ind, it could e assu ed t at individuals' ealt consciousness could come into play as moderator for the influence of attitude towards Internet use for health purposes on the Internet usage for health information. Therefore, individuals high in HCO are thought to be highly concerned about their health and motivated to do anything to stay healthy whereas individuals low in HCO are assumed not to have concern about their health and pay less attention to their health. Further study is, therefore, required to test whether attitude towards Internet usage for health information more positively influences Internet usage for health information for those high in HCO as opposed to those low in HCO.

The main objective of the current study is to test the moderating effect of (HCO) on the influence of attitude towards using the Internet for information regarding health on Internet use for health information seeking within TAM framework. Furthermore, the study aims to test the mediating role of attitude towards Internet for health information in the effect of cognitive beliefs (i.e. perceived usefulness and perceived ease of Internet use) on Internet use for health information seeking.

Background of Research and Hypotheses Development

Theoretical Framework: Technology Acceptance Model

Technology Acceptance Model (TAM) has been frequently studied by scholars in different contexts. The major objective of proposing TAM by Davis (1989) was to predict the whether the perceived usefulness (PU) of technology, perceived ease of technology usage (PEOU) and attitude (ATT) towards technology predict behavior toward technology acceptance. PU is de ined as t e degree to ic a erson elieves t at using a articular tec nology ould en ance is er er or ance on a task ile PE is de ined as t e, degree to ic a erson elieves t at using a articular syste ould e ree ro e ort . (Davis, 1989, p. 320). Davis (1989) argued that PU is more important determinant

t an PE . not er co onent o M is attitude ic re ers to an individual's positive or negative evaluation of performing the behavior. t involves an individual's judgment that performing a behavior is good or bad and also a general evaluation that an individual is inclined or disinclined to perform the behavior (Ajzen & Fishbein, 1980).

TAM framework posits that PU and PEOU as initial drivers for technology acceptance behavior influence on ATT towards using the technology which in turn influences behavioral intention to use which in turn influences actual use, as shown in Figure 1. PU also influences behavioral intention to use technology as well as actual technology use (Davis, 1989). However, studies showed that PEOU also directly plays an essential role in recognizing to actual use of technology (Turner, Kitchenham, Brereton, Charters, & Budgen, 2010; Yusoff, Muhammad, Zahari, Pasah, & Robert, 2009).

Compared to PEOU, PU has explained a greater variance of technology usage. Several research studies have indicated that PU is more influential factor predicting technology usage than PEOU (Igbaria, Zinatelli, Cragg, & Cavaye, 1997; Jeong & Yoon, 2013; Park, Kim, & Kim, 2013). Examining the most significant and powerful variables of the TAM affecting microcomputer usage, Igbaria *et al.* (1997) found that PU and PEOU significantly and positively contribute to technology usage. However, PU had a larger influence than PEOU.

Adding or removing some constructs, researchers have modified the original TAM. However, three most important constructs of TAM (i.e. PU, PEOU and attitude) have ostly re ained. e construct intention to use tec nology as een ocused or revising the original TAM framework. A construct that is often been eliminated from the original TAM is behavioral intention (BI) which plays the role of mediating variable between PU, PEOU, and attitude towards technology usage (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989; Horton, Buck, Waterson, & Clegg, 2001). Horton *et al.* (2001) stressed that BI should be removed from the TAM framework in order to realize the direct effects of other constructs such as attitude, PU, PEOU on technology usage. Additionally, studies revealed that BI has not mediated the influence of PU, PEOU, and attitude on technology use (Horton, *et al.*, 2001; Mohanty & Turner, 2006). Therefore, the current study excludes BI and examines the direct influence of PU, PEOU, and attitude on technology usage.

Internet Use for Health Information from TAM Perspective
A Great number of empirical studies revealed the ability of TAM to explain technology use in different contexts including Internet use for health information (Kim & Park, 2012; Lemire, Pare, Sicotte, & Harvey, 2008; Lim*, et al.*, 2011; Wong*, et al.*, 2012; Yun & Park, 2010).

Research studies provided evidence in support of the PU effect on the usage of information technologies for health-related issues. For instance, Lemire *et al.* (2008) found the positive and significant influence of PU of a health website on the usage of the site as a preferred source of health information as well as the frequency of health site use. Using TAM framework, Lim *et al.* (2011) also carried out a research to investigate behavioral intention to use mobile phone for health-related information among Singaporean women. The authors found that PU as a core TAM variable was found to be significantly and positively contributed to behavioral intention to use mobile phone for health information. Similarly, Wong *et al.* (2012) used TAM constructs to examine the determinants of intention to use Internet to look for health-related information among Chinese older adults. Findings showed that PU of Internet has a significant positive effect on intention to use Internet for health information seeking, indicating that individuals with

higher PU presented higher behavioral intention to use Internet for health information. Based on the TAM and the literature, the following hypothesis is proposed:

H1: Perceived usefulness of Internet for health management has a significant positive effect on Internet use for health formation.

Regarding the influence of PEOU of health information technology on technology use, Lim *et al*. (2011) found that PEOU of mobile has a significant impact on intention to use mobile phone for health information seeking. Wong *et al.* (2012) also discovered that PEOU has a significant effect on behavioral intention to use Internet for health related Information, indicating that Internet users with higher PEOU have a higher intention to use the Internet for health information. The following hypothesis is, therefore, proposed:

H2: Perceived ease of Internet use has a significant positive effect on the Internet use for health information.

In addition to technology usage, attitude is also influenced by PU and PEOU based on the TAM framework. Regarding the influence of PU of Internet for health information and PEOU on attitude towards Internet usage for health issues, Yun and Park (2010) found that PU of Internet for disease information seeking and PEOU for seeking disease information positively influenced attitude towards Internet use for disease information. In consistent with Yun and Park (2010), Kim and Park (2012) also identified that attitude towards health information technology usage is significantly affected by PU of health information technology and PEOU. Thus, the following hypotheses are proposed:

H3: Perceived usefulness of Internet for health management has a significant positive effect on attitude towards Internet use for health information.

H4: Perceived ease of Internet use has a significant positive effect on attitude towards Internet for health management.

Regarding the relationship between attitude toward health information technology usage and technology usage for health-related issues, Yun and Park (2010) found that attitude to using the Internet for seeking disease information had a significant impact on the intention to use this technology for seeking disease information. Similarly, the positive influence of attitude towards health information technology usage on health information technology usage as ound in i and Park 's study. dditionally, based on the TAM framework (Davis, 1989) and prior study (Kim & Park, 2012) attitude mediates the effects of PU and PEOU on Internet use for health information. Based on this literature, the following hypothesis is, therefore, proposed:

H5: Attitude towards Internet use for health management has a significant positive effect on Internet use for health information.

Moderating Impact of Health Consciousness

 ealt consciousness is t e degree to ic ealt concerns are integrated into a erson's daily activities (Jayanti & Burns, 1998, p. 10). Health conscious people are aware of and concerned about their wellness and are motivated to improve and/ or maintain their health (Chen, 2011, p. 255)(Chen, 2011, p. 255)(Chen, 2011, p. 255)(Chen, 2011, p. 255)(Chen, 2011, p. 255)(Chen, 2011, p. 255). HCO is a predictor of the use of communication channels for health information seeking (Dutta-Bergman, 2006),

especially Internet (Dutta-Bergman, 2004a, 2004b). HCO increases the amount of health-related information obtained from media sources such as TV, radio programs, books, newspaper, magazines, advertising and pamphlets about health (Moorman & Matulich, 1993). If a person has a higher degree of HCO then he or she has more positive attitude towards Internet usage for health information (Yun & Park, 2010), consequently more willing to engage in online health information seeking behaviuor (Dutta-Bergman, 2004a, 2004b) to find helpful information to maintain good health and prevent disease. On the contrary, it is difficult to expect those people who have a low degree of HCO use Internet for health information. In other words, for those female Internet users who are concerned about their health at low level they show little interest in health-related activities, in particular health information seeking on the Internet. Consequently, they rarely use the Internet for health information to maintain, promote, and manage their health. HCO can be also assumed to moderate the effect of attitude towards Internet use for health on Internet adoption for health information. Depending on HCO level, the influence of attitude on Internet use would be, therefore, varied. In other words, attitude more positively affects Internet usage under high level of HCO as compared to the condition where HCO level is low. To date, no study has examined the moderating effect of HCO on the influence of attitude towards Internet use for health purposes on the Internet usage for health information. Thus, the following hypothesis is proposed:

H6: Health consciousness moderates the influence of attitude towards Internet use for health management on Internet use for health information.

Based on the TAM framework, the influence of PU of Internet for health information and PEOU on technology use is mediated by attitude. It indicates that favorable affective feeling towards Internet use for health become central for those who perceive Internet useful for health management and easy to search for health information. Meanwhile, as it was discussed, this research proposes that HCO positively moderates the effect of attitude towards Internet use for health management on Internet use for health information. Thus, all together the following hypotheses are proposed:

H7: Health consciousness positively moderates the mediation effect of perceived usefulness of Internet for health management on Internet use for health information through attitude towards Internet use for health management.

H8: Health consciousness positively moderates the mediation effect of perceived ease of Internet use on Internet use for health information through attitude towards Internet use for health management.

Methodology

Participants and Data Collection

For this study, a questionnaire was used to collect data. It contained 34 items measuring PU of Internet for health information and management, perceived ease of Internet use, attitude towards Internet use for health issues, Internet use for health information and HCO.

The research participants were recruited among Malaysian females residing in the state of Selangor, an urban area in Malaysia. Questionnaires were distributed among women who

were Internet users and had willingness to attend the study. The convenience samples were sourced from women working in governmental institutions located in Selangor state t roug riends' contacts.

From 330 questionnaires retuned back to the researchers, three hundred three responses were identified as usable after excluding cases that have not used the Internet for health information, cases that had more than 10 percent missing values and cases that were identified as outliers.

Measurement of Variables

PU of Internet for health information and health management and PEOU of Internet were assessed by the eight items developed by Davis (1989). All items of these constructs were rated on a 5-ponit Likert-type scale (1= Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree and 5= Strongly agree). Higher score indicated the more PU of Internet for health information and health management and more PEOU. Four items on attitudes toward Internet use for health information were adopted from Wong *et al.*'s study (2012). All items of these constructs were rated on a 5-ponit Likert-type scale (1= Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree and 5= Strongly agree). Higher score indicated the more favorable attitude towards Internet use for health information. Internet usage for seeking health information was measured by eleven items which they were adopted from past studies (Hale, Cotten, Drentea, & Goldner, 2010; Yoo & Robbins, 2008). Respondents were asked to determine how frequently they use the Internet for health and medical information. All items were rated on a 5-point Likert-type scale (5= Always, 4= Often, 3= Sometimes, 2= Rarely, and 1= Never). Higher score indicated higher frequency of Internet usage for health information seeking. Partici ants' HCO measured by eleven items covering most facets of HCO was adopted from Chen (2011). All items of these constructs were rated on a 5-ponit Likert-type scale (1= Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree and 5= Strongly agree) (see Appendix 1).

General Characteristics of the Participants

As indicated in Table 1, a majority of participants (42%) were made up of the 30 to 39 age group (with mean age= 34), married (67%), had a secondary school (50%), and had income in the range of RM3000-5999 (47%).

Table1. Demographic Characteristics (N=303)

	Frequency	Percentage	Mean	SD
Age (Years)			34	8
20-29	116	38		
30-39	128	42		
40-49	46	15.5		
	13	4.5		
Marital Status				
Single	95	31		
Married	202	67		
Others	6	2		
Education Level				
Primary school	21	7		
Secondary school	151	50		

College/university	131	43		
Household Income (RM)			3428	1824
1000-2999	118	39		
3000-5999	144	47		
6000-8999	39	13		
	2	1		

Data Analysis

1.1. Measurement Models Assessment

First of all, we evaluate validity of all reflective and formative measurement models. The results of the assessment of reflective measurement models are shown in Table 1. As it is shown, construct reliability of HCO (0.928), PEOU (0.882), PU (0.916), and ATT (0.938) are greater than 0.7 which indicates high internal consistency and reliability (Hair, Black, Babin, & Anderson, 2010). The average variance extracted (AVE) of HCO (0.619), PEOU (0.653), PU (0.785), and ATT (0.790) are greater than 0.5 and they are less than their respective construct reliability. This demonstrates that convergent validity of all reflective constructs is established (Hair et al., 2010). Besides, Maximum Shared Squared Variance (MSV) and Average Shared Square Variance (ASV) of HCO (0.171 & 0.102), PEOU (0.288 & 0.122), PU (0.270 & 0.159), and ATT (0.288 & 0.196) are less than their respective AVE. Thus, all reflective constructs in the model have discriminant validity (Hair et al., 2010) as well.

TABLE 1
Reflective Measurement Model Assessment

Construct / Measure (Construct Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), Average Shared Square Variance (ASV))		Factor Loading
Health consciousness (CR = 0.928, AVE = 0.619, MSV = 0.171, ASV = 0.102)		
HCO 1	I have the impression that I sacrifice a lot for my health.	0.785
HCO 2	I consider myself very health conscious.	0.719
HCO 3	I actively try to prevent disease and illnesses.	0.827
HCO 4	I think that I take health into account a lot in my life.	0.850
HCO 5	I think it is important to know well how to eat healthy.	0.871
HCO 6	My health is so valuable to me, that I am prepared to sacrifice many things for it.	0.687
HCO 7	I do not continually ask myself whether something is good for me.	0.793
HCO 8	I often dwell on my health.	0.742
Perceived ease of Internet use (CR = 0.882, AVE = 0.653, MSV = 0.288, ASV = 0.122)		
PEOU 1	Learning to use the Internet for searching health information was easy for me.	0.728
PEOU 2	My interaction with the Internet for health information is clear and understandable.	0.837
PEOU 3	I find the Internet for health information to be flexible to interact with.	0.818
PEOU	It is easy for me to become skillful at using the Internet for health information.	0.843

4

Perceived usefulness of Internet (CR = 0.916, AVE = 0.785, MSV = 0.270, ASV = 0.159)	
PU 1	Using the Internet is useful in managing my daily health.	0.867
PU 2	Using the Internet for health information is advantageous in better managing my health.	0.917
PU 3	Using the Internet for health information is beneficial to me.	0.873

Attitude towards health related Internet use (CR = 0.938, AVE = 0.790, MSV = 0.288, ASV = 0.196)	
ATT 1	Using Internet for health information and health management would be a good idea.	0.905
ATT 2	Using Internet for health information and health management would be a wise idea.	0.891
ATT 3	I like the idea of using Internet for health information and health management.	0.880
ATT 4	Using Internet for health information and health management would be a pleasant experience.	0.879

In order to assess IS as a formative construct, we evaluate (i) collinearity among its formative indicators as well as (ii) relative and absolute contribution of formative indicators to forming IS. The results of the assessment of IS measurement model are shown in Table 2. As it is shown, maximum VIF of indicators of IS (3.420) is less than five and IS inter-item correlation ranges between 0.311 and 0.751 which is less than 0.9. Thus, there is no collinearity issue among formative indicators of IS (Field, 2013). Besides, although some of IS indicators do not have significant outer weight and relative contribution to forming IS, outer factor loadings of all indicators are significant at 95% confidence level which indicates that they have significant absolute contribution to forming the construct.

TABLE 2
Formative Measurement Model Assessment

Construct / Measure	Indicator Outer Weights (t-value)	Indicator Outer Loadings (t-value)
Internet usage for medical and health information seeking (IS) (Range of inter-item correlations= 0.311-0.751; Average inter-item correlation: 0.528; Max. VIF= 3.420)		
IS1 — I use the Internet to get general health information	0.012^{*} (0.079)	0.429^{**} (3.022)
IS2 — I use the Internet to get information on medicine/drug	0.474^{**} (2.742)	0.843^{***} (6.216)
IS3 — I use the Internet to be equipped with information before/after doctoral appointment	-0.094^{ns} (0.304)	0.618^{**} (3.130)
IS4 — I use the Internet to get description of various diseases	0.142^{ns} (0.781)	0.740^{***} (5.508)
IS5 — I use the Internet to get information on treatments/therapy/	-0.064^{ns}	0.525^{***}

	diagnosis	(0.299)	(3.568)
IS6	I use the Internet to get information on how to care for oneself	-0.180^{ns} (0.935)	0.595^{***} (3.891)
IS7	I use the Internet to decide about how to treat an illness	0.463^{*} (2.122)	0.857^{***} (6.328)
IS8	I use the Internet to decide about whether or not visit a doctor	0.066^{ns} (0.305)	0.630^{***} (4.008)
IS9	I use the Internet to understand how to deal with an illness	0.108^{ns} (0.372)	0.728^{***} (4.966)
IS10	I use the Internet to get information on hospitals/clinics/other healthcare facilities	0.061^{ns} (0.368)	0.476^{***} (3.443)
IS11	I use the Internet to get information for health management (exercise, abstinence from drinking, smoking, diet, nutrition, stress, mental health, etc.)	0.219^{ns} (0.799)	0.656^{**} (2.961)

*, **, and *** indicate statistical significance at the 0.05, 0.01, and 0.001 levels respectively. *ns* indicates not significant at 95% confidence level based on $t(1999)$, one-tailed test). $t(0.05, 1999) = 1.646$, $t(0.01. 1999) = 2.328$, $t(0.001, 1999) = 3.094$.

1.2. Structural Model Assessment and Hypothesis Testing

This research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) method and smartPLS software to analyse the structural model (Ringle, Wende, & Will, 2005). This is because PLS-SEM can cope with both reflective and formative constructs (Ragavan, Subramonian, & Pahlevan Sharif, 2014). The results of analyzing the model by PLS algorithm and bootstrapping technique with 2000 samples are reported in Table 3. The results of total effect model show that PU has a significant positive effect on IS (= 0.453, *t*-value = 6.135) and the first hypothesis is supported at 95% confidence level. However, the effect of PEOU on IS is not significant at 95% confidence level (= -0.122, *t*-value = 0.833) and the second hypothesis is not supported. Thus, we can test mediation effect of PU on IS and indirect effect of PEOU on IS through ATT while their path from ATT to IS is positively moderated by the effect of HCO.
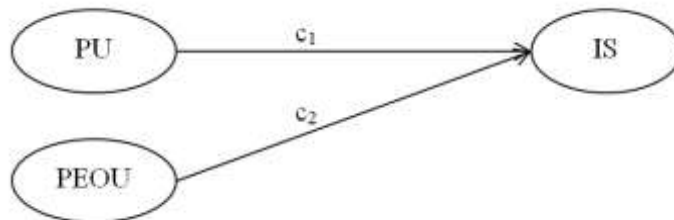
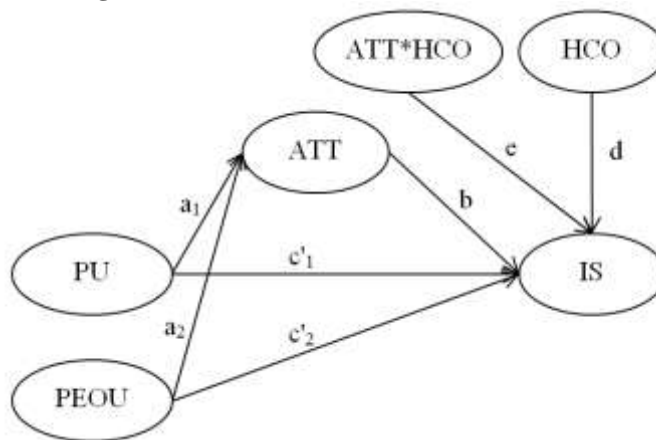**Figure 1.a: Total Effect Model**

Figure 1.b: Moderated Mediation Effect Model

TABLE 3
Structural Model Assessment

	Hypothesis	Standardized Path Coefficient (*t*-value)	Percentile 95% confidence intervals
Total Effect			
IS			
$(R^2 = 17.29\%; Q^2 = 6.77\%)$			
$\leftarrow$ PU (c_1)	H1	0.453^{***} (6.135)	[0.332; 0.575]
$\leftarrow$ PEOU (c_2)	H2	-0.122^{ns} (0.833)	[-0.362; 0.119]
Direct Effect			
ATT			
$(R^2 = 40.72\%; Q^2 = 39.45\%)$			
$\leftarrow$ PU (a_1)	H3	0.372^{***} (6.255)	[0.274; 0.470]
$\leftarrow$ PEOU (a_2)	H4	0.399^{***} (7.533)	[0.312; 0.486]
IS			
$(R^2 = 20.84\%; Q^2 = 20.83\%)$			
$\leftarrow$ ATT (b)	H5	0.026^{ns} (0.415)	[-0.078; 0.131]
$\leftarrow$ PU (c'_1)		0.337^{***} (6.130)	[0.246; 0.427]
$\leftarrow$ PEOU (c'_2)		-0.088^{ns} (1.215)	[-0.207; 0.031]
$\leftarrow$ HCO (d)		0.213^{***} (3.831)	[0.122; 0.305]
$\leftarrow$ ATT*HCO (e)	H6	0.137^{**} (2.697)	[0.053; 0.220]
Moderated Indirect Effect			
IS			
$(R^2 = 20.84\%; Q^2 = 20.83\%)$			
$\leftarrow$ ATT $\leftarrow$ PU | HCO $(a_1{*}b + a_1{*}e{*}HCO)$	H7		
$\leftarrow$ ATT $\leftarrow$ PU | HCO = -1 SD $(a_1{*}b - a_1{*}e)$		-0.041^{ns} (-1.300)	[-0.093; 0.011]
$\leftarrow$ ATT $\leftarrow$ PU | HCO = 0 SD $(a_1{*}b)$		0.010^{ns} (0.417)	[-0.029; 0.049]
$\leftarrow$ ATT $\leftarrow$ PU | HCO = +1 SD $(a_1{*}b + a_1{*}e)$		0.061^{*} (1.879)	[0.008; 0.114]
$\leftarrow$ ATT $\leftarrow$ PEOU | HCO $(a_2{*}b +$	H8		

$a_{2*e*}HCO)$		
$\leftarrow$ ATT $\leftarrow$ PEOU | HCO = -1 SD $(a_{2*}b - a_{2*}e)$	-0.044^{ns} (-1.424)	[-0.095; 0.007]
$\leftarrow$ ATT $\leftarrow$ PEOU | HCO = 0 SD $(a_{2*}b)$	0.011^{ns} (0.404)	[-0.032; 0.053]
$\leftarrow$ ATT $\leftarrow$ PEOU | HCO = +1 SD $(a_{2*}b + a_{2*}e)$	0.065^{*} (1.829)	[0.007; 0.123]

*, **, and *** indicate statistical significance at the 0.05, 0.01, and 0.001 levels respectively. *ns* indicates not significant at 95% confidence level based on $t(1999)$, one-tailed test). $t(0.05, 1999) = 1.646$, $t(0.01. 1999) = 2.328$, $t(0.001, 1999) = 3.094$.

The moderated mediation model is developed by adding ATT as the mediator and HCO as the moderator on the effect of ATT on IS (Fig, 1.b). The results show that both PU (= 0.372, *t*-value = 6.255) and PEOU (= 0.399, *t*-value = 7.533) have positive significant effect on ATT. Thus, the third and fourth hypotheses are supported at 95% confidence level. However, this research could not support the fifth hypothesis which proposes the positive direct effect of ATT on IS (= 0.026, *t*-value = 0.415). This is due to the moderating role of HCO on the effect of ATT on IS (= 0.137, *t*-value = 2.697) which is significant at 95% confidence level and indicates the effect of ATT on IS depends on the HCO level and supports this research sixth hypothesis.

The moderated mediation effect of PU on IS through ATT when the effect of ATT on IS depends on HCO is $(a_{1*}b + a_{1*}e_{*}HCO)$. The results show that the indirect effect of PU on IS through ATT for the medium level of HCO which is called the reference point (= 0.010, *t*-value = 0.417) and for lower HCO (i.e. HCO decreases by one standard deviation point) (= -0.041, *t*-value = -1.300) is not significant at 95% confidence level. However, by increasing HCO (i.e. HCO increases by one standard deviation point), this moderated mediation effect will be stronger and becomes significant (= 0.061, *t*-value = 1.879). It means with high level of HCO, PU has a significant positive indirect effect on IS through ATT. Indeed, the non-significant indirect effect of PU on IS in low and medium level of HCO is due to the weak and non-significant effect of ATT on IS in this condition. As the direct effect of PU on IS still is significant (= 0.337, *t*-value = 6.130), the effect of PU on IS is partially mediated through ATT while HCO positively moderates the positive effect of ATT on IS and the seventh hypothesis is supported. Similarly, moderated indirect effect of PEOU on IS through ATT $(a_{2*}b + a_{2*}e_{*}HCO)$ while is not significant for low (= -0.044, *t*-value = -1.424) and medium (= 0.011, *t*-value = 0.404) level of HCO, becomes significant when HCO gets higher (= 0.065, *t*-value = 1.829). It indicates that the indirect effect of PEOU on IS through ATT will be stronger and significant in higher level of HCO and the eighth hypothesis is partially supported as well.

This model explains 20.84% of IS. In addition, Stone-Geisser's Q^2 value for IS (Q^2 = 20.83%) indicates that the model has predictive relevance (Geisser, 1974; Stone, 1974; Henseler, Ringle, and Sinkovics, 2009; Tenenhaus, Vinzi, Chatelin, and Lauro, 2005).

Discussion and Conclusion

The results of this study showed that there is a positive influence of PU of Internet on Internet use for health information (H1). This finding lends support to Wong *et al.* (2012) study   ic   ound t at P o nternet is signi cant in in luencing   o en' intention to use the Internet for health information. Furthermore, the findings of the current study are in

line with Lim *et al.* (2012) study which revealed that PU significantly and positively contribute to the behavioral intention to use mobile phone for health information.

The present study also revealed that PEOU has no positive influence on Internet use for health information (H2). This result does not provide support for prior studies which revealed that perceived ease of Internet us is an antecedent of behavioral intention to use health information technology (Kim & Park, 2012; Yun & Park, 2010).

In agreement with past studies (Kim & Park, 2012; Yun & Park, 2010), this research also found that PU of Internet for health management and PEOU of Internet both have a positive effect on attitude towards Internet use for health information (H3 & H4), supporting that cognitive beliefs with regards to health information technology lead to affective feelings about Internet use for health management.

The effect of attitude on Internet use was not found in this study (H5). This result is not consistent it i and Park's study ic ound t at avora le attitude to ards the use of health information technology positively does contribute to adoption of health information technology. The positive influence of attitude on the Internet use is positively moderated by the effect of health consciousness (H6). It indicates that affective feeling about Internet use has no ability to solely contribute to Internet use for health information. us, it needs to e u ta osed y individuals' concern about their health.

It was also found that attitude partially mediates the influence of PU on Internet use for health information, when the influence of attitude on Internet use is moderated by health consciousness (H7). Besides, PEOU has an indirect effect on the Internet use when there is a high level of health consciousness (H8).

o t e est o t e researc ers' kno ledge, t is study as t e irst atte t to investigate the moderating effect of health consciousness on the influence of attitude towards Internet use for health management on Internet use for health information. The study found that high level of health consciousness indeed exerts a positive influence on the relationship between attitude towards Internet use for health and Internet use for health information. Women with low and medium level of health consciousness do not use the Internet for health information even if they have a positive affective feeling towards Internet use for health management. On the other hand, those who possess high level of health consciousness tend to use the Internet whether when they have favorable attitude towards Internet use for health information.

Limitations and Directions for Future Works

The present study was limited in several ways. First, the sample population was relatively homogenous in that they were women working for governmental organizations located in Selangor state of Malaysia. Therefore, a more comprehensive future study is suggested to include other population of women to provide more accurate and precise information and enhance the generalizability of the findings.

Secondly, apart from health consciousness examined in the current study there are other health-related factors such as perceived health risk which could be examined as a

moderator influencing the relationship between attitude towards Internet use for health information and Internet usage. Additionally, the examination of the joint moderating influence of health consciousness and other health-related factors is also suggested for the future study.

Lastly, the present study only focused on Internet use for searching health information. However, Internet also might be used to communicate for health-related purposes such as emailing with doctor or health providers, chatting with people experiencing a specific illness, sharing and exchanging experiences on health-related issues. Thus, further study is suggested to examine the communication function of Internet for health-related purposes.

References

Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin, 84*(5), 888-918.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Chen, M. F. (2011). The joint moderating effect of health consciousness and healthy lifestyle on consumers' willingness to use functional foods in Taiwan. *Appetite, 57*(1), 253-262.

Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science, 35*(8), 982-1003.

Dutta-Bergman, M. J. (2004a). Health attitudes, health cognitions, and health behaviors among Internet health information seekers: Population-based survey. *Journal of Medical Internet Research, 6*(2), e15.

Dutta-Bergman, M. J. (2004b). Primary sources of health information: Comparisons in the domain of health attitudes, health cognitions, and health behaviors. *Health Communication, 16*(3), 273-288.

Dutta-Bergman, M. J. (2006). A formative approach to strategic message targeting through soap operas: Using selective processing theories. *Health Communication, 19*(1), 11-18.

Hale, T. M., Cotten, S. R., Drentea, P., & Goldner, M. (2010). Rural-urban differences in general and health-related internet use. *American Behavioral Scientist, 53*(9), 1304-1325.

Horton, R. P., Buck, T., Waterson, P. E., & Clegg, C. W. (2001). Explaining intranet use with the technology acceptance model. *Journal of information technology, 16*(4), 237-249.

Igbaria, M., Zinatelli, N., Cragg, P., & Cavaye, A. L. (1997). Personal computing acceptance factors in small firms: a structural equation model. *MIS Quarterly, 21*(3), 279-305.

Jayanti, R. K., & Burns, A. C. (1998). The antecedents of preventive health care behavior: An empirical study. *Journal of the Academy of Marketing Science, 26*(1), 6-15.

Jeong, B. K., & Yoon, T. E. (2013). An Empirical Investigation on Consumer Acceptance of Mobile Banking Services. *Business and Management Research, 2*(1), 31-40.

Kim, J., & Park, H.-A. (2012). Development of a Health Information Technology Acceptance Model Using Consumers' Health Behavior Intention. *Journal of medical Internet research, 14*(5), e133.

Lemire, M., Pare, G., Sicotte, C., & Harvey, C. (2008). Determinants of Internet use as a preferred source of information on personal health. *International journal of medical informatics, 77*(11), 723-734.

Lim, S., Xue, L., Yen, C. C., Chang, L., Chan, H. C., Tai, B. C., et al. (2011). A study on Singaporean women's acceptance of using mobile phones to seek health information. *International Journal of Medical Informatics, 80*(12), e189-e202.

Mohanty, M., & Turner, P. (2006). Foreign exchange reserve accumulation in emerging markets: what are the domestic implications? *BIS Quarterly Review, September*, 39-52.

Moorman, C., & Matulich, E. (1993). A model of consumers' preventive health behaviors: The role of health motivation and health ability. *Journal of Consumer Research, 20*(2), 208-228.

Park, C., Kim, D.-g., & Kim, C. (2013). Adoption of shout message service: Gender difference. *Issues in Information Systems, 14*(1), 10-20.

Turner, M., Kitchenham, B., Brereton, P., Charters, S., & Budgen, D. (2010). Does the technology acceptance model predict actual use? A systematic literature review. *Information and Software Technology, 52*(5), 463-479.

Wong, C. K., Yeung, D. Y., Ho, H. C., Tse, K.-P., & Lam, C.-Y. (2012). Chinese Older Adults' Internet Use for Health Information. *Journal of Applied Gerontology, 32*(8), 1-20.

Yoo, E. Y., & Robbins, L. S. (2008). Understanding middle-aged women's health information seeking on the web: A theoretical approach. *Journal of the American Society for Information Science and Technology, 59*(4), 577-590.

Yun, E. K., & Park, H. (2010). Consumers' disease information-seeking behaviour on the Internet in Korea. *Journal of clinical nursing, 19*(19-20), 2860-2868.

Yusoff, Y. M., Muhammad, Z., Zahari, M. S. M., Pasah, E. S., & Robert, E. (2009). Individual differences, perceived ease of use, and perceived usefulness in the e-Library usage. *Computer and Information Science, 2*(1), P76.

Appendix A

Constructs	Items	Source (s)
Health consciousness	1-I have the impression that I sacrifice a lot for my health.	Chen (2011)
	2-I consider myself very health conscious.	
	3-I think that I take health into account a lot in my life.	
	4-I think it is important to know well how to stay healthy.	
	5-My health is so valuable to me, that I am prepared to sacrifice many things for it.	
	6-I have the impression that other people pay more attention to their heath than I do. (R)	
	7-I do not continually ask myself whether something is good for me. (R)	
	8- really don't t ink o ten a out et er everyt ing do is healthy. (R)	
	9- don't ant to ask ysel all t e ti e, et er t e things I eat are good for me. (R)	
	10-I often dwell on my health.	
	11-I am prepared to do many things to have good health.	
Perceived usefulness of Internet	1-Using the Internet for health information is useful in managing my daily health.	Davis (1989)
	2-Using the Internet for health information is advantageous in better managing my health.	
	3-Using the Internet for health information is beneficial to me.	

	4-Using the Internet for health information is valuable to my healthcare.	
Perceived ease of Internet use	1-Learning to use the Internet for searching health information was easy for me.	Davis (1989)
	2-My interaction with the Internet for health information is clear and understandable.	
	3-I find the Internet for health information to be flexible to interact with.	
	4-It is easy for me to become skillful at using the Internet for health information.	
Attitude	1-Using Internet for seeking health information and health management would be a good idea.	Wong et al. (2012)
	2-Using Internet for seeking health information would be a wise idea.	
	3-I like the idea of using Internet for seeking health information and health management.	
	4-Using Internet for seeking health information and health management would be a pleasant experience.	
Internet use for health information seeking	1-I use Internet to get general health information.	Items 1-7 from Yoo and Robinson (2008) Items 8 & 9 from Kim and Park (2012) Items 10 &11 from Hale et al. (2010)
	2-I use Internet to get description of various diseases.	
	3-I use Internet to get information on medicine/drug.	
	4-I use Internet to be equipped with information before/after doctoral appointment.	
	5-I use Internet to decide about whether or not visit a doctor.	
	6-I use Internet to decide about how to treat an illness.	
	7-I use Internet to understand how to deal with an illness.	
	8-I use Internet to get information on treatments/therapy/ diagnosis.	
	9-I use Internet to get information on hospitals/clinics/other healthcare facilities.	
	10-I use Internet to get information for health management (exercise, abstinence from drinking, smoking, diet, nutrition, stress, mental health, etc.).	
	11-I use Internet to get information on how to care for oneself.	

...

Improving the Effectiveness of Virtual Teams:
Tackling Knowledge Management and Knowledge Sharing
A real case scenario

[1]*Prof. Dr. Ana María Lara Palma* , [2] *Robert Giacinto*
[1] *University of Burgos (Spain), amlara@ubu.es*
[2] *Cologne University of Applied Sciences (Germany), robert.giacinto@fh-koeln.de*

Abstract:
Globalisation has led to the development of new kinds of knowledge work and collaboration schemes. In globalised companies, virtual teams are a phenomenon of critical interest, and to understand the way they manage knowledge flows is becoming more relevant in terms of increased effectiveness, discoverability and reuse. The growing amount of available knowledge poses a challenge of many dimensions to innovative companies. This includes the evaluation their intangible assets that are an essential factor in many corporate initiatives. This research reports on the analysis of a real case scenario in the context of dynamic knowledge retrieval by using the Open plexus framework, a distributed knowledge sharing system that supports knowledge discovery and context-aware knowledge sharing in virtual teams by introducing a 3-tier knowledge sharing architecture. Each tier holds the knowledge of one of the following dimensions: individuals (the personal knowledge created by one knowledge worker), teams (she shared vocabulary and experience-based knowledge that is a result of team processes) and the organisation (the persistent knowledge of the organisational memory that is globally available). Based on a recent management tool, the Knowledge Path Method Model, the system starts recognising and eliminating stale knowledge in the project; thereby reducing the cognitive load of all the agents involved in the development of a new product. These findings allow eliminating the unnecessary interchange of knowledge flowing in the net of knowledge workers, optimising the time to market and increasing the quality and effectiveness of tasks. In addition, it is used to articulate team internal processes which help identifying the agents that are dispensable as members of a specific knowledge flow path. It helps adjusting the use of assigned resources and, simultaneously, identifying the virtual knowledge linked to the product's creation processes. Drawing broadly from our case study, the analysis reveals that Openplexus is able to help identify and monitor important knowledge paths and emergent knowledge flow patterns with their related contexts and thus improves the effectiveness of the employed knowledge worker. The findings have high implications for managers and Human Resources departments, as they can start measuring the traces relevant knowledge leaves in virtual teams.

Key words: virtual teams, knowledge management, knowledge sharing systems, knowledge flow patterns

1 Introduction

Knowledge and its management has been subject of many research endeavours by authors like Hedlund (1994), Nonaka and Takeuchi (1995), Muñoz-Seca and Riverola (1997), Wiig (1993), Marquardt (1996), Van Der Spek and Spijkeruet (1997), Beckman (1997), Ruggles (1997), Holsapple and Joshi (1998) which have led to a detailed taxonomy and understanding. It is an essential building block for enterprises that want to be and stay successful in a globalised world. But more than that it is a product on its own that is produced, maintained and sold. The management of this knowledge and questions about the optimisation of its creation and evolution is getting more into the focus of most globally acting companies. Managers in charge of such knowledge-intensive projects are concerned about questions regarding the amount of newly created and how the effectiveness of related processes can be measured. Brotons (2009) describes the Knowledge Path Model (KPM) that enables the project management to measure and evaluate the effectiveness of existing knowledge transfer paths in teams by introducing a set of metrics that help turning down unnecessary knowledge changes and reducing the time each involved agent has to invest. With the constantly growing amount of available knowledge that an agent has access to, the effort needed to find the right information for a task is increasing as well. To help a knowledge worker discover task-related and relevant information contextual metadata can improve the efficiency of a user in such retrieval tasks which was demonstrated in Dumais et al. (2001). Following the definition by Shkundina et al. (2005) a work context is comprised of the six dimensions (1) information (relevant or used documents), (2) organisation (involved organisational structures or persons), (3) behaviour (performed actions), (4) operation (used tools or applications), (5) cause (task and user goals) and (6) chronology (timeline of events). With the availability of computer supported collaboration tools and many electronic devices like mobile phones, laptops or sensors, it is now possible to keep track of these contexts in virtual environments. In this paper we argue that it is important to improve the attitude towards the sharing of (virtual) knowledge with two parallel strategies: (1) identifying and introducing optimised knowledge sharing processes in teams with KPM and (2) incentivising knowledge sharing by using additional metadata for context-aware services supporting the individual knowledge worker in distributed teams where the context in which virtual knowledge was used is often lost. The paper is organised as follows: in the remainder of this first section we will present related work that influenced the our research, give an overview of our research objectives and the methodology we adhered to. Section 2 introduces the case study and presents the major problems in distributed knowledge work that could be identified and describes how the Knowledge Path Model can help in this setting. Section 3 concentrates on the application of Openplexus by introducing a constant feedback loop module to the system that maps the KPM to processes in a computer supported collaboration environment. Section 4 discusses the results from the KPM analysis and the Knowledge Path Extraction with Openplexus and section 5 concludes this paper.

1.2 Objective of the research study

The objective of this paper is to reflect the applicability of two recent models developed to measure and optimize the knowledge that flows in a team of a department of a company. All in all, the research paper provides a basis for identifying and resolving three emergent problem areas in companies with virtual knowledge teams:

1. To eliminate (by using KPM) the unnecessary interchange of knowledge working in a concurrent engineering environment. This way it is possible to avoid the deterioration of wisdom that flows through unnecessary steps from the source to the final

destination. It is possible to cut the time spend in a task cutting the time of the agents involved in the develop of new products optimizing the time to market and increasing the quality of the tasks due to the new amount of knowledge.

2. To identify (by using the KPM Model) the agents (members of the project team) that are dispensable as members of the cognitive nets in the knowledge teams, adjusting the use of resources assigned to the teams. Simultaneously the model gives information about how every worker is doing his job regarding the knowledge, which is a key indicator to evaluate aptitudes and solidarity within the team. Eventually, the KPM model allows to identify the virtual knowledge linked to the new products generation processes.

3. To support the reuse and to improve the discoverability of existing knowledge artefacts in a specific context, computer systems can support the knowledge worker a great deal to not only to understand the work habits of one individual but has to take the context of the whole team into account. The Openplexus System offers ways to gather contextual information without disturbing the team in their routine. This context information is used to identify the flow of digital knowledge artefacts through the virtual team and to provide detailed feedback to the KPM analysis and thus enables the evaluation of knowledge sharing processes.

Results shed light on how in a net of knowledge is feasible to discover the virtual knowledge; and, also assisting the highest profitability of the current knowledge in the enterprises.

1.3 Method of the research study

KPM and Openplexus have both different stages of application. This section shows a mere summary of the most relevant aspects of the use of both models. On the one side, KPM re uired to esta lis t e at s ere t e kno ledge is oving, at is called kno ledge at s , t en it is set u t e trains o kno ledge at is t e nu er o re ittance knowledge in between the agents and immediately the knowledge known till now as explicit or tacit is catalogued in wide a range of taxonomies depending on the target got and the source it comes from. These categories can divide the knowledge in standard, exclusive, virtual, decisive, illustrative, fixed, variable, generated and spread. Table 1 and Figure 2 define and show the theoretical concept of each one. Once the knowledge is identified, it is introduced a parameter that defines the movement of the knowledge through the paths, and allows to know if the knowledge is generated or spread.

Openplexus is an event-driven, semantic middleware that offers a set of functional components that support the knowledge work of distributed teams in virtual enterprises. It integrates into existing operating systems and tool chains by an open event-consuming platform designed improves the knowledge workers' efficiency by making context-aware recommendations available to the user without enforcing a specific workflow. Using this infrastructure it is possible to gain access to real interaction patterns that emerge in teams over time. This way it complements the top-down approach of the KPM methodology by giving the company possible tools that help the management understand existing team interaction structures or deficiencies from the individual up to large-scale patterns.

2. Case Study

The scenario we present here is the result of interviews and contextual enquiries that were conducted at a ig erican co any in t e and net ork sector, let's call it ME Telecommunications. Since the insights that could be gathered during this time contains sensitive information, we will present to you the generalised version of common problems that could be identified in this problem scenario. Here we will concentrate on the knowledge flow patterns that can be found in companies with distributed teams that work

from different places where a large amount of knowledge is accessed as digital artefacts that are shared with team members.

Consider a Project Manager at ACME Telecommunications, Susan. Her competences within the enterprise are, exclusively, supervise the customer projects, but, nevertheless, due to a lot of irregularities in the flows of knowledge of other agents involved in the system, she has to develop extra activities that does not belong to her; due to this she is increasing in stress, anxiety and time of work. The questions Susan makes herself are why is she making tasks does not belong to her and no one can realize it, why the work in group is now working, why is so difficult to check where the system is failing and which agent is dispensable, etc. Unfortunately this is not an isolated case, this is happening continuously daily in many departments, many companies. The solution to all these questions can be reached by the application of the KPM Model and the Openplexus System which allow identifying through the knowledge generated how each worker is doing the work. These models are not only a window to look through the daily posts but, also, an important and advanced model for Human Resources Departments to detect the commitment of the workforce with the environment.

2.1 Analysis with KPM

The KPM target consist of managing the knowledge to reduce the time to market in Susan´s posts; what is, to eliminate the unnecessary process of knowledge. Also, it allows identifying the agents that are dispensable within the project, adjusting the use of resources assigned to the projects. With is will be possible to create High Profitability Teams. Figure 1 shows the five agents involved in the scenario: Project Director (Susan), Customer, General Supervisor, Intermediate Commission and Committee and the codification of the knowledge that flows in the system. To make easier the comprehension o t e ro ect tasks and t e agent's co etences, t e icture as een divided in t ree steps (the paths regarding the initial supervision of the project, the paths regarding the bureaucracy, and, the paths regarding the production time when the project has been checked and is ready). The paths of knowledge are codified with numbers. In our case we have 25 paths. Each path collects the knowledge that flows through it and also knowledge is classified as standard, exclusive, decisive or

illustrative. The TS-01-KST-D means: Total Support (TS), knowledge number 1 (01), Knowledge standard (KST), Decisive (D).

3 Knowledge Path Extraction with Openplexus

The Knowledge Tracker implementation in Openplexus follows the idea of the Knowledge Path Model by assigning a unique identifier to every knowledge artefact that is registered with the system. From that point on, the system is capable of tracking the interactions (e.g. reading a document, sending a file to a team member or writing an email) of the users with the system.

Figure 3 depicts the most important components of the Openplexus architecture that are necessary to implement the knowledge path tracking. Openplexus is implemented around two major design decisions:

1. It is a semantic middleware that offers knowledge-work related services by helping aggregate all relevant knowledge from different distributed sources in one unified data model.

2. It is an event-driven, reactive middleware that is built from several loosely coupled components that consume knowledge-work related events and are used for proactive and context-aware recommendations supporting the extension of the base system by adding additional components that process the events made available through the event bus .

These events are published on the event bus which acts as the central communication component between the other modules. The source of a n event can be another module within Openplexus, a running process of the underlying operating system or a reaction to a user interaction that fired an event to notify the Openplexus middleware. Context-related events are consumed by the local module, keeping track of interactions with documents or team members. Interactions like document sharing or team messages are supported through the team handling component. This module manages the access to the vocabulary owned, created and shared by a team and offers ways to access knowledge or documents of connected team members.

Every time something is shared with a member, Openplexus adds knowledge path related information to the shared data model that is described as an ontology in RDF (Resource Description Framework) statements. Figure 4 shows an excerpt from the data model that is part of the case scenario. The green nodes represent the involved users, orange nodes are the knowledge flow representation which hold the necessary metadata that is needed to keep track of the knowledge sharing activities and the blue nodes which are the documents with their respective metadata (lighter blue). The grey box around a sub-graph highlights the metadata that represents one knowledge route in the KPM (in this case route 1 and 3 from Figure 2). Each node in the Openplexus team network has only partial knowledge about the flow of a document. To be able to visualise the full path of an artefact, the distributed information has to be gathered and aggregated by the knowledge path tracking module which sends out a process that visits every member being connected with the team network at that time and asks every available node for additional flow information.

4 . Results

4.1 KPM Results

This research with a real case brings the possibility of knowing how each roll of the enterprise is working. In our scenario, as expected, Susan is developing an extra percentage of her responsibilities. She was really upset and worry about how to find the solution to this. It is really difficult to prove, just with a perception what is happening in some departments regarding who is in charge of knowledge, who is using it effectively, who is dispensable, who is committed and who is generating and creating knowledge from the source. From this perspective we can asset that:

Taking into account Susan's results it is demonstrated that she is doing a 33% of work that does not belong to her. Consequently, while she is doing these tasks, she is not spending time on her own issues.

The General Manager only develops a 17% of work regarding knowledge classified as illustrative, what means that is failing in this issue. The result is that the work is done, but with lacks of excellence and high quality. This work is done by the Project Director.

The Intermediate Commission is more focused on the decisive work, what is required to the good way and fluid flow of the knowledge through the structure.

Customer and commission are not required to do more than what they do. They are a necessary figure for the help of the project. Their knowledge and their support are essential, but, they do not create new knowledge (not expected anyway).

The sharing of exclusive knowledge must be encouraged. The difficulties of doing this, used to be the distance between the agents of the project and the reluctance to share the key knowledge each one possesses and learned through the long time. Knowing the figure that is doing the unexpected works is easy to speak about which kind of lacks are found in order to improve the arisen situations. Speaking with Susan was easy to know that she was doing a work that should be done by the General manager, such as: staying in contact with

the committee (competences belonged to the General Manager), staying in contact with the customer in management tasks (competences belonging to the General Manager), even, being the link between the General Manager and the Intermediate Commission (both should work together by their own with any contact in the middle). This scenario arises the picture of this department day of work. The General Manager is not doing what is expected and the reasons can come from different reasons, such as:

The person is not qualified for the post and should renew the knowledge or acquiring new one and eliminate the obsolete one. Knowledge management is the key aspect in this situation.

The person has got level enough to develop the competences but is not committed with the post. Human Resources Management should manage this scenario.

4.2 Openplexus Knowledge Path Extraction Results

For this scenario, a data model was used that simulates the interactions with the Openplexus System based on the problem description in the previous section. This model is distributed across the team members (director, commission, supervisor and so on) and loaded into the system on start up. Each model contained the description necessary to simulate the interactions between the agents, the documents that were exchanged along with their required metadata and the knowledge flow metadata. The distributed knowledge graph could then be analysed by the knowledge flow module of the system to answer the general question, which artefact was sent to what agent. The result of this query can be seen in Figure 6 and presents a possible visualisation of the returned data from the analysis. The boxes represent the involved individuals with their respective role. Currently there are three roles that the system is able to recognise. The author or creator of a new artefact is displayed in red. An individual that edited an existing document creates a child version of this artefact and is called a commiter. Commiters are presented in green. The standard role does not involve any active participation and is displayed in grey. Standard users received a document and worked with it but never shared new knowledge with the organisation or the team. The colour of the arrows that connect different nodes represent the different document or versions of it that were indentified in the interactions within the system. Part of a knowledge management dashboard is the knowledge path module able to give an overview of the current knowledge sharing situation in the system and can indicate possible bottlenecks or efficiency problems in a current team configuration. Feedback that would otherwise be hard to get. In combination with the KPM methodology it is an instrument that enables the management to optimise knowledge sharing in virtual knowledge teams and get instant feedback of the actual changes within the team's knowledge sharing processes.

5 . Conclusions

In this paper we have described a novel approach to the problem of improving knowledge sharing in virtual teams by a combination of a top-down knowledge management methodology and a bottom-up computer supported collaboration tool focussing on context-aware knowledge sharing services and therefore being able to manage and optimize the knowledge of the companies, these new models have developed solutions to help enterprises increase the profitability of their workers under the perspective of knowledge management. Both applications are a means to tackle the effectiveness of knowledge work by considering knowledge as a tangible resource. To stay innovative and highly profitable, the creation and interchange of new knowledge within the organisation has to encouraged with managerial instruments and incentivised with tools that take advantage from this additional knowledge and its metadata.

6 . References

Bechman, T. (1997) A methodology for knowledge management. International Association of Science and Technology for Development (IASTED). AI and Soft Computing Conference. Banff, Canadá

Brotóns, R. (2009) La gestión del conocimiento en entornos de ingeniería concurrente. Desarrollo del método de rutas de conocimiento (KPM). Doctoral Thesis. University of Burgos

Corchado, E., Corchado, J. M., Lara Palma, A. M. (2004): Constructing a Global and Integral Model of Business Management Using a CBR system. Lecture Notes in Computer Science (LNCS), Springer Verlag.

Dumais, S., Cutrell, E., & Chen, .   ti izing searc   y s o ing results in context. In Proceedings of the SIGCHI conference on Human factors in computing syste s   . -284). ACM.

Hedlund, .   odel o kno ledge   anage ent and t e No or   cor oration. Strategic   anage ent ournal , ol. , No. ,   . -90.

  olsa le, . and os i, . D.   nowledge management: a three fold framework.   entucky initiative or kno ledge   anage ent . esearc Pa er N   .   . ollege o Business and Economics. University of Kentucky. Kentucky

Marquardt, M. J. (1996) Building the learning organization. McGraw-Hill Companies.

Nonaka, I., & Takeuchi, H. (1995) The knowledge-creating company: How Japanese companies create the dynamics of innovation. Oxford university press.

Ruggles, R. L. (Ed.) (1997) Knowledge management tools. Routledge.

Shkundina, R., & Schwarz, S. (Si ilarity Measure or ask onte ts . n ICCBR Workshops (pp. 261-270).

Van der Spek, R., & Spijkervet, .   no ledge   anage ent dealing intelligently   it kno ledge. no ledge   anage ent and its integrative ele ents , . -59.

Wiig, K. M. (1993) Knowledge Management Foundations: thinking about-how people and organizations create, represent, and use knowledge. Arlington, Texas: Schema.

Figures and Tables

KNOWLEDGE	DEFINITION	TARGET	ORIGIN (SOURCE)
ESTÁNDAR	No specific Inherent to an activity	Cover a necesity	Unknown knowledge
EXCLUSIVE	Mix of experiences and training (capacities?)	Enrich and complete the estándar knowledge	Amount of estandar knowledge
VIRTUAL	Immediate, amount of individual experiences	Join to tacit and explicit knowledge	Multiagent
DECISIVE	Immediate use. Facilitate	No stop the next tasks	Amount of estandar and exclusiv knowledge
ILLUSTRATIVE	Contains information to carry out the task with excellence and quality	To complete the necessities of the decisive knowledge	Decisive knowledge
FIXED	Independent of the task developed Never change	To be always there	Each activity of the project
VARIABLE	Changes with each activity	To keep the knowledge updated	A dinamic change
GENERATED	Created and linked to the system immediately	To increase new knowledge	Innovative processes
SPREAD	Received from a previous source	To share knowledge	Prior to the agent

Table 1. Taxonomies of the knowledge

Source: Own elaboration
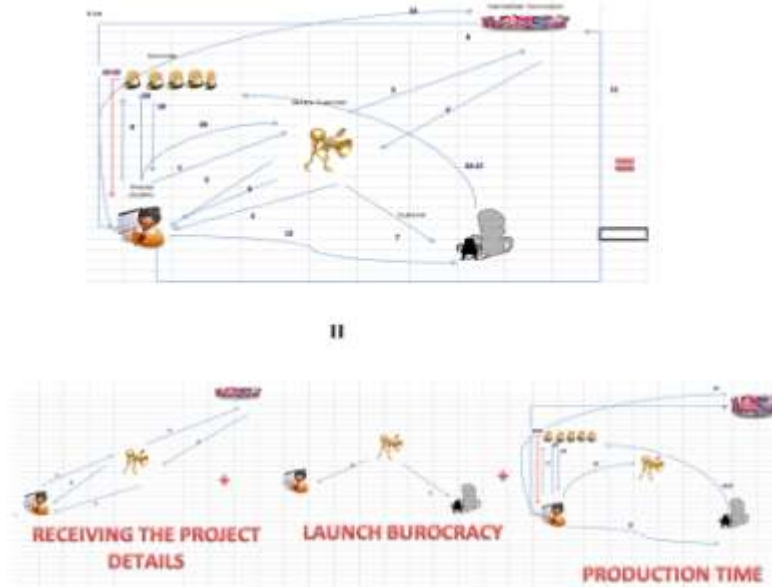
Figure 1: Susan's real case. Source: Own elaboration

Figure 2. Knowledge real case codified

Source: Own elaboration

....

Impact of coaching on organizational learning and effectiveness

Lui-Yin KWAN

University of Wales, Newport, UK
C/O International Academy of Management, Hong Kong

Abstract:
Many organizations keep recruiting coaching professionals for human resources development purpose and adopt coaching as an essential approach to achieve business goals because training and development is not enough for this era. Coaching is a dialogue process between the coach and the client (coachee). Coach asks questions and make coachee to realize his blind spots, enhance his strength and discover possibilities. Thus, coaching is adopted in order to create organizational effectiveness. The aim of the research is to understand and examine the impact of coaching on organizational learning and organizational effectiveness. Adoption of coaching as learning & development purpose ables to generate individual learning in order to generate collective learning, ulti ately results organizational learning. i ra e ork intuiting, inter reting, integrating and institutionalizing is also researc ed. t de onstrated t e linkage o organizational learning, co ination o individual's cognitive and behavioural operation. Personal learning lead Mentoring, Mentoring lead Career outcome is the proposed model. Qualitative research, focus group interview was conducted. Participants were the coaching service users who were working in different position from 4 different companies but in the same industry. The outcomes of the study indicate coaching as an effectiveness approach for both individual and organization development.

Keywords:
coaching, individual learning, organizational learning, organizational effectiveness, leadership, training & development, learning & development, human resources development.

1 Introduction

Since the beginning of 21st century, many companies have an awareness of the need of training & development (T&D) repositioning because 21st century is the era of no ledge Econo ic . o anies e loyed any kno ledge orkers, t ere ore, D is not sufficient for core competency enhancement. Those co anies' u an resources department employed new employees with coaching skills and qualifications or hire external coaches in order to reinforce their departmental functions. This approach will encourage the transformational change from Human Resources Management (HRM) to Human Resources Development (HRD) because those companies will change their focus on development rather than management upon they experience the impact from coaching.

oac ing does not train ut develo eo les.

This new concept will drive human resources department to absorb coaching as another option of strategic intent in order to generate core competency and sustainable development. Because training focus on transfer of knowledge / skills for tasks in order to meet the standard required, and it is almost a one way methodology to cultivate e loyees' a ility. o ever, coac ing can ins ire e loyees to e ore clever, cultivate their ability so that they are capable to generate extraordinary performance; this is a kind of strategic capabilities for organizations. Managers and executives will use coaching to achieve personal and business goals because coaching can expend their mindset to figure out blind spots, aware their strength and limitation, discover more possibilities and options, understand gap between existing performance and ideal performance, get insight from cognitive progress, enhance the capability of self awareness. On the other hand, they are automatically eager to learn more in order to absorb the capability which can enhance performance and enrich outcomes, willing to take commitment of accountability and responsibility. Futhermore, managers and executives will use coaching as situational leadership style because they need to lead / manage their subordinates who are knowledge workers. Those subordinates might be an expert / specialists of any area / profession. This atmosphere demonstrated managers and executive would like to contribute more to organizations upon experience the impact of coaching. The ultimate outcome is getting ptersonal and business success which shape competitive advantages. And, those competitive advantages can contribute to organizational effectiveness enhancement.

Owing to the transformation of HRD as above mentioned, coaching will be adopted in order to create organizational development. Thus, this study will research following areas : -

a)   To examine factors of how coaching can link with organizational learning.
b)   o e a ine ersonal learning ill result individual's satis action in order to enhance performance which will benefit organizational effectiveness.
c)   To examine coaching can be applied not only in psychology discipline, and it can be applied in business as well.
d)   To explore the correlation between coaching and below areas :
 i.   Leadership & Management
 ii.   Organizational culture
iii.   Personal mastery results competitive advantage
iv.

2 Rationale

During t e eriod e ore   's, su ervisors   anagers t oug t t at t eir o is anage ent. e ain unction is su ervision o ot er eo les' orks   doing things rig t and getting o done t roug ot er eo les. n ost   's, t ey t oug t t at t ey are leaders, their main function is leading other people in order to achieve visions   doing right things through other peoples. In other words, the core function of management is : Planning, Organizing, Leading & Controlling within this period.

 o ever, in t e era o   no ledge Econo ic *The past president of the United States Bill Clinton declared that new era has been kick off in 1997 and he named the era*   d   ), information and technology will generate knowledge society which brings the revolutionary change. This change will break the old rules, regulations, styles and patterns of living[1]. Under this wave, managers / supervisors must act the role as a   oac   so t at t ey el t eir su ordinates   colleagues to en ance e ectiveness through both leadership and management. On the other hand, they will search the best leverage for individuals and organizations as well. New wave of management has been started.

 oac ing started ro   's in t e nited States, over t e ass decades, t e conce t of coaching has aroused a revolution within management mindset around the world silently.

As per conservative prediction, there are more than 0.25 million professions working in coaching industry around the global.

Fortune500 indicate that more than 80% of senior employees (include supervisors and managers) of success enterprises have learnt coaching skill in order to enhance operating performance and sta s' otential.

 n   , t e re ort o   artered nstitute o Personnel and Develo   ent said that : 90% of the participants in the survey had attended coaching training.

Lancaster University Management School had adopted coaching as the formal program of their campus.

 ccording to a ove   eno enon, e are no   living in a coac ing century.

Charles Handy[2] pointed out that, enterprises / organizations development like an organic life as similar as product life cycle which includes four stages : 1. Enterprises / Organizations start operating business; 2. Carry out development; 3. Performance and outcome will be reached at the peak; 4. Decline and died (Like human being : born, develop, growth, aging and died). Charles Handy described this organic li e as Sig oid urve . ere ore, e can not treat enter rises organizations as su stances non-living things) anymore, we have to treat as holistic.

 e can get insig t ro   andy's ook[2] , he indicated that we have to plan a new sigmoid curve before the existing sigmoid curve turn into the stage of performance reaching the peak.

According to the below listed diagram, 1A is the stage of beginning; 1B is the next stage   e eak o organizations' outco e   is t e last stage Decline and died .   e

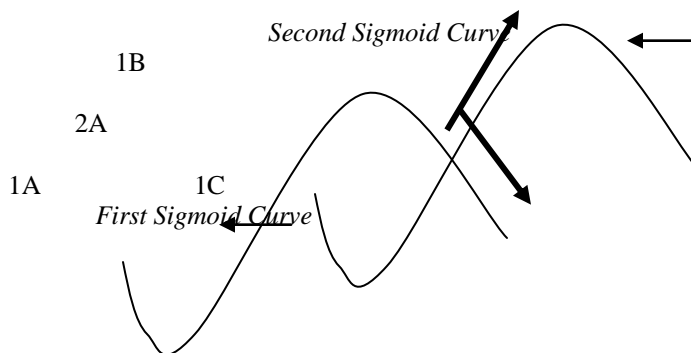only   ay o   aintaining organization's li e is launc ing out anot er curve Second Sigmoid Curve).

Fig. 1 Sigmoid Curve.

 n order to   aintain t e organization's develo   ent and li e, usiness leaders s ould considerate dee ly and deter ine to launc Second sig oid curve e ore First sig oid curve ste into decline and died stage in order to create sustaina le gro t .   at curve may replace the old business model[3] , operating system, product, technology, value c ain .etc.   us, t ey s ould e ca a le to ado t ne a roac and ca a ility[4] , create new core competency[5] and decrease the impact of path dependency[6] .

3 Literature Review

   ccording to t e article . S art, and . arcu ,   learn do e learn '   e link et een e ecutive coac ing and organizational leanring, *Management Learning*. **44**(4), 337-354 (2012), it identified coaching as a learning & development approach to generate individual learning that it results collective learning, finally it will transfer to organizational learning. Those learning are factors of enhancing organizational effectiveness which is the objective of this research.

This article involves the correlation between executive coaching to organizational learning. It provided evidence that coaching can be a tool of learning & development in both individual and organizational, this is able to generate contribution for organizational learning. It also proofed how coaching act as an approach of transformation of individual learning so that embed into collective learning (collective learning = collective level of learning by individuals) which results organizational learning. Because organizational learning is trigger organizational effectiveness enhancement.

This article focuses the mechanisms of individual learning converting into collective learning t roug individuals' concrete e eriences [7,8]. It also pointed out two important themes. The first one, individual needs to learn wide spread[9] within collective level (*multi-level learning*). The second one, individual learning co-relate to organizational outcomes.
It described the process of accumulation at collective level of individual learning generating organizational leaning t us, it na ed learning in organizations . This demonstrated individuals experience the learning which is the only way of organizational learning[9,10] for expected outcomes.

This article quoted learning process will be operated via four processes : intuiting, interpreting, integrating and institutionalizing (4-i framework) [11]. These processes demonstrated the linkage of organizational learning by a psychological process and co ination o individual's cognitive and e avioral o eration. ndividuals ill learn subconsciously and share their ideas t roug   e ternalization [12]. On the other hand, it discussed how genuine leaders will learn via genuine / reflective dialogue[13] and aware the relationship between coaching and leadership, this approach will cultivate organizational culture which support and reinforce double-loop learning : feed-forward and feed-back[14]. These are the expected outcomes of this research.

Above mentioned areas involve mechanism of knowledge transfer, it is an important factor of how individual learning transfer to collective learning[15]. And, different kinds of knowledge need different types of transfer mechanisms[16]. They are the key success factor of generating organizational effectiveness.

This article also focuses the benefits of executive coaching due it can be used as an media for executive development; besides, line managers conducted coaching internally[17-19] or hire external coaches to enhance productivity. Evidence of influencing organization in performance improvement[20], productivity improvement[21-23], increment of job satis action and sta   er or ance   organization's cost savings[19,24-26], creativity and innovative ability increment[20] via coaching were increasing. Those benefits are the effect of organizational effectiveness enhancement.

Final, this article quoted coaching will result multiple outcomes which includes individual and collective level by improving performance and effectiveness, changing personal attitude and perception[27]. (Changing attitude and perception is important because cognitive deviation will produce psychological blind spots which will influence mindset, behavior and performance). There is a trend of increasing interests in how coaching works within influencing organizational change[7,28-29].

According to the article: R. Gong, S.Y. Chen, and M.L. ang,   areer outco e o   e   loyees   e ediating e ect o   entoring, *Social behavior and personality*. **42**(3), 487-502 (2014), it researched the linkage of personal learning and mentoring so that results career outcome[30]. Personal learning generated motivation effect which is acting a critical role or rot g s,   entoring syste   ay a ect rot g s' career develo   ent and outcome positively due keeping learning is able to have successful career.

This is the process to proof protégés get learning and satisfaction, then, give contribution to trigger organizational effectiveness.
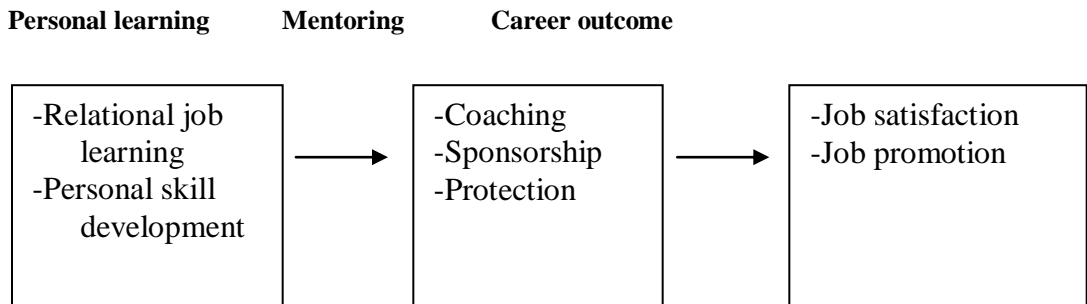
Personal learning   **Mentoring**   **Career outcome**

-Relational job learning -Personal skill development	→	-Coaching -Sponsorship -Protection	→	-Job satisfaction -Job promotion

Fig. 2 Conceptual framework

Personal learning can shape competence which includes knowledge, skills and attitude enhancement for career outcome contribution[31]. Protégés have to explore their interpersonal skills and collaborate with colleagues[32] so that obtain personal learning. Because personal learning will arouse self-awareness and understanding consciously and unconsciously so that it can generate personal development[33]. This is the *First Hypothesis* elations i et een e loyees' ersonal learning and entoring.

This article focuses the *Second Hypothesis* : Relationship between mentoring systems as a ec anis to el rot g s' success or career, t is ill generate organizational e ectiveness t roug e loyees' ro essions and er or ance advance ent y u li ting e ers' s irits and orking uality, it de onstrated o t e ec anis roduce e loyees' satis action ro syc ological su ort and career advance ent opportunity[34].

This article focuses the *Third Hypothesis* : The relationship between personal learning and career outcome in companies because it discussed how individual learning transform to personal mastery in order to shape competitive advantage (organizational level). It indicated four critical factors of personal learning and successful career outcome : career change, personal learning, organizational commitment and job satisfaction[35]. These are significant elements to enhance organizational effectiveness.

This article discussed the *Forth Hypothesis* : How employees practice mentoring as approach of relationship mediation between personal learning and career outcome.

Finally, this article quoted implications that management has awareness of e loyees' career outco e ill e a ected signi icantly y a syste to i rove ersonal learning ic rings e ect o e loyees' o satis action and en ance ent. is is t e objective of learning & development is the way to generate competitive advantage in order to create organizational effectiveness.

4 Research context and methods

Owing to the purpose of this research was to identify the systems that transform individual learning into collective learning & organizational learning, so that organizational effeceiveness will be generated as a result. Therefore, focus group interview has been conducted, we interviewed 4 participants who give their consent prior interviews. Participants came from 4 different financial cum insurance companies and they were coachees (clients of coaching service) with experiences that had been coached. They have to answer research questions within the context of how coaching transform individual learning to organizational learning. uestions relate to coac ees' ers ections o t eir coaching experience, how coachee had learnt (individual learning), how coaching generates collective changes in order to fulfill team goals, how individual learning outcomes translate to collective learning outcomes, and, another open-ended questions.

Table 1 Interview questions example for participants.

1.	How long have you been coached?
2.	How often you took up coaching?
3.	What are your objectives of using coaching?
4.	Please give an example that you have learnt personally from coaching?
5.	How did you know that you had learnt as a result from coaching?
6.	Please identify three most important tools used in the coaching which have

helped you to learn?

7.   Have you discovered any one in your team learn personally from coaching? If so, please give an example how they have learnt personally from coaching.

8.   How did you know that they had leant?

9.   Please give an example how you have used what you have leant from coaching to bring changes at a collective level.

10.   How did you know that team members had learnt as a result?

11.   Have you discovered any one in your team make collective changes after they have been coached? If so, please give an example of the changes they have made at a collective level.

12.   What kind of processes or approach they had go through to make these changes at a team level?

13.   How did you know that team members had learnt as a result?

---

5   Mechanisms that transform individual learning into collective learning & organizational learning: 4i framework

All the participants demonstrated examples of the co-relation between individual learning, collective learning and organizational learning. Those examples include : cognitive and behavioral changes, mentailty and attitude changes, self-awareness increased, self-confidence and ability enhanced, team atmosphere cultivated, encouragement and motivation created, culture and leadership established.

5.1 Intuiting

The first element of the mechanisms that we identified was intuiting. Our findings de onstrate t at artici ants' erce tion and cognition to coac ing as t e a roac helping them to increase business result, to change attitude / behavior / mentality / attitude:

> Enhance working ability in different areas includes team members recruitment, business result, team leading, team members business activities monitoring.

> et's say t e level o recruiting, e ore ave een coac ed, kno not ing a out recruit ent and don't kno   at ave to do a out recruit ent. only know that I need to recruit new agents for the company, I can be a manager once I recruited new agents; I have no idea what I need to do after recruitment. I know nothing about what kind of psychological preparation and changes I should have, and I have no idea what kind of skills should be enhanced before recruitment.

> En ance tea   e ers' acco lis ent and let t e ac ieve ore usiness goal. For higher level, generate changes in attitude and in-de t c anges. et's say they will work automatically or figure out their goal of working clearly. The ultimate objective is more business fulfillment.

> ead count o recruit ent and tea   e ers' usiness result en ance ent.

> I want to improve myself, clear my block and solve the core problem which relate to my work and life. There is a metaphor, you can not have a long journey if you

carry super heavy luggage. I can learn let go , the person who can help me is me.

5.2 Interpreting

The second element of the mechanisms that we identified was interpreting. Data indicate that participants have changes of attitude / behavior / mentality / attitude; and, they increased self-awareness, enhanced self-confidence and ability. Participants realized that they obtain benefit and they have learnt from coaching and this is the frist step of proposed model (Personal learning) as well:

After I have been coached, it let me know one by one and show me the direction what I have obtain and what I have to learn in advance, then I can be a better manager. It will not tell you something what you should obtain, it will use multiple areas approach and many questions to facilitate you so that you will aware what type of leader you want to be, what kind of character / personality you are, and you will obtain something to use.

After I have been coached, I know that what the attitude of new members should have, how recruiter can help new members to success. Meanwhile, I would like to demonstrate the benefit of financial planning industry to my relatives because it can achieve career goals and life goals. This is my drive of conducting recruitment now.
The most significant change is behavior, one of my team member applied what he has leranrt in his work including words and content which he spoke, and add new working model together with existing working model.
Another team member aware how many weekly activities he should made, even his activities are not enough at this moment but he has an awareness of the standard and keep putting effort to achieve.

It is the result of the c ange o tea e ers' entality and e avior. e ore they have been coached, they have no awareness to recruit new members. After they have been coached, they have awareness to recruit new members. Second, they aware they have to increase activity quantity. Besides, according to skill level, team members improved their content of speaking.

Personal and team business performance has been enhanced, personal changes such as self-confidence and working ability enhancement. For example, young members have more confidence and they act initiative after have been coached. Their working ability has been improved; they have more confidence and better performance in presentation and contribute suggestions during the meeting.

I can get better performance and business outcome, have an attitude which eager to insist on working, have positive mind to enhance performance and see the significant improvement.

Yes, one team member who was a university fresh graduate student, he changed a lot. Before he has been coached, he has not enough self-confidence and not acted initiative, but he used 3 years to be a one of management now, it is very fast. He has stronger self-confidence and has positive mind, coaching let him to work

automatically.

Team member got better performance and business outcome; he obtained a better self-being and self-confidence, attitude changes. He also has positive mind and act initiative.

I am able to get more business result and solve my problems. My mentality, mindset and thinking way will be changed; those changes will influence my behavior so that performance and result will be enhanced.

Yes, Before my team members have been coached, they will feel uncertain when they call clients for appointment. After they have been coached, they got some mindset and working pattern so that they are able to get breakthrough.
 ea e ers' usiness result as een en anced. ey ave c ange o attitude, and, have breakthrough as well.

  et's say our recruitment activity; we will practice mentality preparation for our team member prior recruit new colleagues. I think that we should have a clear mind set prior determine any concrete action plan.

Under direct observation, we can see that team members will repeat their problems or not; if they had solved their problems, they will have better performance and business results.

I had learnt coaching skills from my coach and his questioning skills, I found out what kind of problem I'm facing now. Coaching can help me to expend my thinking which according to problems I have to solve. I am able to discover the answers / solutions from myself during coaching process. I think that the coach gave coachee pressure in order to generate coachee's actions, or, coach use some approach to facilitate / push coachee's drive, so that the drive can generate actions for improvement. No actions, coaching is not worth doing. The drive is very important, it is the dynamic which coachee will eager to change; otherwise, why coaching?
Peoples like to discover their changes by themselves but hate to be told.

5.3 Integrating

The third element of the mechanisms that we identified was integrating. Participants demonstrated their individual learning transformed into collective learning (team learning). Those datas indicate individual learning generated effects of cultivating team atmosphere, creating encouragement & motivation, establishing culture & leadership. And, this is also the step of proposed model (Personal learning lead Mentoring):

According to y anager's tea , t e ers o ave een coac ed ill use divergent mode in order to let other members to know what they have learnt from coaching. We have used many promotion and facilitation to bring out the benefit we got, so that we can attract more other members to use what we have learnt from coaching.
According to my team, we have discussed to identify the mentality and tools what we have learnt and discussed if they are suitable. If so, we will use those

mentality and tools together, and, evaluate the effect weekly.

We will let our team members to think something very often, for example: What is the purpose of our job? We will use questioning to help and use exercise to facilitate them. Besides, we will launch team building activity; relationship of each colleague will be closer, they will be more positive to get more business result.

Yes. My team members had a clear goal and stronger self-confidence after they had been coached. Those results should be done by their effort putting; they did all their best to achieve. Coaching surely helps.

5.4 Institutionalizing

The fourth element of the mechanisms that we identified was institutionalizing. Our findings demonstrated that collective (team) learning generated the effect of organizational learning; and, this is the step of proposed model (Mentoring lead Career outcome). Datas indicated that this effect is the key factor to generate leadership and enhance team performance, personal career outcome transformed to organizational outcome:

es, y tea e ers ave learnt. ne e er's learning can otivate i ut can not last or longer ti e. not er e er's learning can last or long ti e because he eager to find method to make the effect stay long within.

There are t o levels, en a a tea layer o y anager's tea , ill use what I have learnt according to the situation and share my learning with other team players.
When I am the leader of my team, we will use what we have learnt together so that effect can be more efficient.

I will practice weekly work revision with my team members to evaluate their performance. Besides, I will talk with them to see they are still using what they have learnt or not.

My team members learnt that activities lot weekly review is useful; they had review by themselves and also asked me to review as well.
Besides, my team members have awareness that they should have at least one to two appointments for recruitment weekly. Before they have been coached, they don't ave this awareness and they only work for their individual business, but they have awareness now after coached.

We will measure it terms of business result; colleagues will improve result not a single time, they will improve result very steady with their changes.

Some other team members worked with my team will practice many exercises and achieve some goals together; finally, they will get positive mentality in work to influence and motivate our team members. They will take initiative as team leaders as a culture; leaders influence members so that members influence other e ers ecause ot er e ers' e ositive ind. t is a good culture ecause

those atmospheres of influence are for team.

My manager used coaching to create an atmosphere to enhance business results and head count of recruitment. He created a culture to encourage all team
e   ers'   artici   ation o   activities.

I think that it is a culture. We might not have improvement upon we have been coached one time only, we need a long term culture to change though by adopt coaching. For example, we will have changes for business strategy.
Besides, we will have awareness to fine tune incentive in order to generate motivation and encouragement effect, and, we will allocate manpower according to our department's recruitment activity upon we have been coached.

My team members dare to work hard, then, they earn satisfaction and proud of their contribution even whatever results they obtained finally. It will be a gear system, one gear moved will contribute dynamic to the other gears continuously. They discover their strength and ability to get job done. Before they have been coached, they had many excuses; but they had intrinsic satisfaction now and will achieve goal continuously. Moreover, they had discovered their own methods to achieve goal, it is a sustainable effect. According to my industry, if you can sustain your goal fulfillment ability, you can build up self-confidence.

I applied coaching skills in free talk with my colleagues who didn't feel well. I facilitate them to see something which is positive because I do believe deeply that there are meaning and purpose of each thing happen.
Someone can not leave from trouble; but he can escape if you give him a hand. I help them to discover their own solution by themselves; then, they are able to help by themselves when they need help again.

Yes. Team members had self-confidence enhancement and others praised them, and, team members got intrinsic satisfaction. Those changes will generate influence in the team; members will feel the positive energy when listening to others' sharing.
Those members can be a role model who can influence others to work better and obtain recognition; otherwise, you will not get client and deal. Other team members, will learn working pattern from role model as well; the right way they learnt, job can be done.

They shared their pathway of heart and soul as a way to influence other team members, if you can do it, other will praise you.

6 Conclusion

This research encourages our understanding of the corelation between individual learning and collective learning, ultimate organizational learning generated. Through coac ing, it ins ires individuals' c anges o   cognition and   e avior   ecause individuals had self-awareness so that they are able to determine which mentality and attitude can help them to obtain personal performance improvement and beter business outcome. They are able to distinguish positive mindset and thoughts in order to achieve their goals and

acco olis ent. ose e eriences are individuals' learnings in order to roduce any possibilities, those learnings also make individuals to become clever and brilliant. Therefore, individual development can be happen.

Coaching acted the role of mentoring which encourage thinking. Thinking process generated indset level en ance ent, individuals' sel -awareness can be re-inforced through thinking. Therefore, individuals are able to realize that their existing mental state, cognition & behavior are appropriate and effective for their goals or not. Opposite, coaching helped individuals to figure out their cognitive deviation which makes psychological blind spots. This is another type of self-awareness because discovery of psychological blind spots makes individuals to find out more options and possibilities to achieve their objectives of taking coaching. The critical factor is coaching generating actions which can generate effectiveness; individuals discovered their own options and actions according to their capability level which are appropriate, effective, suitable to the circu stance. is is t e drive to trigger o individuals' dyna ic and desire o actions because those actions are the way of producing improvement, accompolishment and success.

Mentoring lead career outcome is the most important value of this research because it includes satisfaction (intrinsic satisfaction) which is good for leadership and management. Intrinsic satisfaction is the product of job satisfaction through excellent leadership style, individual development and management. It is the effectiveness of well practicing situational leadership, managers / executives will lead their subordinates to perform job well according to their attitude / skills / knowledge / capabilities. As the result of adopt coaching above mentioned, those managers / executives will practice coaching in their teams in order to achieve more business outcome, accomplishment and enhance effectiveness. This approach will be the main stream of the trend of individual and organizational development in order to replenish the limitation of training and develo ent. ndividuals' learning t roug coac ing is an active ay etter t an training. During coaching process, individuals learnt through their dialogue with coaches, this is an interactive methodology. However, training is one-way methododogy because training o ectives are only or trans er o skills or trans er o kno ledge . t is seldo to consider individuals' level o t inking a ility ecause anage ent didn't realize any employees were knowledge workers now. According to above research findings, individual learning played the change agent to influence teams so that teams can obtain collective learning in order to generate positive changes. Multi quantites / level of team learning at the same time will produce leverage effect which generate organizational learning. Finally, those practice were the core competency, organizational culture, leadership style and strategic capability which shape sustainable competitive advantages; and, the ultimate purpose is organizational effectiveness enhancement.

References

1. A. Toffler, *The Third Wave,* William Collins & Co. Ltd (1980).
2. C. Handy, *The Empty Raincoat,* Arrow Business Books (1994).
    . D. . eece, usiness Models, usiness Strategy and nnovation, *Long Range Planning.* **43**(2-3), 172-194 (2010).
    . M. Porter, Fro o etitive dvantage o or orate Strategy, *Harvard Business Review.* **65**(3), 43-59 (1987).

5. C. Prahalad, and . a el, e core co etence o t e cor oration, *Harvard Business Review.* **68**(3), 79-91 (1990).

6. G.. Johnson, K. Scholes, and R. Whittington, *Exploring Corporate Strategy, Text & Cases 8TH Edition,* Prentice Hall (2008).

.   .M. rant, t takes ti e: A stages of change perspective on the adoption of ork lace coac ing skills, *Journal of Change Management.* **10**(1), 61-77 (2010).

. D.E. ray, and . oregaokar, oosing an e ecutive coac e in luence o gender on the coach-coachee matching process, *Management Learning.* **41**(5), 525-544 (2010).

. M. Po er, and . i s itz, rganizational learning Mec anis s, culture, and easi ility. n rey and ntonaco oulou E eds , *Essential Readings in Management Learning.* London: SAGE, 37-52 (2004).

. M. Po er, and . i s itz, rganizational learning ec anis s cultural and structural a roac to organizational learning, *Journal of Applied Behavioural Science.* **34**(2), 161-178 (1998).

. M.M. rossan, . . ane, and .E. ite, n organizational learning framework: Fro intuition to institution, *Academy of management Review.* **24**(3), 522-537 (1999).

. . Nonaka, dyna ic t eory o organizational kno ledge creation, *Organization Science.* **5**(1), 14-37 (1994).

. D.E. ray, Facilitating management learning: Developing critical reflection through re lective tools, *Management Learning.* **38**(5), 495-517 (2007).

. D. Mazutis, and N. Sla inski, eading organizational learning t roug aut entic dialogue, *Management Learning.* **39**(4), 437-456 (2008).

. M. avier, and . Salo on, no ledge trans er ca acity and its i lications or t e t eory o t e ultinational cor oration, *Journal of International Business Studies.* **34**(4), 356-373 (2003).

. . res an, . irkins a , and . No el, nowledge transfer in international ac uisitions, *Journal of International Business Studies.* **30**(3), 439-462 (1999).

. . gar al, .M. ngst, and . Magni, e er or ance e ects o coac ing ultilevel analysis using ierarc ical linear odeling, *International Journal of Human Resource Management.* **20**(10), 2110-2134 (2009).

. .E. oyatzis, M. . S it , and N. laize, Develo ing sustaina le leaders t roug coac ing and co assion, *Academy of Management Learning & Education.* **5**(1), 8-25 (2006).

19.   .D., Ellinger, .E., Ellinger, D. . ac rac , et al, rganizational invest ents in social capital, managerial coaching, and employee work-related er or ance, *Management Learning.* **42**(1), 67-85 (2011).

. . Mulec, and . ot , ction, re lection, and learning: Coaching in order to enhance t e er or ance o drug develo ent ro ect anage ent tea s, *R&D Management.* **35**(5), 483-491 (2005).

. S. a a, and .P. ite, e e ectiveness o e ecutive coac ing at e kno and what we still need to kno . n o an ed. , *The California School of Organizational Studies Handbook of Organizational Consulting Psychology.* San Francisco, CA: Jossey-Bass. 139-158 (2002).

. . . il urg, rudging to ard Dodoville once tual a roac es and case studies in e ecutive coac ing, *Consulting Psychology Journal: Practice and Research.* **56**(4), 203-213 (2004).

. . ., S it er, M., ondon, . Flautt, et al, an orking it an e ecutive coac improve multi source feedback rating over time? A quasi-experimental ield study, *Personnel Psychology.* **56**(1), 23-44 (2003).

. .D. Ellinger, ntecedents and conse uences o coac ing e aviour, *Performance Improvement Quarterly.* **16**(1), 5-28 (2003).

. .D. Ellinger, and .P. ostro , Managerial coac ing e aviours in learning organizations, *Journal of Management Development.* **18**(9), 752-771 (1999).

. .D. Ellinger, .E. Ellinger, and S. . eller, Su ervisory coac ing e aviour, employee satisfaction, and warehouse employee performance: A dyadic perspective in t e distri ution industry, *Human Resource Development Quarterly.* **14**(4), 435-458 (2003).

. D. . all, . . tazo, and ..P. ollen eck, e ind closed doors at really a ens in e ecutive coac ing, *Organizational Dynamics.* **27**(3), 39-53 (1999).

28. J.M. Hunt, and J.R. Weintraub, *The Coaching Organisation,* Thousand Oaks, CA: SAGE (2007).

. D. . Sto er, Making it stick oac ing as a tool o organizational c ange, *Coaching: An International Journal of Theory, Research and Practice.* **1**(1), 71-80 (2008).

. . . ones, n analysis o learning outco es it in or al entoring relations i s, *International Journal of Evidence Based Coaching and Mentoring.* **10**(1), 57-72 (2012).

31. K.E. Kram, *Mentoring at work : Developmental relationships in organizational life,* University Press of America (1988).

. S. erardi, D. Nicolini, and F. della, o ard a social understanding o o eo le learn in organization, *Management Learning.* **29**(3), 273-297 (1998).

. M. a son, earning to learn More t an a skill set, *Studies in Higher Education.* **25**(2), 225-238 (2000).

. S. ryee, . . ay, and . e , e otivation to entor a ong anagerial e loyees n interactions a roac , *Group and Organization Management.* **21** (3), 261-277 (1996).

35. M.C. Higgins, .E. ra , econce tualizing entoring at ork develo ental net ork ers ective, *Academy of Management Review.* **26**(2), 264-288 (2001).

Lui-Yin Kwan is a graduate student of MBA at the University of Wales, Newport, UK. He received his BA(Hons) degree in Business Administration from the University of Coventry, UK in 2012. He is a corporate coach and corporate trainer respectively, he received his RCC (Registered Corporate Coach) professional qualification from the Worldwide Association of Business Coaches, Canada in 2006.

THE INFLUENCE OF WORKPLACE CONDITION AND EMPLOYEE SATISFACTION ON EMPLOYEE COMMITMENT IN SOUTH AFRICAN COMPANIES

Elizabeth Chinomona
Vaal University of Technology
Faculty of Management Sciences
Vanderbijlpark, 1900
South Africa
Email: chakubvae@hotmail.com

Tebogo Mofokeng
Vaal University of Technology
Faculty of Management Sciences
Vanderbijlpark, 1900
South Africa
Email: mofokengtebogo@gmail.com

Abstract:
Developing and maintaining a relationship with employees has become an imperative t ing to do or usinesses to e co etitive in today's dyna ic environ ent. ork lace conditions tends to ave eit er a ositive or negative i act on e loyees' e aviour and output. Satisfied employees are likely to be more productive and involved in organisational activities. Committed employees are more likely to facilitate the provision of superior service quality. Despite the increase in research focusing on workplace conditions on organisational performance, there seem to be lack of studies that have investigated the influence of workplace conditions and employee satisfaction on employee commitment in the business fraternity in South Africa. Examining the influence of workplace conditions and employee satisfaction on employee commitment will be valuable in proving useful insights for businesses on how to create strong relationships with employees in order to enhance loyalty, longevity and competitiveness in the business. Therefore, using a data set of 150 from lower level employees in the Gauteng Province of South Africa, this study examines these relationships. Smart PLS software for Structural Equation Modeling (SEM) technique was used to statistically analyse the measurement and structural models. The results indicated that there is a significant positive relationship between all the three hypotheses. The research paper discusses both academic and managerial implications of the results and future research directions are suggested.

Keywords:
Behavioural decision making theory, Workplace conditions, employee satisfaction and employee commitment.

1.0. INTRODUCTION

Survival and success is important for any firm operating within the competitive business environment. As competition plays a major role in the business environment (Kocoglu, Imamoglu, Ince & Keskin, 2011), committed employees become critical in ensuring that organisations remain competitive (Matzler & Renzl, 2007). Commitment entails that employees are emotionally attached (Thomson, de Chernatony, Arganbright & Khan, 1999) and as such they are more likely to be more engaged (Morgan & Hunt, 1994) on organisational activities necessary or a ir 's survival. ile t is assertion is signi icant or an aspiration for most firms, it is however worrisome that globally, only 31 percent of employees, appear to be engaged (Blessingwhite, 2011). It is therefore due to such predicaments that this study finds it necessary to investigate the factors influencing employee commitment. Particularly, the study seeks to identify if whether the conditions at the workplace affect employee satisfaction and hence their commitment.

ile t ere is e tensive kno ledge o a undant key deter inants o an organisation's success, employee commitment still remains pertinent (McGregor, 2009; Bingham & Galagan, 2009). However what is of concern is that in view of the aforementioned statistic it appears that the standard of employee commitment for most firms is by and large distressing. In developing countries such as South Africa, the importation of outdated technologies, equipment and chemicals without the accompanying of guidelines to facilitate safety during application is a known phenomenon (Mbakaya, Onyoyo, Lwaki & Omondi, 1999). These unpleasant workplace conditions may conflict with employee commitment (Wibberley, 2013) and presumably be in part, the reason employee satisfaction is a major concern for businesses today (Needleman 2011). Negative and unsupportive organisational climates decrease satisfaction, resulting in unfavourable outcomes (Wangenheim, Evanschitzky & Wunderlinch, 2007) most likely to deter commitment. It is against this mainstay that the current study is found essential.

ccording to o en, , custo er satis action and inancial success often acco any ositive organisational cultures . Satis ied e loyees are likely to e ore productive and involved in organisational activities (Yoon & Suh, 2003; Yee, Yeung & Cheng, 2008) and committed employees are more likely to facilitate the provision of superior service quality (Bowen & Ostroff, 2004; de Chernatony & Cottam, 2009). It is therefore evident that satisfaction as well as commitment is vital for increasing organisational performance (Matzler *et al.,* 2007; Chena, Lee & Tseng, 2012).

As such, the academic literature is rife with studies on the drivers for employee satisfaction and commitment, respectively (e.g., Chi & Gursoy, 2009; Wallace, de Chernatony & Buil, 2013). According to Balmer, (2001) employee commitment is essential for accomplishing organisational objectives. It expresses the importance of the relationship between an employee and an organisation (Klein, Molloy & Brinsfield, 2012) as well as drives the will to sacrifice short term goals in order to realize long-term goals (Anderson & Weitz, 1992). However, satisfaction is presumed to be an influential construct of commitment (Beatson, Coote, & Rudd, 2006) but this relation has been given little attention in academic works. Also according to Chena *et al.,* (2012) workplace conditions influence employee satisfaction in some way but research on the influence of workplace condition on employee commitment remains scant as well.

As such, in order to fill the aforementioned research gap, the study has three empirical objectives, that is:

1. To investigate the influence of workplace condition on the satisfaction of employees working in Vanderbijlpark-South Africa.

2. To investigate the influence of employee satisfaction on the commitment of employees working in Vanderbijlpark-South Africa.
3. To investigate the influence of workplace condition on the commitment of employees working in Vanderbijlpark-South Africa

This study is set to improve on our understanding of how organisational climate and employee emotional state play a role on employee commitment. In addition, a contribution of new knowledge and empirical support will be added to existing body of literature on employee commitment.

The rest of the paper is organized as follows. A research model and hypotheses are provided. A discussion on the methodology, constructs and scales is to follow and the analysis and conclusion is outlined thereafter.

2.0. LITERATURE REVIEW

This study will reveal literature on the four key words which are behavioural decision making theory, workplace condition, employee satisfaction and employee commitment.

2.1. Behavioural decision making theory

According to the behavioural decision making theory, employee perception of uncertainty affects their judgment significantly (Kahneman, Slovic & Tversky, 1982). Schweizer and Patzelt, (2012) suggest that the decision of an employee to continue working for a firm depends on the extent of insecurity they perceive to be related to continued commitment. As employee commitment is essential for organisations (Bowen *et al.,* 2004; Boyd & Sutherland, 2006) employees need not encounter any organisational obstacles and must be satisfied (Aquino & Thau, 2009; Bowling & Beehr, 2006; Yee, *et al.,* 2008) in order to encourage commitment. This suggests that when employees work in good conditions, they are more likely to be satisfied and hence be committed to their work. However, according to the behavioural decision making theory, when the organisational climate does not support employees in terms of addressing their concerns and providing necessary information and knowledge with regards to their role in achieving organisational goals (Schweiger & DeNisi, 1991), employees might perceive uncertainty and as a result their level of satisfaction and involvement in the work environment decreases, leading to a reduction of commitment to the firm as well (Schweizer *et al.,* 2012). Firms therefore need to create the often preferred convenient and expected organisational structure that will minimise the perception on uncertainty (Homburg & Stock, 2004; McMullen & Shepherd, 2006), thus building employee satisfaction and encouraging commitment.

2.2. Workplace condition

ork lace condition is a unidi ensional construct and or t e ur ose o t is study, a definition of workplace condition will be adopted from Hills and Joyce, (2013) where they suggest that workplace condition may be considered in terms of both the physical and cultural setting that shapes the psychosocial environment in which work is organised and performed. According to Howell and Annansingh, (2013), an inadequate supply of information and lack of communication restrains employees from fulfilling their duties better. In terms of safety, lack of awareness leads to unsafe work (Mbakaya *et al.,* 1999) leading to workplace accidents that result in not only lost working time, but fatality as well (Boone, van Ours, Wuellrich & Zweimuller, 2011). More so, Barish, (2001) discovered that in some cases these fatalities are caused by other individuals in the workplace as opposed to inanimate working objects and conditions. Although Weiss, (1999) and Hills *et al.,* studied ork lace condition it in t e conte t o teaching and medicine, it is considered as an influential component in the business environment as well (Mishima, Goto, Kubota & Nagata, 2006; Cottini, Kato & Westergaard-Nielsen, 2011)

2.3. Employee satisfaction

E loyee satis action is de ined as a leasura le or ositive e otional state resulting ro t e a raisal o one's o or o e eriences ocke, . n t is study, a definition will be adopted from Robbins, (1996) where he describes the construct as an individual's road outlook to ard is or er ork t at as an e ect on t eir roductivity and competence in the workplace. Previous studies have provided support on the association of employee satisfaction with customer satisfaction and firm performance (Brown & Lam, 2008; Wangenheim *et al.,* 2007; Snipes, Oswald, LaTour & Armenakis, 2005; Jung & Yoon, 2013), and as such organisations strive to endorse employee satisfaction in order to respond effectively to the pressures of the competitive environment (Yee, *et al.,* 2008). According to Lam, Zhang, and Baum, (2001) employee satisfaction is especially important in the service industry, however organisations in general need to actively promote it through discouraging issues negatively affecting employees such as low pay and limited upward mobility for example (Katzenbach & Santamaria, 1999; Osterman & Shulman, 2011; Segal, 2012). In this way, employees will be happy, displaying a pleasant attitude towards customers and thereby encouraging a positive perception of customers or clients regarding the firm and the particular services they provide (Howard & Gengler, 2001).

2.4. Employee commitment

o it ent is de ined as an i licit or explicit pledge of relational continuity between e c ange artners D yer *et al.,* 1987). Moorman, Zaltman and Deshpandé, (1992) de ned t e ter as an enduring desire to aintain a valued relations i . t is a multidimensional construct comprising of affective, continuance and normative commitment however for the purpose of this study, it will be measured as unidimensional. Adopted from Schweizer *et al.,* (2012) this study defines employee commitment as the e loyees' decision to stay it a ir regardless o t e organisational cli ate or t e change therein. According to Klein *et al.,* (2012) commitment conveys the significance of a relationship between partners and their will to proceed with the relationship in the future. However when employees sense uncertainty, their will to continue working for the firm dissolves (McMullen & Shepherd, 2006; Bockerman & Ilmakunnas, 2009). Changes in organisational structures and working conditions arouse uncertainty (Shanley & Correa, 1992), however when a firm devotes efforts to support employees, employees become dedicated to their work duties (Berry, 2002). Dedicated and committed employees become more willing and capable of delivering higher levels of service quality (El ada , Ellinger & Franke, 2008; Lee, Nam, Park & Kyung, 2006). As a result customers are more likely to be satisfied and loyal to the organisation (Beatson *et al.,* 2006).

3.0. CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT

Drawing from the theory, the extant literature from Health Economics, Management and Operations Management aforementioned, a conceptual model is developed in Figure 1. The model consists of three constructs, that is, two predictors workplace condition and employee satisfaction and one outcome variable employee commitment. Conceivably, workplace condition and employee satisfaction influences employee commitment. Detailed explanations of the associations between these constructs are provided in the hypotheses developed hereafter.
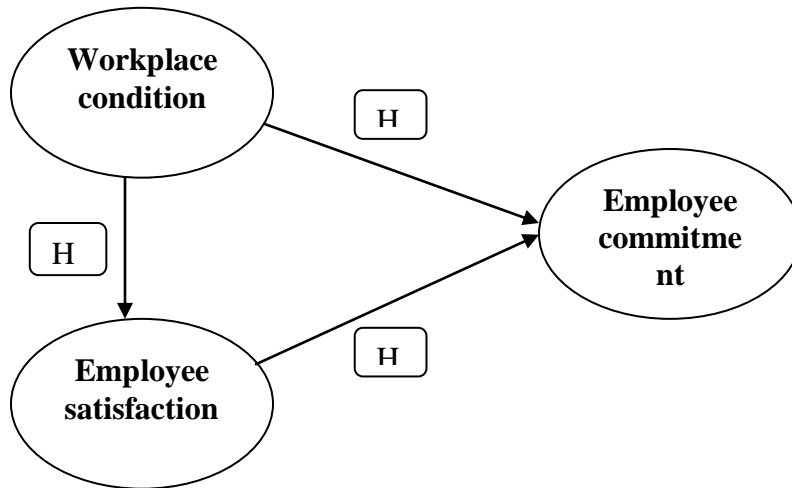
Figure 1: Conceptual Model

Based on the above literature and conceptual model, the following hypotheses are developed

3.1 Workplace Condition and Employee Satisfaction

According to the behaviour decision making theory, when firms support and care for their e loyees' t roug e ective co unication e.g. de onstrating sa ety a areness (Schweiger *et al.,* 1991), employees are likely to be satisfied (Schweizer *et al.,* 2012). More so, the assigning of apposite workload, the provision of opportunities and training and involvement in decision making are vital for employee satisfaction (Weiss, 1999). Therefore once the overall conditions at the workplace are in accordance with the South African labour legislations, it is expected that employees will be much satisfied in their workplace. Therefore, based on such reasoning, this paper hypothesizes that:

H1: Workplace condition has a positive influence on the satisfaction of employees working in Vanderbijlpark.

3.2 Employee satisfaction and Employee commitment

In an industry survey conducted by Mercer LLC 2010, results revealed that employee satisfaction is still a major concern for customers and firms alike (Needleman, 2011). It is therefore proposed in the current study that the development of positive working climates by firms will lead to satisfied employees (Wangenheim *et al.,* 2007). Accordingly, when employees are satisfied, they develop a positive attitude and become more efficient (Robbins, 1996). This suggest that when employees become satisfied, they become happy (Chena *et al.,* 2012) and as they become happy, they tend to be more dedicated and thus committed to their work (Yoon *et al.,* 2003). Therefore, it can be hypothesized that:

H2: Employee satisfaction has a positive influence on the commitment of employees working in Vanderbijlpark.

3.3 Workplace Condition and Employee Commitment

According to Barish, (2001) many occupations are inherently risky. As such many workers are likely to be involved in a workplace accident (Boone *et al.,* 2011). Furthermore, it has been found that unsupportive workplace conditions are the primary reason why employees tend to leave their work (Yee, 1990; Cottini *et al.,* 2011). It is therefore submitted in the current study that safety awareness programmes and supportive

workplace conditions must be arranged within organisations in order for employees to be contented (Yee, 1990; Mbakaya *et al.,* 1999). Accordingly, when employees work under such a positive working climate, they are likely to be more committed to their work. Thus, based on such reasoning, this paper hypothesizes that:

H3: Workplace condition has a positive influence on the commitment of employees working in Vanderbijlpark.

4.0 Research Methodology

4.1 Sample and data collection

The target population for the study was South African companies in Gauteng province. The sampling unit was the individual employees who are not in managerial positions. This method has the advantage of speed, is less costly and the researcher has control over respondent type. Students from the Vaal University of Technology were recruited as research assistants to distribute and collect the questionnaires. Of the total of 200 questionnaires distributed, 150 usable questionnaires were retrieved for the final data analysis, representing a response rate of 75 per cent. To eliminate differences in response patterns due to different reference points, all respondents were prompted to answer the questionnaires with reference to companies they work for.

4.2 Measurement Instrument and Questionnaire Design

Research scales were operationalized on the basis of previous work. Proper modifications ere ade in order to it t e current researc conte t and ur ose.   ork lace conditions   easure used our-ite   scales ada ted ro   ule   . Employee satis action used our- item scale measure all adapted from Chinomona, Lin, Wang and   en   . E loyee co   it ent used ive item scale measure adapted from Meyer, Allen and Smith (1993). All the measurement items were measured on a five-point Likert-type scales that was anchored by 1= strongly disagree to 5= strongly agree to express the degree of agreement.

4.3 Respondent Profile

Table 1 presents the description of the participants. The respondents were asked to report their demographic information, including gender, age, position in the company and type of employment. The respondents were predominantly females (86%). The mode age group of the respondent was that of less than 36-45 years (50%). 70% occupy the junior level positions. 75% of the respondents were part-time employees.

Table 4.1 Sample Demographic Characteristics

Gender	Frequency	Percentage
Male	64	43
Female	86	57
Total	**150**	**100**
Age	**Frequency**	**Percentage**
18-25	20	13
26-35	30	20
36-45	50	33
46-55	35	23
56 and above	15	11

Total	150	100
Position in the company	**Frequency**	**Percentage**
Trainee entry level	15	10
Junior level	70	47
Senior level	55	37
Others (Specify)	10	6
Total	**150**	**100**
Type of employment	**Frequency**	**Percentage**
Casual	20	13
Contract	35	23
Part-Time	75	51
Permanent	20	13
Total	**150**	**100**

5.0 Data Analysis

In order to statistically analyze the measurement and structural models, this study used Smart PLS software for Structural Equation Modeling (SEM) technique (Ringle, Wende & Will 2005). In SEM, the measurement model refers to the linkages between the latent variables and their manifest variables and the structural model captures the hypothesized causal relationships among the research constructs (Chin & Newsted, 1999; Wetzels, Odekerken-Schroder & Van Oppen, 2009). Unlike AMOS and LISREL which are covariance based approaches, Smart PLS is a regression based technique that originates from path analysis. Smart PLS has emerged as a powerful approach to study causal models involving multiple constructs with multiple indicators (Chinomona & Surujal, 2012). Smart PLS - a component-based method, has an ability to model latent constructs that are uncontaminated by measurement error under conditions of non-normality. It has the ability to handle complex predictive models in small-to-medium sample sizes. Since the current study sample size is relatively small (150) Smart PLS was found more appropriate and befitting the purpose of the current study. In this respect, Bootstrapping resampling method was used to test the statistical significance of the relationships. This procedure entailed generating 200 sub-samples of cases randomly selected, with replacement, from the original data. Below is Table 5.1, presenting evidence on the reliability and validity of the measurement model.

5.1 Measurement Model

To ensure convergent validity, the researcher checked if items loaded on their respective (a priori) constructs with loadings greater than 0.6, while discriminant validity was checked by ensuring that there was no significant inter-research variables cross-loadings (Chin, 1998). As can be seen (Table 5.1), all items have loadings greater than 0.6 (i.e. ranging from 0.640 to 0.891), with no cross-loadings greater than 0.903, while t-statistics derived from bootstrapping (200 resamples) suggest all loadings are significant at p value, 0.001. As such, this confirms that all the measurement items converged well on their respective constructs and therefore are acceptable measures.

Table 5.1 Accuracy Analysis Statistics

Research Construct		Sample Mean	Standard Deviation	Standard Error	T-Statistics	Cronbac's value	C.R. Value	AVE Value	R-Square	Factor Loading
WC	WC 1	0.405	0.121	0.121	4.606	0.875	0.914	0.727	0.00	0.777
	WC 2									0.798
	WC 3									0.743
	WC 4									0.744
ES	ES1	0.482	0.102	0.102	3.748	0.7647	0.850	0.586	0.500	0.812
	ES2									0.843
	ES3									0.891
	ES4									0.864
EC	ECI	0.408	0.120	0.120	3.193	0.738	0.818	0.500	0.450	0.750
	EC 2									0.645
	EC 3									0.640
	EC 4									0.655
	EC 5									0.748

*Note: EC=Employee Commitment; ES=Employee Satisfaction; WC=Worplace Condition; C.R.: Composite Reliability; AVE: Average Variance Reliability; * Scores: 1 – Strongly Agree; 3 – Neutral; 5 – Strongly Disagree*

According to Chin (1998), research variables should have an average variance extracted (AVE) of more than 0.5 and a composite reliability of more than 0.8 (convergent validity), and inter-construct correlations should be less than the square-root of the AVE (discriminant validity). As can be seen (Table 2), all constructs exceed these criteria, with AVE and CR generally equal or greater than 0.5 and 0.8, respectively. All in all, these results confirm the existence of discriminant validity of the measurement used in this study.

Table 5.2 Correlations between Constructs

Research Constructs	EC	ES	WP
EC	1.000		
ES	0.460	1.000	
WP	0.334	0.400	1.000

Note: EC=Employee Commitment; ES=Employee Satisfaction; WP=Worplace Condition.

5.2 Path Model

PLS also generates the path coefficients for the relationships modelled among the constructs. The significance of these coefficients was assessed using the bootstrap procedure (with 200 sub-samples) that provided the t-values for each path estimate. Figure 5.1 and Table 5.3 presents the results of the PLS analysis on the structural model along with the path estimates and t-values. Support for the study hypotheses, which are labelled on their corresponding paths in Figure 5.1, could be ascertained by examining the directionality (positive or negative) of the path coefficients and the significance of the t-values. The standardized path coefficients are expected to be at least 0.2, and preferably greater than 0.3 (Chin 1998).

Figure 5.1 Measurement and Structural Model
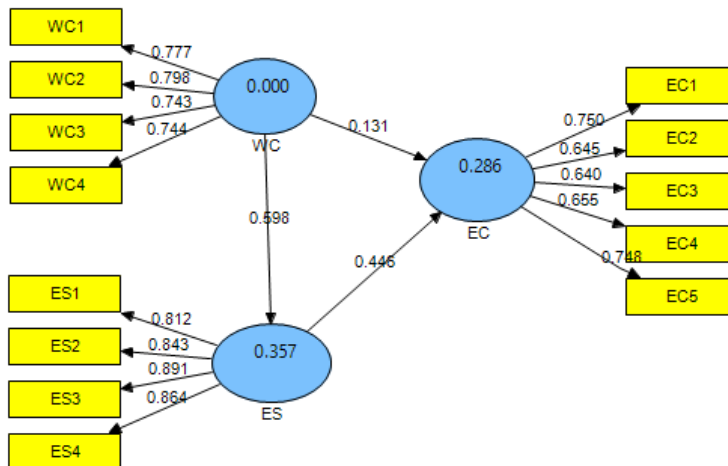
Results

Note: EC=Employee Commitment; ES=Employee Satisfaction; WC=Worplace Condition

657

The results provide support for the proposed positive relationships between the three relationships (i.e. H1, H2, and H3). Figure 5.1 and Table 5.3 provide the path coefficients for H1 to H3 (i.e. 0.131to 0.598).

Table 5.3 Results of Structural Equation Model Analysis

Proposed Hypothesis Relationship	Hypothesis	Path Coefficients	T-Statistics	Rejected/ Supported
WC to ES	H1	0.598	4.333	Supported
ES to EC	H2	0.446	4.836	Supported
WC to EC	H3	0.131	4.289	Supported

Note: EC=Employee Commitment;   ES=Employee Satisfaction;   WC=Worplace Condition

Following formulae provided by Tenenhaus, Vinzi, Chatelin & Lauro, (2005), the global goodness-of-fit (GoF) statistic for the research model was calculated. The calculated global goodness of fit (GoF) is 0.66, which exceed the threshold of GoF>0.36 suggested by Wetzels, Odekerken-Schröder & van Oppen (2009). Thus, this study concludes that the research model has a good overall fit.

6.0Discussion of Results

The results in Table 5.3 and Figure 5.1 provide support for the three hypotheses (H1 to H3). Hypothesis 1 posited a positive relationship between workplace condition and employee satisfaction. Consistent with H1, the result in Table 5.3 and Figure 5.1, indicates that there is a significant (t= 4.333) positive (beta= 0.598) relationship between workplace condition and employee satisfaction. Therefore, H1 is supported.

Hypothesis 2 posited a positive association between employee satisfaction and employee commitment. Hypothesis 2, results indicated that the relationship between employee satisfaction and employee commitment (beta= 0.446) is positive and that relationship is significant (t= 4.836). This is consistent with the prediction of H2 and is therefore supported. Thus, a higher level of employee satisfaction is associated with a high employee commitment.

Hypothesis 3 posited a positive relationship between workplace condition and employee commitment. Consistent with H3, the result in Table 5.3 and Figure 5.1, indicates that there is a significant (t= 4.289), positive (beta= 0.131) relationship between workplace condition and employee commitment. Therefore, H3 is supported.

7.0 Conclusion

The purpose of this study was to investigate the influence of workplace conditions and employee satisfaction on employee commitment. To achieve this objective, this paper used Smart PLS to test the hypotheses. To test the proposed hypotheses, data were collected from Vanderbijilpark in Gauteng Province in South Africa. The empirical result supported all the three posited research hypotheses in a significant way.

8.0 Implications of the study

The current study investigate this contentious issues in an often most neglected research context   the African setting. Therefore, the findings of this empirical study are expected to provide fruitful new insights and implications to both academicians and employees across the globe. In particular, the current study findings provide tentative support to the proposition that workplace conditions and employee satisfaction have an impact on e loyee co   it ent. n t e ractitioners' side, i   ortant in luential role o   ork lace conditions and employee satisfaction on employee commitment in an African context are highlighted. Therefore, this study for instance submits managers should find ways to attract and please employees in order to retain them.

9.0 Limitations and Future Research

Although this study makes significant contributions to both academia and practice, it was limited in some ways, and therefore some future research avenues are suggested. First, the data were gathered from Vanderbijlpark in the Gauteng Province of South Africa and the sample size of 150 which is relatively small. Perhaps, the results would be more informative if the sample size is large and data gathered from the other eight provinces of the country are included. Therefore, future studies may be conducted by using data from other cities and other provinces in South Africa. Second, perhaps too, future studies should not be limited to South Africa, but rather consider extending this research to other African countries such as Zimbabwe for results comparison. Future studies can also extend the current study by studying the relationships in the current conceptual model in other sectors of the economy. Above and beyond, this will immensely contribute new knowledge to the existing body of literature in the African setting   a research context which happens to be neglected in academics.

REFERENCES
ANDERSON, E., & WEITZ, B. 1992. The use of pledges to build and sustain commitment in distribution channels. *Journal of Marketing Research*, 29(1), 18-34.
AQUINO, K., & THAU, S. 2009. Workplace victimization: Aggression from the target's perspective. *Annual Review of Psychology*, 60(1), 717-741.
BALMER, J.M.T. 2001. Corporate identity, corporate branding and corporate marketing: Seeing through the fog. *European Journal of Marketing*, 35(3/4), 248-291.
BARISH, R.C., & CIH, M.S. 2001. Legislation and Regulations addressing Workplace Violence in the United States and British Columbia. *American Journal of Preventive Medicine*, 20(2), 149-154.
BEATSON, A., COOTE, L.V., & RUDD, J.M. 2006. Determining consumer satisfaction and commitment through self-service technology and personal service usage. *Journal of Marketing Management*, 22(7), 853-882.
BERRY, L.L. 2002. Relationship marketing of services-Perspectives from 1983 and 2000. *Journal of Relationship Marketing*, 1(1), 59-70.
BINGHAM, T., & GALAGAN, P. 2009. Training at Lowe's: Let's learn something together. *T+D*, 34-43.
BLESSINGWHITE, 2011. Employee Engagement Report, (retrieved on 12.08.13), [from http://www.blessingwhite.com/eee report.asp].

BOCKERMAN, P., & ILMAKUNNAS, P. 2009. Job disamenities, job satisfaction, quit intentions, and actual separations: Putting the pieces together. *Industrial Relations*, 48(1), 73-96.

BOONE, J., VAN OURS, J.C., WUELLRICH, J-P., & ZWEIMULLER, J. 2011. Recessions are bad for workplace safety. *Journal of Health Economics*, 30, 764-773.

BOWEN, D.E. 2010. Creating and Maintaining a Service Culture. In Ostrom, A. L., Bitner, M. J.,Brown,S.W.,Burkhard,K.A.,Goul,M.,Smith-Daniels,V.,Demirkan,H.,&Rabinovich, E. (2010). Moving forward and making a difference: Research priorities for the science of service. *Journal of Services Research*, 13(1), 4-36.

BOWEN, D.E. 1996. Market-focused HRM in service organizations: Satisfying internal and external customers. *Journal of Market-Focused Management*, 1(1), 31-48.

BOWEN, D.E., & LAWLER, E.E. 1992. Total quality-oriented human resources management. *Organizational Dynamics*, 29-41.

BOWEN, D.E., & OSTROFF, C. 2004. Understanding HRM- r er or ance linkages The role of the strength of the HRM system. *Academy of Management Review*, 29(2), 203-221.

BOWLING, N.A., & BEEHR, T.A. 2006. Workplace harassment from the victim's perspective: A theoretical model and meta-analysis. *Journal of Applied Physiology*, 91(5), 998-1012.

BOYD, G., & SUTHERLAND, M. 2006. Obtaining employee commitment to living the brand of the organization. *South African Journal of Business Management*, 37(1), 9-20.

BROWN, S.P., & LAM, S.K. 2008. A Meta-Analysis of Relationships Linking Employee Satisfaction to Customer Responses. *Journal of Retailing*, 84(3), 243-255.

CHENA, Y-H., LEE, W-C., & TSENG, K-W. 2012. Differentiation Research on employee satisfaction and happiness for European invested and local Chinese companies. *Procedia - Social and Behavioral Sciences*, 57, 549-554.

CHI, C.G., & GURSOY, D. 2009. Employee satisfaction, customer satisfaction and financial performance: An empirical examination. *International Journal of Hospitality Management*, 28, 245-253.

CHIN, W.W.1998. Issues and opinion on structural equation modelling, MIS Quarterly, 22 (1), 7 16.

CHIN, W.W & NEWSTED P.R. 1999. Structural equation modeling analysis with small samples using partial least squares. In Rick Hoyle (ed). Statistical Strategies for Small Sample Research. Thousand Oaks, CA: Sage. pp. 307-341.

1. CHINOMONA, R., LIN, J.,WANG, M.,&CHENG, J. 2010. Soft power and Desirable
2.   Relationship Outcomes in Zimbabwe Distribution Channels. *Journal of African Business,* 11(2) :182-200.

CHINOMONA, R & SURUJAL, B. 2012. The influence of student internship work experience on their self-improvement and professionalism in Sport Management. African Journal for Physical, Health Education, Recreation and Dance, 18(4), 885-899.

COTTINI, E., KATO, T., & WESTERGAARD-NIELSEN, N. 2011. Adverse workplace conditions, high-involvement work practices and labor turnover: Evidence from Danish linked employer employee data. *Labour Economics*, 18, 872-880.

DE CHERNATONY, L., & COTTAM, S. 2009. Interacting contributions of different departments to brand success. *Journal of Business Research*, 62(3), 297-304.

DWYER, R.F., SCHURR, P.H., & OH, S. 1987. Developing buyer-seller relationships. *Journal of Marketing*, 51(2), 11-27.

EMD , . ., E N E , .E., F N E , . . . ntecedents and consequences of frontline service employee commitment to service quality. *Journal of Marketing Theory and Practice*, 16(2), 95-110.

GULE. X. M. 2009. Thesis on Improving the service quality of Taxi operators in the Nelson Mandela Bay. Nelson Mandela Metropolitan University.

GUNDLACH, G.T., ACHROL, R.S., & MENTZER, J.T. 1995. The structure of commitment in exchange. *Journal of Marketing*, 59(1), 78-92.

HILLS, D., & JOYCE, C. 2013. A review of research on the prevalence, antecedents, consequences and prevention of workplace aggression in clinical medical practice. *Aggression and Violent Behavior*, 18, 554-569.

M , ., S , .M. . e link et een sales eo le's o satis action and customer satisfaction in a business-to-business context: a dyadic analysis. *Journal of the Academy of Marketing Science*, 32(2), 144-158.

HOWARD, D.J., & GENGLER, C. 2001. Emotional contagion effects on product attitudes. *Journal of Consumer Research*, 28(2), 189-201.

HOWELL, K.E., & ANNANSINGH, F. 2013. Knowledge generation and sharing in UK universities: A tale of two cultures? *International Journal of Information Management*, 33, 32-39.

N , .S., N, . . . Do e loyees' satis ed custo ers res ond it a satis actory relations i e e ects o e loyees' satis action on custo ers' satis action and loyalty in a family restaurant. *International Journal of Hospitality Management*, 34, 1-8.

KAHNEMAN, T., SLOVIC, P., & TVERSKY, A. 1982. *Judgement under uncertainty: Heuristics and biases*. Cambridge, MA: Cambridge Press.

KATZENBACH, J.R., & SANTAMARIA, J.A. 1999. Firing up the Front Line. *Harvard Business Review*, 77(3), 107-17.

KLEIN, H.J., MOLLOY, J.C., & BRINSFIELD, C.T. 2012. Reconceptualizing workplace commitment to redress a stretched construct: Revisiting assumptions and removing confounds. *Academy of Management Review*, 37, 130-151.

KOCOGLU, I., IMAMOGLU, S.Z., INCE, H., & KESKIN, H. 2011. The effect of supply chain integration on information sharing: Enhancing the supply chain performance. *Procedia Social and Behavioral Sciences*, 24, 1630-1649.

M, ., N , ., M, . . n investigation o e loyee's o satisfaction: The case of hotels in Hong Kong. *Tourism Management*, 22, 157-165.

EE, . ., N M, . ., P , D. ., N , . . . at actors in uence customer oriented prosocial behavior? *Journal of Services Marketing*, 20(4), 251-264.

LOCKE, E.A. 1976. *The Nature and Causes of Job Satisfaction*, in Handbook of Industrial and Organizational Psychology. Dunnatte Marvin ed. Chicago: Rand McNally, 1297-350.

MATZLER, K., & RENZL, B. 2007. Assessing asymmetric effects in the formation of employee satisfaction. *Tourism Management*, 28, 1093-1103.

MBAKAYA, C.F.L., ONYOYO, H.A., LWAKI, S.A., & OMONDI, O.J. 1999. A survey on management perspectives of the state of workplace health and safety practices in Kenya. *Accident Analysis and Prevention*, 31, 305-312.

MCGREGOR, J. 2009. When service means survival. *Business Week Special Report on Extreme Customer Service*, 26-40.

MCMULLEN, J.S., & SHEPHERD, D.A. 2006. Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31, 132-152.

MEYER, J.P. ALLEN, N.J & SMITH. C. 1993. Commitment to organisations and Occupations: Extension and Test of a Three- Component Conceptuallisation. Journal Of Applied Psychology, 78, 538-551.

MISHIMA, N., GOTO, T., KUBOTA, S., & NAGATA, S. 2006. Present conditions and problems of applying autogenic training to promote mental health in the workplace. *International Congress Series*, 1287, 230-234.

MOORMAN, C., ZALTMAN, G., & DESHPANDÉ, R. 1992. Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29(3), 314-329.

MORGAN, R.M., & HUNT, S.D. 1994. The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58, 20-38.

NEEDLEMAN, S.E. 2011. One-Third of U.S. Workers Ready to Quit, (retrieved on 09.08.2013), [from http://blogs.wsj.com/in-charge/2011/06/20/ one-third-of-u-s-workers-ready-to-quit/].

OSTERMAN, P., & SHULMAN, B. 2011. Good *Jobs America: Making Work Better for Everyone*. New York: Russell Sage.

RINGLE CM, WENDE S & WILL A. (2005). SmartPLS 2.0 M3. Available at http:// www.smartpls.de. Accessed 23/03/2013

ROBBINS, S.P. 1996. *Organizational Behavior, Concepts Controversies Applications*, Publisher: Prentice Hall, 7th Edition.

SCHWEIGER, D.M., & DENISI, A.S. 1991. Communication with employees following a erger longitudinal eld e eri ent. *Academy of Management Journal*, 34, 110-135.

SCHWEIZER, L., & PATZELT, H. 2012. Employee commitment in the post-acquisition integration process: The effect of integration speed and leadership. *Scandinavian Journal of Management*, 28, 298-310.

SE   , D. .   le's etail r y, ong on oyalty ut S ort on Pay retrieved on 10.08.13), [from http://www.nytimes.com/ 2012/06/24/business/apple-store-workers-loyal-but-short-on-pay.html? pagewanted=all& r=0].

SHANLEY, M.T., & CORREA, M.E. 1992. Agreement between top management teams and expectations for post acquisition performance. *Strategic Management Journal*, 13, 245-266.

SNIPES, R.L., OSWALD, S.L., LATOUR, M., & ARMENAKIS, A.A. 2005. The effects of specific job satisfaction facets on customer perceptions of service quality: An employee-level analysis. *Journal of Business Research*, 58, 1330-1339.

TENENHAUS, M. VINZI, V. E. CHATELIN, Y.M & LAURO, C. 2005. PLS Path Modeling. Computational Statistics and Data Analysis, 48(1), 159 205.

THOMSON, K., DE CHERNATONY, L., ARGANBRIGHT, L., & KHAN, S. 1999. The buy-in benchmark: How staff understanding and commitment impact brand and business performance. *Journal of Marketing Management*, 15(8), 819-835.

WALLACE, E., DE CHERNATONY, L., & BUIL, I. 2013. Building bank brands: How leaders i e avior in uences e loyee co   it ent. *Journal of Business Research*, 66, 165-171.

WANGENHEIM, F.V., EVANSCHITZKY, H., & WUNDERLINCH, M. 2007. Does the employee customer satisfaction link hold for all employee groups? *Journal of Business Research*, 60, 690-697.

WEISS, E.M. 1999. Workplace condition Perceived workplace conditions and first-year teachers' morale, career choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher Education*, 15, 861-879.

WETZELS, M. ODEKERKEN-SCHRÖDER, G & VAN OPPEN, C. 2009. Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration

WIBBERLEY, G. 2013. The problems of a dirty workplace in domiciliary care. *Health and Place*, 21, 156-162.

YEE, R.W.Y., YEUNG, A.C.L., & CHENG, T.C.E. 2008. The impact of employee satis action on uality and ro ta ility in ig -contact service industries. *Journal of Operations Management*, 26, 651-668.

YEE, S.M. 1990. *Careers in the classroom: When teaching is more than a job*. New York: Teachers College Press.

YOON, M.H., & SUH, J. 2003. Organizational citizenship behaviors and service quality as external effectiveness of contact employees. *Journal of Business Research*, 56(8), 597-611.

....

Analysis of the Current State of Online Reputation of Public Institutions and the Possibilities of Its Improvement

eter or [a] ranti e o [a] Nella Svetozarovová[a]

[a] niversity o Prešov in Prešov, Faculty o Manage ent, De art ent o Marketing and nternational rade, onštant nova , Prešov, Slovak Republic, 080 01

Abstract:
The article deals with the issue of reputation, especially with the focus on a current phenomenon of reputation in the digital world of the Internet - online reputation - of selected public institutions operating in the domestic market. Sentiments of specifically selected twenty public universities and colleges are rated in two dimensions: virtual and real. The primary aim of this article is to investigate the existence of a statistically significant correlation between reputation of researched subjects in the real and virtual world. In conclusion paper presents options and recommendations for optimizing virtual reputation and highlights the differences of perception of reputation in the traditional and in the virtual market by understanding the differences between factors affecting traditional reputation and factors affecting reputation in digital world.

Keywords:
online reputation, sentiment, public institution, marketing.

Introduction

Reputation is a concept commonly used in marketing management and it generally means an overall presence on the market. From the point of view of Internet we can compare it to leaving footprints. All activities are interconnected and complement one another.[1] Each institution has a reputation or online reputation, whether they want it, or not; the reputation does exist.[2] If an entrepreneurs running their own businesses (or managing an institutions), they should not leave their reputation to chance. It is their ultimate responsibility. Company's reputation is considered to be very valuable asset. As George Washington once said: "With a reputation you can do anything without one, nothing".[3] However, if we consider corporate reputation, its definition is a bit complicated.[4] Balmer and Greyser [5] characterize corporate reputation as such which is created over time based on what the organization did and how it behaved. Company's or corporate reputation only reflects relative standing of the company, both internally with its employees and externally with other stakeholders, in both its competitive and institutional environments. Highhouse defines corporate reputation as a global, stable over time, evaluative judgement about a company that is shared by multiple constituencies.[6] It is a pure reaction of customers, investors, employees and other stakeholders. It is a collective judgement of individual impressions.[7]

1 The issue of reputation in the context of trust

Trust fulfils every organisation in a million of different ways. No institution can function without it. Trust is a strong belief that we can rely on someone.[8] Shaw offers alternative definition (in Armstrong 2007); he defines the concept of trust as a belief that those on whom we depend will meet our expectations of them.[9] These expectations depend on our critical judgement of other person's responsibility to meet our needs. Tavakolifard [10] claims that generally accepted definition of trust is still missing despite comprehensive studies of philosophers, sociologists and psychologists. It is easier to identify individual features of trust than to determine exactly what it means. We agree with the definition by Gambetta [11] who argues that trust (or symmetrically, distrust) is a particular level of the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action, both before he can monitor such action (or independently of his capacity ever to be able to monitor it) and in a context in which it affects his own action. An agent is generally an individual or a thing (entity) which affects the environment or other agents and has characteristic and its own targets which it strives to achieve. The contextuality of trust means that the trust of entity "A" towards entity "B" is always dependent on certain context "C". We'd like to point out the work of Jøsang [12] who deals with "the issue of trust" (in terms of creating trust, establishing credibility and making decisions on the basis of credibility). Jøsang further states that trust is an oriented relationship between two parties called the subject and the object. The term oriented is used in the sense of clear distinction of resources (subject) and goals (object) of the relationship. The authors further define two types of trust: Context-independent (reliability trust) - where trust is the subjective probability by which an individual "A" expects that another individual "B" performs a given action on which its welfare depends; and Context-dependent (decision-trust) - Trust is the extent to which one party is willing to depend on something or somebody in a given situation with a feeling of relative security, even though negative consequences are possible.

1.1   *Classification of models based on trust and reputation*

Jordi Sabater and Carles Sierra [13] in their work Review on Computa-tional Trust and Reputation Models have specified classifications which focus on major models and try to find common features based on which individual classification methods and their

categories are designed. Basic classification criterion is the so called model type. Model type means whether the model works with trust or a reputation:

models of trust   work only with trust,

models of reputation   work only with reputation,

hybrid models   work both with trust and reputation.

According to these authors, models can be classified on the basis of determining the origin of information (knowledge) which is used for the evaluation of reputation, as well as confidence.

1.2   *Classification of models based on trust and reputation*

Companies and organizations in common have invested large amounts of financial resources and hired agencies and marketing professionals to prepare communication campaigns to support such brand image that would create an incentive for the customers to make purchases.[14] This argument is supported by Smaiziene and Jucevicius[15] who claim that companies prefer to focus primarily on the image and leave the reputation behind. Grant Leboff mentions that the image is not a guarantee of positive comments and recommendations.[14] These will only be achieved due to good reputation. In other words, the foundation of modern marketing is not the image which the organization strives to create, but the reputation which it has actually established. As regards the image and reputation, Bennet and Kottasz point out time dimension (time of creation) as the main characteristics which distinguish these two constructs. In other words, organization's image can be created in a short time. Reputation is generated in a longer time frame, and therefore cannot be changed or redirected as quickly as the image (In: Smaiziene, Jucevicius 2009).[15] Such an approach is also supported by Jackson[16] who argues that the time of establishment or creation is one of the main differences between the image (short time of creation) and reputation (long time of creation). Fill[17] perceives reputation as wider set of images. He is also of the opinion that changing reputation is more time consuming and difficult while image can be influenced much faster. Therefore, it may be said that reputation and image are not synonymous, as some authors point out, yet they are closely related and interdependent elements.

1.3 Creation of reputation

Reputation of any organization is composed of three forms, i.e. primary, secondary and cyclic.[18] Fombrun and Foss[19] defined reputation as collective assessment of the organization's ability to provide valuable product, service or other value to a group of customers. They have developed a scale that measures corporate reputation, which they call corporate reputation quotient (RQ). RQ is a complex method of measuring corporate reputation.[20] The building of corporate reputation has been primarily attributed to the area of marketing and communication. Nowadays the corporate reputation has been integrated into human resource management and corporate strategy. Reputation is communicated to t e u lic y t e organization's anagers. t is generally acce ted t at re utation egins from the inside out.[21] Fombrun and Foss[19] noted that it is good if the organization takes care of its reputation, and they emphasized the following factors:

1. The Principle of Distinctiveness - Strong reputations result when organizations own a distinctive position in the minds of customers.

2. The Principle of Focus - Strong reputations result when organizations focus their actions and communications around a single core theme.

3. The Principle of Consistency - Strong reputations result when organizations are consistent in their actions and communications with internal, as well as external environment.

4. The Principle of Transparency - Strong reputations result when organizations are transparent in the way they conduct their affairs. In particular, organizations should be perceived as open and honest in their business activities. Transparency requires communication - a lot of it.

1.4 Reputation in online environment

Reputation in life and business is everything. It means that reputation is very fragile and one mistake may sometimes cause irreversible damage. This is especially true in the digital world, where radical transparency and demanding customers have the greatest power. If the Internet offers consumers a new way to share information about companies and brands, then it also allows the companies to control information about them.[1] Consumers are able to obtain information on potential suppliers and products, but they can also create new content on the Internet which may affect the perception of other consumers and stakeholders of the respective organization. Negative comments on the Internet can quickly and seriously damage the image and reputation of the brand.[22] eWOM (electronic word of mouth) is an important part of online reputation. This form of communication may be defined as any positive or negative statement made by potential, actual or former customers about a product or organization via the Internet.[23]

Jun Loayza[24] presents basic principles of online reputation management which he divides into various segments such as Quick Fix, Long-Lasting, Content Driven and Relationship Driven.

2 Analysis of reputation of selected entities in Slovak real and virtual market

Virtual reputation management or, in other words Online reputation management (ORM in short) has ceased to be a novelty or an unknown concept in Slovakia. ORM has been applied in many industries such as banking and insurance. The results of these surveys provide a reliable and current view of virtual presentation of organizations as well as the image of their virtual identities. The level of positive online reputation is not only a source of information for organizations, but also an important factor influencing the decision-making processes of consumers. Methodology called "sentiment analysis" was used to assess virtual reputation.[18] Using the chosen methodology, online reputation of top twenty public universities and colleges on Slovak market (as the best representatives of entities from education field) was analyzed. The presented methodology can then be used for the purpose of ascertaining the online reputation of various entities such as SMEs, public institutions and even individuals using the Internet for personal branding. The sequence of the reputation measurement process begins by defining representatives of the segment. We have selected representatives of public universities and colleges in Slovakia in this case. Subsequently, virtual identity of these entities using the Google search engine was studied. For the purposes of the sentiment analysis the first 10 search results was taken into account. To ensure objectivity of the results that may be biased due to the tendency of search engines to personalize the search through the history of Internet activity, the proxy anonymizer was used in order to increase anonymity. Only organic results were included in the survey, paid contextual advertisements of the Adwords system were excluded. In determining the sentiment the numbers of positive reviews on social networks were not taken into account. Only the fact that an institution owns a profile on any of the virtual social networks was taken into account. The nature of institutions descriptions on the Wikipedia portal was also not taken into account. Only the fact that Wikipedia mentions an institution was taken into account. In both cases, these results were assigned neutral sentiment. If the search engine found, besides an official institution's web site, web pages

of institution's faculties or entities associated with such institution on other places in a search, these results were assigned neutral sentiments. If the institution's web site occurred in several places within the search, only the first occurrence was taken into account, where the following occurrences of institution's web site were assigned neutral character. Well known and well established names of selected entities were used as search phrases in full regardless of their home sites. One of the main factors in the evaluation process was sentiment of the results. This can be loosely defined as the nature of results found by entering keywords. Positive, neutral, but also negative feedback can be found in the results. These sentiments, as well as positions on which they were displayed, provided a picture of research subjects, and thus ultimately determine its online reputation. Sentiment of individual results in the Top 10 is clearly shown in the table with a short commentary. At the same time, scores are allocated to each position on the basis of sentiment in the following table:

Table 1 Sentiment individual results / position of results.[18]

Sentiment / Position of the result	1	2	3	4	5	6	7	8	9	10
Positive sentiment +	20	19	18	17	16	15	14	13	12	11
Custom web site of the organization X	10	9	8	7	6	5	4	3	2	1
Neutral sentiment ±	2	2	2	2	2	2	2	2	2	2
Negative sentiment -	-20	-19	-18	-17	-16	-15	-14	-13	-12	-11

The table shows chronological sequence of awarding points to analyzed entities. Positive feedback or sentiment increases score. The higher the position of this sentiment in search results, the more points it has. Similarly, but with the opposite effect, this applies to identifying negative sentiment. Points are deducted as follows: the higher the position of the sentiment in search results, the bigger the point deduction resulting in rapidly deteriorating reputation. Within the overall evaluation individual sentiments are then totaled, and the sum indicates the strength of sentiment of all ten search engine results for a given entity. The resulting sum of sentiments represents the overall level (strength) of online reputation. For the purpose of comparison entities were then arranged in ascending order based on the overall level of their online reputation in the virtual environment of the Slovak Internet. For better clarity the methodology is supplemented by the parameter of percentage evaluation of the score relative to the maximum possible number of points obtained within the analysis of sentiment (maximum possible number of points = 155, 1p = 0.645%). For the purpose of comparison of real and virtual (online) reputation of universities and colleges operating on the Slovak market, rating of the ARRA agency was used for the real reputation. Slovak Academic Ranking and Rating Agency (ARRA)[25] annually evaluates the quality of education and research in the faculties of public colleges operating in Slovakia, and the result of this evaluation is a ranking of each institution of a given Department on the basis of comparison of quantity and quality indicators of education and research. The basic principle of assessment is divided into the following 5 indicators: 1) Education (number of students, teachers, quality of the teaching staff); 2) Attractiveness of the study (interest in the study, proportion of foreign students, mobility, unemployment); 3) Research (number of publications and citations, average citation); 4)

Doctoral studies (proportion of graduates, proportion of the student population, the ratio of scientific output and number of doctoral candidates); and 5) Grant success rate (domestic grants, international grants, total income from grants for a creative worker). The following table presents the results of the overall evaluation of sentiments of twenty selected Slovak universities / public colleges. Researched subjects were assigned rankings based on values obtained for real and virtual reputation, which were subsequently subjected to empirical investigation to determine whether there is any statistically significant dependence between the rankings of real and virtual reputation.

Table 2 Total score sentiments twenty Slovak public universities / colleges.

No.	Public universities/colleges	1	2	3	4	5	6	7	8	9	10	Score (on-line) in points / %	*ARRA Average in %	**ARRA Ranking position
1	J. Selye University in Komarno	X	±	±	±	±	+	±	±	±	±	41 / 26,45	32,7	19
2	Comenius University in Bratislava	X	±	±	±	±	±	+	±	±	±	40 / 25,8	58,06	3
3	Technical University in Zvolen	X	±	±	±	±	±	+	±	±	±	40 / 25,8	47,35	8
4	Matej Bel University in Banska Bystrica	X	±	±	±	±	±	±	+	±	±	39 / 25,16	45,38	12
5	University of Veterinary Medicine and Pharmacy in Kosice	X	±	±	±	±	±	±	±	+	±	38 / 24,51	72,3	1
6	Pavol Jozef Safarik University in Kosice	X	±	±	±	±	±	±	±	±	+	37 / 23,87	56,16	4
7	University of Presov in Presov	X	±	±	±	±	±	±	±	±	+	37 / 23,87	40,03	16
8	University of SS. Cyril and Methodius in Trnava	X	±	±	±	±	±	±	±	±	+	37 / 23,87	40,92	15
9	Technical University of Kosice	X	±	±	±	±	±	±	±	±	+	37/ 23,87	41,57	14
10	Constantine the Philosopher University in Nitra	X	±	±	±	±	±	±	±	±	±	28 / 18,06	46,32	9
11	Trnava University in Trnava	X	±	±	±	±	±	±	±	±	±	28 / 18,06	59,9	2
12	University of Zilina in Zilina	X	±	±	±	±	±	±	±	±	±	28 / 18,06	45,62	11
13	Alexander Dubcek University of Trencin	X	±	±	±	±	±	±	±	±	±	28 / 18,06	27	20
14	University of Economics in Bratislava	X	±	±	±	±	±	±	±	±	±	28 / 18,06	45,88	10
15	Slovak University of Agriculture in Nitra	X	±	±	±	±	±	±	±	±	±	28 / 18,06	51,03	7

16	Academy of Performing Arts in Bratislava	X	±	±	±	±	±	±	±	±	±	28 / 18,06	38,1	17
17	Academy of Fine Arts and Design in Bratislava	X	±	±	±	±	±	±	±	±	±	28 / 18,06	56,4	5
18	Academy of Arts in Banska Bystrica	X	±	±	±	±	±	±	±	±	±	28 / 18,06	34,56	18
19	Catholic University in Ruzomberok	X	±	±	±	±	±	±	±	±	±	28 / 18,06	51,3	6
20	Slovak University of Technology in Bratislava	X	±	±	±	±	±	±	-	±	±	25 / 16,12	41,62	13

*ARRA Average in %: The resulting percentages were assigned to individual universities / colleges based on averaging of the achieved score (average from partial ratings of their faculties) in a comprehensive evaluation of the ARRA Agency for 2013.
**ARRA Ranking position: Placement in the ranking corresponds to the resulting averaged percentages of universities / colleges.)

In determining the sentiment the numbers of positive reviews on social networks were not taken into account. Only the fact that an institution owns a profile on any of the virtual social networks was taken into account. The nature of institutions descriptions on the Wikipedia portal was also not taken into account. Only the fact that Wikipedia mentions an institution was taken into account. In both cases, these results were assigned neutral sentiment. If, besides an official institution's web site, the search engine found web pages of institution's faculties or entities associated with such institution on other positions, these results were assigned neutral sentiments. As the Table 2 presents, the ranking of the researched institutions showed significant differences when comparing real and virtual environments. Paradoxically, while some institutions reached a high sentiment score in the virtual environment, they finished among the last when comparing the sentiment score in the real environment. By applying Kendall coefficient , ic easures t e strengt o dependence between two serial variables (in this case, reputation in the real and virtual environment), individual rankings of public universities and colleges in the Slovak market were tested. Since the calculated value o tau is less t an t e critical value in t e ta le, e s all not re ect t e y ot esis o inde endence at t e al a signi icance level . , i.e. there is no statistically significant dependence between universities' or colleges' rankings in the case of virtual (online) reputation and rankings in the case of real environment reputation.

3 Results of the analysis

Based on the analysis it is clear that within the virtual identity of researched entities (twenty public universities or colleges on Slovak market) web sites owned directly by providers are at the top places of search. The dominant group of sentiments consists of search results of neutral sentiment. There was only one instance of negative sentiment of an institution noted: on the eighth position within the search (Slovak University of Technology in Bratislava was given negative assessment, in relation to fire in the chemical laboratory of the University). Entities that occupy top positions have, in terms of virtual reputation among Internet users, undeniable benefit in the form of a more positive perception of their complex virtual identity. If users search for information about a particular university or college and encounter negative references, it can ultimately affect

their overall perception of the given institution. Especially if these users do not have any personal experience with a given institution and judge only on the basis of information from the virtual environment. Entities should therefore make sure to make necessary information available to Internet users in the clearest way possible. It is in their own interest to ensure the elimination of negative publicity (and vice versa reinforce positive publicity) for at least the first ten positions in search engines. This can be achieved by active Internet communication policy in the form of spreading positive information on major Internet players, such as electronic versions of major Slovak dailies or through virtual social networks, Internet forums and discussions. The best way to eliminate negative or neutral publicity in the first ten search engine results is a literal displacement of such publicity by actively working on a coherent marketing communications policy on the Internet. The most interesting finding was a demonstration of relatively low percentage of achieved reputation in the online environment considering the high percentage of reputation (ARRA index) achieved within the real world. This points to the fact that over a period of time the very best universities and colleges managed to optimize the factors and processes that have contributed significantly to increase their reputation in the real world but in the virtual environment are still a long way to go. Notional value of 100% of online reputation (155 points achieved in the sentiment analysis) is, in this case is "only" sort of imaginary, in the virtual world almost unattainable state. With such small differences within the analyzed entities it also possible to achieve a significant progress towards top positions against competition exerting fewer resources (financial, time, human). As already mentioned, the methodology presented is one of many methodologies used for the assessment and measurement of online reputation. Its complexity, clarity and relatively low time demandingness predisposes it to be used for the purpose of assessment of online reputation of various entities such as public institutions acting in various field, companies and even individuals using the Internet for purpose of personal branding.

4 Summary

The current hyper informational time puts high demands on individuals as well as the whole society. Highly specialized power elites take the lead with the help of new technologies. Building and promoting a quality brand and the related good repute requires application of the right marketing tools. Nowadays, there are innumerable ways in which a subjects share information with their environment. However, building brand credibility is influenced by many factors that management is not always able to have under control. The aim of the paper was to highlight the importance of reputation in the online world in comparison with the real world in the area of public universities and colleges operation in the Slovak market. Compiled reputation levels ranking of Slovak universities and public colleges show substantial differences. Statistically significant dependence between ranking based on the reputation in the real and virtual market was not confirmed. The result of the perception of reputation, also on the basis of this paper, may be a good and targeted communication, which is part of the marketing mix. Positive reputation, especially in the online environment of immediate decisions, is often the critical factor for customers. In addition to long-term building of positive image it is therefore important to regularly verify the level of reputation and eliminate negative news to constantly form a positive customer experience with an institution. As we mentioned, the very best universities and colleges managed to optimize the factors and processes that have contributed significantly to increase their reputation in the real world but in the virtual environment are still a long way to go.

References

1.   V. Janouch, *r   r   r   r   *. Brno: Computer Press (2011).
2.   H. Marsden, *Guard Your Reputation On-line*. Birmingham: Smartebookshop (2013).
3.   R. Haywood, *Manage Your Reputation: How to Plan Public Relations to Build & Protect the Organization´s Most Powerful Asset*. London: Kogan Page Publishers (2002).
4.   A. Griffin, *New Strategies for Reputation Management: Gaining Control of Issues, Crises & Corporate Social Responsibility*. London: Kogan Page Publishers (2008).
5.   J. Balmer, and S. Greyser, *Revealing the Corporation: Perspectives on Identity, Image, Reputation, Corporate Branding and Corporate-level Marketing*, Oxford: Routledge (2003).
6.   S. Helm, K. Liehr-Gobbers, and Ch. Storck, *Reputation Management.* Berlin: Springer-Verlag (2011).
7.   P. Gottschalk, *Corporate Social Responsibility, Fovernance and Corporate Reputation*. USA: World Scientific Publishing Co. Pte. Ltd. (2011).
8.   D. A. Shore, *The Trust Prescription for Healthcare: Building Your Reputation with Consumers.* USA: Health Administration Press (2005).
9.   M. Armstrong, *Handbook of Human Resource Management Practice*, 10th ed., Prague Grada Publishing, (2007).
10.   M. Tavakolifard, *On Some challenges for On-line Trust and Reputation Systems* (2012) <http://www.diva-portal.org/smash/get/diva2:548911/FULLTEXT02>
11.   D. a etta, an e rust rust   [doi: 10.1.1.24.5695].
12.   . sang, . s ail, and . oyd, Survey o rust and e utation Syste s or n-line Service Provision, in *QUT ePrints* (2006) <http://eprints.qut.edu.au/7280/1/7280.pdf>
13.   J. Sabater, and C. Sierra, *Review on Computational Trust and Reputation Models*. (2003) <http://www.iiia.csic.es/~sierra/articles/2005/SabaterSierra.pdf>
14.   G. Leboff, *Sticky marketing –   dr*   Prague Management Press (2011).
15.   . S aiziene, and . ucevicius,   or orate e utation Multidisci linary Richness and Searc or a elevant De inition, in *Inzinerine Ekonomika-Engineering Economics*. 91-101 (2009).
16.   K.T. Jackson, *Building Reputational Capital: Strategies for Integrity and Fair Play that Improve the Bottom Line*. USA: Oxford University Press (2004).
17.   C. Fill, *Marketing Communications: Interactivity, Communities and Content*, 5th ed. UK: Pearson Education Ltd. (2009).
18.   . o á , and . Sasko, *Analýza sentimentu výsledkov slovenských firiem*. Visibility s.r.o. (2011) <http://www.reputation.sk/whitepapers/Analyza_sentimentu_ re-putation_sk.pdf>
19.   . . Fo run, and . . Foss,   e e utation uotient, Part Develo ing a e utation uotient, <http://www.reputationinstitute.com/frames/press/01_15_14_GUAGE.pdf>
20.   . als , and S. eatty, usto er- ased or orate e utation o a Service Fir , in *Journal of the Academy of Marketing Science,* Vol 35, No 1, 127-143 (2007).
21.   R. J. Burke, and C. L. Cooper, *Corporate Reputation: Managing Opportunities and Threats*, UK: Gower Publishing Ltd. (2011).

22.   . Siano, . ollero, and M. Pallazo, E   loring t e ole o   n-line Consumer E   o er ent, in *Reputation Building: Research Questions and Hypotheses.* (2011) <http://www.academia.edu/1096337/Exploring_the_role_of_on-line_consumer_empowerment_in_reputation_building_Research_questions_and_hypotheses>

23.   T. Henning- ueau, . P.   inner, . alsc , and D.D. le ler, Electronic   ord-of-mouth Via Consumer-opinion Platforms: What Motivates Consumers to Articulate   e selves on t e nternet http://www.gremler.net/personal/research/2004_Electronic_WOM_JIM.pdf>

24.   J. Loayza,   *r   d   M   r   r   iples of Reputation Management*. (2013) <http://reputationhacks.com/guide-to-reputation-management-3-8-core-principles/>

25.   Academic Ranking and Rating Agency (ARRA),   *d 2013*, (2013) <http://www.arra.sk /ranking-2013>

Caption List

Table 1 Sentiment individual results / position of results.
Table 2 Total score sentiments twenty Slovak public universities / colleges.

••

Kazakhstan Way of Innovation Clusterization

K. Mukhtarova

Al-Farabi Kazak National University, Almaty, Kazakhstan

Abstract
During implementation of the Strategy "Kazakhstan-2030" dynamic economic development allowed the Republic of Kazakhstan increasing the average per capita income more than twice. All the goals of the Strategy "Kazakhstan-2030" have been achieved ahead of schedule. The aim of the new Strategy "Kazakhstan-2050" is entering the country among the 30 most developed countries in the world by 2050. Its achievement will require maintaining high rates of economic growth for a long time. Such basic factors of competitiveness as natural resource endowments, favorable macroeconomic environment and political stability have helped the Republic of Kazakhstan to succeed in socio-economic development and attracting foreign investments today.

Keywords: innovation, cluster, Kazakhstan, management

1. Introduction

To maintain high rates of economic growth, the Republic of Kazakhstan needs to implement structural changes in the economy necessary for the transition to a new stage of development. These changes include the active creation of new productive jobs in the manufacturing industry, including through cross-flow of labor from the agricultural sector.

Lack of effective public policy in the field of natural resources and revenues from commodities, the high cost of raw materials in the domestic market of Kazakhstan may lead to the possibility of the sector operators to gain excessive profits, upon this limiting the ability of manufacturing sector to develop effectively.

Currently manufacturing industry occupies almost the third part in the structure of the economy of the Republic of Kazakhstan, the high share of the mining sector provides more than 2.5% of employment and 18% of GVA in the economy. Investments in the fixed assets in the mining industry today represent more than 30% of the total volume, and in the manufacturing industry only 12%.

Kazakhstan being the leading exporter of extractive sectors (especially due to the export of crude oil), in terms of per capita exports is ahead of all the CIS countries. However, manufacturing sector exports is relatively low in the Republic of Kazakhstan - approximately twice lower than in Russia.

Level of manufacturing industry development was quite low. State program on industrial-innovative development for 2010-2014 (hereinafter - SPIIAD) allowed creating background for the further development of the industrial sector: a system of institutions for development has been established, a number of the necessary legal acts has been adopted, separate tools developed.

As a result of SPIIAD implementation a trend has shifted towards improving the manufacturing industry, although it is still relatively low. Manufacturing sector generates less than 7% of employment and 12% of GVA in the country's economy. Employment in manufacturing sector of the Republic of Kazakhstan is lower than in all member countries of the Organization for Economic Cooperation and Development (hereinafter - OECD), and the level of performance is 2 times lower.

The Republic of Kazakhstan has been one of the first countries that expressed the need for industrial-innovative development of the economy, with account of the new technologies' importance. Development and launch of SPIIAD was a respond of the country to the challenges generated by the economic crisis. This program has laid the foundation for further industrial growth and is one of the examples of public systems approaches to develop its own industrial base. SPIIAD aim is to ensure sustainable and balanced economic growth through diversification and increase of its competitiveness. SPIIAD has become one of crisis management tools to support the industry during the global financial crisis.

2. **Literature review**

Over the last decades, technological advances have been the most important determinant of growth rate for many countries (Mitchell [1]). Additionally, a number of cross country studies identified innovation as a key factor of productivity growth (Grossman and Helpman [2]; Coe and Helpman [3]). Moreover, increase in productivity promotes international competitiveness of economy (Gustavson [4]). Recent studies have been focused on explaining growth rates of countries through endogenous technological change. Modern theories of economic growth aimed to explain the growth patterns of world economies; technological innovation is created in the research and development (R&D) sectors using human capital and the existing knowledge stock. According to these

studies R&D, human capital and current stock of knowledge are the foundations of technological innovation (Frantzen [5]).

ccording to Porter , o co   ete e ectively in international arkets, a nation's businesses must continuously innovate and upgrade their competitive advantages. Innovation and upgrading come from sustained investment in physical as well as intangi le assets . Sophistication of financial markets is vital for innovative growth (Schumpeter [7]). As suggested by existing literature, de- cline in economic growth is observed when government imposes restrictions on banking system (introducing interest rate ceiling, increasing reserve requirements) (Shaw [8]). The purpose of the paper based on the foregoing discussion is to posit following hypothesis.

3. Main part

Following the results of 2012 year in comparison with 2008, Kazakhstan has seen positive growth dynamics of the main indicators of the SPAIID: gross domestic product has grown by 22.5%, the gross value added of non-resource industry - by 23.4%, output in the manufacturing industry - by 20, 5%, labor productivity in the manufacturing industry - by 70%, the volume of non-resource exports - by 6.4%, the level of innovation activity of enterprises - by 3.6%, the volume of innovative products and services - by 240%.

The main positive results of the SPAIID:

1）   it laid the foundations of modern industrial policy in the Republic of Kazakhstan. There have been adopted the basic legal acts, tested different tools to support industrial development and new policy directions. In particular, the mechanisms have been launched to attract FDI and export support, the process of transformation of the special economic zones have been started;

2）   diversifying of the economy has been started by accelerating development of the manufacturing industry, increase of non-oil exports and attracting FDI in non-source sectors. Production of more than 150 new products has been set up. These are high-tech products of engineering, pharmaceuticals, chemical industry;

3）   major new industrial projects implemented within the Industrialization Map have got the support, which allowed avoiding production cuts. To date there have been introduced more than 500 new products. Specified objects produced goods worth

2.5 trillion. tenge, their share in industry was 6.3%, in manufacturing - 9.5%;

4）   number of people employed in industry (for 4 years) has

increased by 9.3% and exceeded 1 million people (1004.4 thous.).

More than 60,000 new jobs in manufacturing have been created within

the Industrialization Map, which allowed avoiding an increase in

the unemployment rate;

5）   following the results of 2012 compared with 2008, labor productivity in manufacturing industry increased 1.7 times (the schedule was 1.5 times by 2015), from 37 thousand of U.S. dollars to 61.8 thousand of U.S. dollars;

6）   since 2010 there have been attracted more than U.S. $ 90 billion in foreign direct investment, accounting for over 50% of the total gross FDI inflows since 2005;

7) a system of industry institutions for development has been created, allowing to implement effective measures to support;

8) broad industry focus has revealed a potentially competitive sectors. However, during the implementation of SPIIAD a number of systemic lessons has been identified, which should be considered while forming the policy of industrial development of the Republic of Kazakhstan for 2015-2019 (hereinafter - the Policy), including the following:

1) unnecessarily wide range of industries for public support has not allowed effective focusing of limited resources available to support the industries with the greatest potential for development;

2) insufficiently focused budget funding distribution between activities that directly affect the achievement of the stated objectives of the SPIIAD (direct), and activities not related to the immediate implementation of the industrial policy (indirect). Less than half of the budget resources allocated to the SPIIAD, has been spent on the implementation of the direct and more than 60% - on indirect activities;

3) defects in implementation and monitoring of the SPAIID. There have been adopted 25 different programs to support 14 industries within SPIIAD. Several activities of sectoral programs have not been aimed towards the achievement of goals and objectives of the SPAIID;

4) inadequate operational cooperation between state, local agencies and institutions for development , which has led to increase in terms of decision-making and reduce the effectiveness of state support;

5) SPIIAD have not been fully financed for several reasons related to insufficient functioning of the financial system. One of the problems is the state of the STB system, limiting access of enterprises to debt financing. Capital markets of Kazakhstan are characterized by low liquidity and do not allow sufficiently cover the needs for investment capital.

Policy will be a logical continuation of the SPIIAD and should take into account the experience of its implementation.

Emphasis will be focused on sectors of the economy, which will help reducing the economy's dependence on the mining sector.

The ratio of budget financing of direct and indirect activities aimed at implementing the Policy will be reviewed in the light of the previous experience.

4. Conclusion

To improve coordination and cooperation in the implementation of industrial policy between state, local agencies, institutions for development and other actors of industrial policy, a formation will be continued in the prescribed manner of a competence center for industrial policy at the National Institute of Development in the industry.

2. Global trends in industrial development.

In developing policy documents on industrial development the impact of global trends must be taken into account and assessed.

1. Increasing importance of resources.

Shrinking resources and fluctuations of their price form two divergent trends. The first one is increasing the cost of resources in the medium term and "resource nationalism", characterized by reduced availability, the second trend - the development of resource-saving and resource-efficient technologies.

2. Globalization and transformation of production chains.

TNCs being major participants of world trade, are constantly

seeking more efficient production sites and partners, including local ones. Value added chains are in constant transformation. Geography and level of their globalization is changing.

3. Strengthening the role of markets in developing countries.

Formation of a middle class in developing countries leads to a

shift in demand towards emerging markets.

4. International restrictions and narrowing of opportunities for government intervention.

In recent decades a number of countries participating in international organizations voluntarily assumed obligations to limit government intervention in the economy to benefit from participation in international organizations, from the reduction of tariffs and barriers is growing. Participation in regional economic unions may impose additional restrictions on the industrial policy of the country. However, in some cases, countries deliberately violate commitments in order to support domestic industries.

5. Competition of countries for the location and development of production.

Importance of production sites in developing countries in recent decades has grown steadily and competition between them has increased. Production moves to countries with lower costs and developed resource base.

6. Increase in the proportion and importance of services.

With the increasing technological complexity of the product and transition to modular designs the services play an increasing role in modern manufacturing sectors. Economic activity is shifted from manufacturing to services sector, capacious in terms of human capital. Services such as research and development, engineering and design, develop successfully only if there is demand from the competitive manufacturing sector.

7. Entrepreneurship role growth.

Industrial development in the world is based on the entrepreneurial potential. In many sectors integrated companies give way to multi-level providers systems, the role of small and medium-sized businesses grows. Countries having developed small and medium businesses are most likely to develop successfully on their territory new segments of global industry chains.

8. Development of new production technologies (The Third Industrial Revolution). New technologies are changing the global organization of production and determine competitiveness of the companies. Business Process and supply chain Management using information and communication technologies, new materials and new ways of using robotics, smart modeling and additive technologies provides competitive advantages and opens up the opportunities for the development of high-tech industries in the developing countries. This leads to a reduction in production, increase in resource efficiency, rapid response to consumer demand and labor productivity growth, which affects the benefits of the developing countries in the cost of labor, helps to preserve jobs in manufacturing sector in the developed countries.

References

. . Mitc el, lo al ec nology Policies or Eco-no ic ro t , *Technological Forecasting and Social Change*, Vol. 60, No. 3, 1999, pp. 205-214. doi:10.1016/S0040-1625(98)00044-4

. M. ross an and E. el an, nnovation and ro - t in t e lo al Econo y, MIT Press, Cambridge, 1991.

D. . oe and E. el an, nternational D S ill-overs, *European Economic Review*, Vol. 39, No. 5, 1995, pp. 859-887. doi:10.1016/0014-2921(94)00100-E

P. ustavson, P. anson and . und erg, ec nology, esource Endo ents and International Competitive-ness, *European Economic Review*, Vol. 43, No. 8, 1999, pp. 1501-1530. doi:10.1016/S0014-2921(98)00027-0

D. Frantzen,   D, u an a ital and nternational ec nology S illovers   ross
 ountry   nalysis, *Sca- ndinavian Journal of Economics*, Vol. 102, No. 1, 2000, pp. 57-
75. doi:10.1111/1467-9442.00184

M. E. Porter,   e o   etitive   dvantage o Nations, Free Press, Ne   ork,   .

  .   . Sc u   eter,   eorie der   irtsc a tlic en Ent i- cklung, Duncker   u   lot,
Leipzig, 1911.

E. S. S a , Financial Dee ening in Econo ic ro t ,   ord   niversity Press, Ne
York, 1973.

ON THE HISTORY OF THE RESEARCH OF OLD TURKIC ORHON INSCRIPTIONS IN LINGUISTIC ASPECT

Nurila Shaimerdinova
Doctor Philological Sciences, Professor
Aisulu Kupayeva
MA in Turkological Studies, PhD student
L.N. Gumilyov Eurasian National University, Astana, Kazakhstan

Abstract:
Since the discovery of Old Turkic Inscriptions scholars from different countries focus their concentration on the research of these inscriptions. However, the inscriptions are studied in different aspects. This paper gives the periodization of research history of the monuments and detailed description of each periods. The author of this paper attempts to give comparative analysis of research works on linguistic aspect of the inscriptions of the scholars who made a great contribution to the study of Old Turkic Manuscripts.

Introduction

Valuable heritage of shared historical period of all Turkic peoples and the primitive Turkic runic writing have attracted the attention of all scholars from different countries, since Russian scientists as N. Vidzen, S.Remezov and a Sweden officer, who was exiled to Siberia, Philip Johan
Von Strahlenberg declared about stele with unknown writings along the rivers Orhon in Mongolia and Yenissei in Siberia. Turkic tribal federations living in the territory of Central Asia and Siberia during the V - VII centuries left a remarkable inheritance of runic written monuments to the following generation: the Orkhon-Yenisey and Talas runes (Saurykhov N., 2014: 167). Since the discovery of unknown signs on the stones found in the valley alongside the Orhon River in the territory of Mongolia, these inscriptions are studied in different aspects as well as these texts contain important historical, linguistic, cultural, geographical evidence of ancient times. The oldest Turkic written records are considered as valuable materials for reconstruction of Proto-Turkic language and establishment of genetic relations of modern Turkic languages.

As we stated above scholars have addressed to different aspects of the inscriptions. Consequently, in our research we try to distinguish the aspects of studies on inscriptions. The purpose of this paper is the general description of research history of Orhon Old Turkic monuments, periodization of research history and revealing specificity of research aspects in a definite period research. To achieve this purpose the following tasks are set:
-to give a short description of the texts of Orhon inscriptions;
-to describe the research history of Orhon monuments in linguistic aspect;
-to determine the periods of research in accordance with the specificity of research works conducted in that period;
- to consider specificity of research works on inscriptions;
In the history of research of Orhon Runic Inscriptions, some scholars distinguish five periods: 1. 1678-1820 –expeditions organized by Russian Empire for political purposes in which archeologists came across with the monuments. 2.1820 to 1893- discovery of monuments and specially organized expeditions. 3. 1893 to 1945 – deciphering of the unknown runic writings, reading and translations of the texts and different hypothesis about the origin of this runes. 4. 1945 to 1991 studies on grammar and language of inscriptions, 5. The last period from 1991 up to now studies post-soviet period (Yesskeeva, 2012). Drawing conclusion from studied material, we distinguish the following periods in the research history of Orhon Inscriptions:
(1)   The first period from 1678 to 1893 captures the discovery of monuments and specially organized expeditions to study above-mentioned monuments.
(2)   The second period from 1893 to 1945 in the history of Old Turkic Inscriptions research is concerned with deciphering of the unknown runic writings, reading and translations of the texts and different hypothesis about the origin of this runes.
(3)   In the next period of research history from 1945 to 1991 scholars studied and wrote the grammar of Old Turkic monuments and begun to study Turkic languages in comparative –historical aspect.
(4)   The last period of Old Turkic inscriptions research which begins from 1991 up to now is described as a post-soviet period because in this period Turkic republics got their independence and the scholars have started to study the Old Turkic Inscriptions in new aspects.

Consequently, in this paper we are going to give a detailed picture of each period and analyses of the research works on the language of inscriptions in linguistic aspect in our own way. Before starting with research history periods, we would like to give the description of the texts of inscriptions.

Description of Orhon Old Turkic texts.

Orhon Inscriptions consist of big texts Kultegin, Ongin, Bilge Kagan, Tonykuk monuments and other smaller texts (Kononov, 1979; Zholdasbekov, Sartkozhauly, 2007).

1. The monument of Kultegin is an epitaph devoted to a hero Kultegin, which narrates about his heroic campaigns, conquest and about Turkic tribes and people. Masters from Chinese Tan Dynasty established this monument to the leader of Turkic Khanate at the proposal of Bilge Kagan in 731, as it is stated in the inscription (Zholdasbekov, Sartkozhauly, 2007). This monument is situated in Central Mongolia, on the east bank of Orhon River. N. Yadrintsev discovered this Turkic-Chinese writing on a stela in 1889. In 1890 a Finnish researcher A. Geikel and in 1891 Russian scientist V.Radlov made an estampage copy of the monument. After the deciphering of Runic alphabet by V. Thomsen, V. Radlov was the first scholar who made the transcription and translation of the Kultegin inscription (Sartkhozhauly, 2012).

2. The monument of Bilge Kagan, which is situated on the east side of Orhon River in Mongolia, is similar to Kultegin monument. The turkologists assume this monument was written in 683-734 (Kononov, 1979). In this text, the author tells about the Turkic governors, political affairs and historical events. The monument of Bilge Kagan was discovered and studied at the same time with Kultegin inscription.

3. The next big text of Orhon Inscriptions is Tonykuk monument, situated in Tov region the Central part of Mongolia 60 km from Ulan Bator. This monument established in honor of Tonykuk dates in 712-716. Turkologists suppose the author of the text is Tonykuk himself. He was an important figure in Turkic Khanate, who was an advisor of three Khans in this Khanate. He is described as a wise man playing an important role in politics of the Khanate. The Tonykuk inscription was discovered in 1897 by E. Klements, a wife of D. Klements, who was in the political exile. V. Radlov published the transcription and translation of the text in 1899 (Zholdasbekov, Sartkozhauly, 2007).

4. Ongin monument an epitaph of army leader Alp El Etmish was established nearly between 700-716. It is situated in Ovorhangai region 30 km. from Arvahaiyr town in Mongolia. N. Yadrintsev discovered it in 1891 and V. Radlov published the text in 1895, afterwards research works of H. Orkun [6], S. Malov [7], T. Tekin [8], G. Clausson [9] and others was published.

5. The monument of Culli Chur a leader Tardush tribe, who died in 721. V. Kotvitch discovered it in Ihe-Hushety steppe in 1921 (Zholdasbekov, Sartkozhauly, 2007).

6. Moiun Chur monument or a "Selenga Stone" found near the river Selenga in 1909 by G. Ramsted. The text was written nearly in 744-759 in the honour of the first leader of Uigur Dynasty Moiun Chur, who conquered the last Khan of Turkic Khanate Ozmish Tegin in 745 (Zholdasbekov, Sartkozhauly, 2007).
 The word 'chur' with the meaning of 'leader', 'worrior' was used as title of higher administration, military rank. The language of the monument is Uihgur and it differs from the language of other monuments.

7. Sudgin inscription was discovered in 1909 by G. Ramsted (Sartkhozhauly, 2012).

8. Inscription from Hoito-Tamyr is an example of runic cursive writing copied by D. Klements (Kononov, 1979).

9. Inscription from Ihe-Ashete studied by S. Malov [7], H.N.Orkun [6] .

11. Inscriptions on a silver bowl found on the northeast side of the Tuul River in Mongolia in 2009. In 2011 Japan turkologists T. Osowa, K. Suzuki and Mongolian scientist G. Lhundev gave the description of the writing on a silver bowl in the paper (T. Osawa and others,2011)

12. Inscriptions on the dombyra (a musical instrument) found in Nuhen-had cave in Zhargalant Kairkhan mountains in Mongolia in 2007. In 2009 German scholars published an article about the dombyra inscriptions (Batsukh and others, 2009).

1. Discovery and presentation of monuments to the world of science.

The discovery of the monuments is associated with the expeditions organized by East and West Siberia Geographical society of Russian Empire the territory of Siberia, Mongolia and Central Asia. On the instructions of the society, the scholars of Russian Empire conducted research works to study the territory and draw the scheme of this territory. Besides this, scholars collected materials on language, culture and traditions of people living in Siberia, Mongolia and Central Asia. For this purpose, Russian Empire begun to send travelers, archeologists and scholars to above-mentioned territories. One of those was a Dutch traveler N. Vidzen (1641-1717) who first came to Moscow to collect materials on Russia. Afterwards he made a travel to Siberia and collected materials on Siberian people, their language and traditions. As a result of this travel he published his book about Far East (Russia's Far East) in 1692 and in 1695 he published the second book "The North and the Eastern Tatars". In his letters to the president of the Royal Society of Great Britain Sir R. Southwell, he wrote about pictures and unknown writing on the stones and the people of that place call the territory 'Bitig tas' (the Stone of Bitig) (Sartkhozhauly, 2012).

The next scholar who wrote about unknown signs on the stones was the Russian geographer, ethnographer S.Remezov. He made an expedition to draw the scheme of the Siberia. In his book "The drawing book of Siberia", he mentioned about Orhon stones.

At the end of the XVIII c. Peter the Great adopted resolution on collecting and preservation of historical values. Accordingly, he invited scholars from Europe to conduct research works. Among those scholars was Daniel Gottlieb Messerschmidt. He was a doctor, a botanist, and a linguist. As a result of his expedition to Mongolia, West Siberia lasted for seven years he gathered materials on history, language, ethnography, geography, botanics. In his works, he gave a lot of information about runic inscriptions in Siberia.

A Sweden officer, who was exiled to Siberia and spent twelve years, Philip Johan von Strahlenberg left important facts on the history, language, traditions, archeology and ancient monuments of Siberian people. He captured all these information in his books "A new geographical reference book of the Great Tataria (they called Turkic people Tatars)" and "The North and East part of". All these scholars named the unknown inscriptions 'runes' as well as they were similar to Scandinavian Runic inscriptions.If we take into consideration primitive information in the works of eastern scientist Atamalik Zhuveini wrote about the Orhon manuscripts found in the territory of Mongolia in the XIII c.

Orhon Runic writing monuments was discovered and presented to the whole world by Russian scientist N. M. Yadrintsev, who came across with these monuments during his travel to Mongolia on the instructions of East and West Siberia Geographical society. N. M. Yadrintsev declared that he had found Chinese hieroglyphs and runic writings similar to the Yenissei runes in Mongolia. In the result of expedition, he made copies of unknown writing and introduced them to the world of science, since that Orhon monuments have been an object of research. The earliest period of Orhon-Yenissei monuments research history captures the discovery and presentation of monuments to the world of science.

Recently discovered Orhon monuments are inscriptions on a silver bowl found on the north-east side of the Tuul river in Mongolia in 2009 and inscriptions on the dombyra (a musical instrument) found in Nuhen-had cave in Zhargalant Kairkhan mountains in Mongolia in 2007. In 2011 Japan turkologists T. Osowa, K. Suzuki and Mongolian scientist G. Lhundev gave the description of the writing on a silver bowl in the paper (Osawa and others,2011) and in 2009 German scholars published an article about the dombyra inscriptions (Sartkhozhauly, 2011).

2. Deciphering the unknown runes and discussions on the origin of runes.

After the discovery and presentation of monuments researches tried to identify the inheritants of this monuments and decipher the runes. In 1889 the East Siberia department of Russian Geographic Society organized an expedition to Mongolia. V.V. Radloff conducted research works in the territory of Mongolia to decipher the runes in 1891. However, his attempt was not fruitful. As runic writings was not deciphered for a long time, different hypotheses were told about it. Some scientists supporting the hypothesis about original concernment to Greece culture and the others held to different opinions relating it to old Mongolian,old Finnish, Scythian and Slavonic writings failed in deciphering the manuscripts. Finally, the runic scripts were deciphered by V. Thomsen, a Danish scholar and professor of Copenhagen University, on the 25th of May 1893. V. Thomsen made a report about it at the conference of Royal Academy of Science of Denmark, which made a great impression on scientists of the world on 15 December of the same year. In his report, V. Thomsen declared that it was written in protolanguage of Turkic languages. The first words he had read were «täŋri» and «türk». Soon V. Radloff read the whole text with the help of Thomsen's method, after which he made the translation of monuments.

The monuments found in Mongolia were epitaph written on stelae of Bilge Kagan (also known as Mogilian) , the 17th Kagan of East Turkic Khanate and his brother, military commander Kultegin. Later not far from this region, along the Selenga river the stele of Tonikuk, a wise adviser of three Turkic Kagans, was found by the brothers Klemens.

The next problem that scholars had hot discussions was the origin of Turkic runes. There were three different hypotheses about the origin of Turkic runes: 1. Aramaic, 2.Sogdian, 3. Original Turkic runic alphabet (Sartkhozhauly, 2012). The Aramaic origin of Turkic runes was offered by V. Thomsen and supported by O. Donner, P. Millioransky, A. Cherbak. G.Klosson, V. Levshits and S.Klyashtorny took its beginning from Sogdian alphabet (Klyashtorny, Levshits, 1978). According to the hypothesis of N. Aristov 29 symbols of Orhon runes out of 38 are similiar to Turkic signs and 20 of them to signs of Kazakh tribes (Aristov, 1896). Nowadays this last hypothesis found its supporters among Turkologists. A Kazakh Turkologist Kh. Sartkhozhauly offers an opinion that Old Turkic

Runic alphabets were originated on the basis of world-view philosophy of Old Turks (Sartkhozhauly,2012) .

Orhon-Yenissei texts of Old Turkic monuments were read and translated by V.Radloff, V. Thomsen, U. Nemmet and X. Orkun. Specially a well-known Russian scientist S. Malov made a great contribution to the preparation and translation of scientific texts. He paid a special attention

to the right translation of texts (Shaimerdinova, 2009). Famous Turkologists M. Zholdasbekov and Kh. Sartkozha in their work "The Atlas of Orhon Monuments" published in 2005, presented the whole texts with transcription and translation by correcting mistakes of the previous works of other scholars (Zholdasbekov, Sartkozhauly, 2007).

3. **Studies on grammar of monuments and comparative -historical studies of Turkic languages.**

Furthermore, scientists begun to study the language and grammar of the Old Turkic monuments. We want to point out that the language of Orhon Manuscripts were studied as a part of Old Turkic language, there are few works on the grammar of Orhon texts. A group of scientists working on the grammar of runic writings studied phonetic system and morphological structure of manuscripts. A great contribution made to this field of investigation are the works of V. Radloff, P. Millioransky, V.Bartold, F.E. Korsh (Amanzholov, 2003). P.M. Mellioransky devoted his work to the language and semantic features of Old Turkic manuscripts and V. Bartold interprets the historical and cultural importance of these inscriptions. Besides V. Radloff, who paid a special attention to typological peculiarities of old language, distinguished the root and functions of word forming and inflectional suffixes. In 30-40s of XX century, the research works on Old Turkic language took a new direction after H.N. Orkun's work on historical-comparative grammar of Turkic languages (Shaimerdinova, 2009). During the Soviet Union the works of Russian scholars as E.R. Tenishev, A. Kononov and N. Baskakov have an important place in Turkological studies. While E.R. Tenishev conducted detailed studies on dialect system of old turkic language (Tenishev, 1976), A. Kononov worked on phonology of roots and word formation in old language (Kononov, 1979) and N. Baskakov studied phonetic features of old monuments (Baskakov, 1939).

Kazakh scientists' works as G. Aydarov, A. Amanzholov, M. Tomanov are considered to be a valuable scientific works on grammar and lexicology of old manuscripts. These scholars begun their research during the Soviet period and some of them continued their work in the post-soviet period. G. Aidarov was the first Kazakh turkologist who studied the language and grammar and published a book "The language of Orhon Monumnets" (Aidarov,1971). In addition, he devoted research works to separate Orhon monuments as Kultegin and Tonykuk. In his works, he gives the transcription, translation of texts and description of morphology, lexicology and word formation of the language of monuments. The work of A. Amanzholov on the derivation of verbs in Old Turkic language is important in reconstruction of historical verb roots and suffixes.

In the graphics system of Orhon and Yenissei monuments alphabet there are 31 letters, which stands for 16 consonant phonemes and phoneme variants. Five of them *z, m, ŋ, p, č* phonemes are defined by individual signs with some variants, while eleven of them *b, γ-g, d, j, q-k, l, n, r, s, t, š* are given by polyphone signs with two soft and hard variants. Besides there are four signs which define compound consonants: *rt, lt* are given by mono-phonemic signs, *nt, nč* are given by polyphone signs. A. Amanzholov states that the last

above-mentioned phonemic signs are used both for hard and soft consonants (Amanzholov, 2012).

The scholars of Turkey made a great contribution to the research of the language and grammar of Old Turkic manuscripts. We can point out the works of M. Erdal on grammar and word formation of Old Turkic language. As a Korean turkologist, Kim An-Lim states "Erdal's "Old Turkic Word Formation", a work with second title "A functional approach to the lexicon", has revealed the meanings of numerous derivational markers. It explains the grammatical and functional behaviors of various formatives" (An-Lim, 2011:3), M. Erdal used different approach to word formation analysis as far as other scholars used traditional one, morphemic-structural approach (Erdal, 1991). M. Erdal in his work on Old Turkic grammar gives analyses of phonetics, morphology and syntactics of The Old Turkic and its relation to Altaic language family (Erdal, 1991). Besides the works of Ch. Aiylmaz "The word stock of Orhon Inscriptions", in which he gives consideration to roots, derivations and word-forming suffixes (Aiylmaz, 2004) and the work of M. Olmez on semantics of borrowings in Old Turkic inscriptions (Olmez, 1995).

4. Post-soviet period: studying the inscriptions in the new aspects of linguistics.

The language of Orhon inscriptions are studied as a valuable material evidence in reconstruction of proto-Turkic language. Besides in modern Turkological studies, the research of the Old Turkic monuments are conducted in the aspect of anthropocentrism, which means to research the language in consequence with history, culture and worldview of ethnos.

In modern Kazakh Turkology the works of B. Sagyndykuly, Zh. Mankeeva and M. Yeskeeva investigating the monosyllabic system, historical development of lexis and the nature of root words of Old Turkic language are valuable in historical-comparative studies of Turkic languages. In the work of M. Yeskeeva, the author describes the structural features and etymology of monosyllabic roots and gives the phonogical, lexical-semantic analyses of *V, VC, CV, CVC, VCC, CVCC models* of monosyllables in Orhon monuments and in modern Kipchak group of Turkic languages. In accordance with linguistic data, scholars have found that the CVCC model is the latest phenomenon in Turkic languages. On the basis of structural paradigm and semantic derivation of monosyllables in the language of the Old Turkic inscriptions and modern Kipchak group of Turkic languages the historical development of monosyllables is assumed as the followings(Yeskeeva,2007):
(1) CVC VC
(2)V VC CVC VC CVCC
(3) VCC CV

B. Sagyndykuly gives detailed analyses of phonetic-historical changes in lexis, consonant correspondence and the historical development of this consonant correspondence. Based on the law of phonological development, articulation and acoustic features of Turkic languages and linguistic data he suggests that the old Turkic *j* phoneme is developed (comes from) T [s/š] a complex affricate gives the progression of phonemes as followings: *tš~ts~ti ~di~dž dz~t's'~d'z'~t~d~s~z~ š~ ž ~i~h~□ ~q~k~γ~g~s'~z'~t'~d'~o*. For example in Kultegin inscription *jat* « to lie», *jaz* «summer», *jol* «road», *joq* «no» (Aidarov, I, 211-213) ~ in Kazakh, Karakalpak *žat, žol, žaz, žoq* but in Nogai language which belong to this group of languages *jat, jaz, jol* and the old Turkic *j*

phoneme is preserved in Oguz, Karluk group of Turkic languages etc. (Sagyndykuly, 2004).

As anthropocentrism became widely used in the world of science, this gave a rise to requisite for investigating the texts in a new way. It means to research a language in consequence with history, culture and worldview of ethnos. N. Shaimerdinova, a Kazakh Turkologist, expressed outlandish ideas about Old Turkic worldview in consequence with the language of Orhon monuments.

Recently, in post -soviet Russian Turkology historical-comparative research works on the reconstruction of Proto-Turkic and defining the place of Turkic languages in Altaic family of languages are related to Old Turkic inscriptions. In the result of investigations, the Russian scientists published book on historical- comparative grammar, historical-comparative morphology and historical-comparative lexicology of Turkic languages. In this field scholars as A. Dybo, D. Kormushin and O. Mudrak made a great contribution.

The comparative methodology, still successful used in the humanities, allowed to classify in due time language families, on the basis of their genealogical relationship, similarity of their language systems (in the material sphere of a language sign - phonetic / a phonologic subsystem, and also in grammar system). The Altai family of the languages allocated in the specified way is not an exception.

Along with it there is a hypothesis of the Ural-Altai family of languages in which a large number of the Ural-Altai lexical parallels testifying to areal contacts of the Altai and Ural protoethnoses during the most ancient eras is established. The key Proto-Uralic-Altai ethnocultural ties mentioning the sphere of the nature, flora and fauna, occupation, ritual traditions and clothes, are revealed by A.V.Dybo. The theory the Altai family of languages causes ambiguous judgments. On the one hand, there is a conceptual theory scientific altaic studies, with another - the absence of proof of relationship of the Altai languages is approved, it is considered that the Altai community is caused by areal and typological convergences, the community of lexemes in the Altai languages is defined as the loans resulting long ethnocultural contacts.

Anna Dybo along with other scientists such as B. Ya. Vladimirtsov, G. Ramsted, N.N.Popp, E.D.Polivanov, V.L.Kotvich M. Pellio, A. Gabin, A.Rona-Tash, D. Shinor, T.Tekin, M. Ryasyanen, I.V.Kormushin, O.A.Mudrak, represents a position of positive Altaic theory.

A.V.Dybo's merit, that it managed to reveal in Altaic studies a new level of knowledge to reconstruct 'deep language system', to recreate parent language basis, praaltaysky language in which found compliances Turkic, Mongolian, Tungus-Manchurian, Korean and Japanese parent languages at levels phonetic, lexical, grammatical and on the basis of language data to define Paleo-culture and an ancestral home of Altaians. Having defined prepotent key concepts of pro-altaic culture of A.V.Dybo, recreates the general archetype of specified Paleo-Culture. Focus of these concepts is reduced to designation in landscape language (mountains and slopes, valleys and steppes, the rivers, lakes, the seas); climate; florae, characteristic for accommodation of praaltayets (coniferous and broad-leaved trees, bushes, wild cereals, hemp and a worm wood - from here and conclusions of the author:' the ancestral home of the Altai people was in a border area of the southern taiga and the steppe'); detailed gender and age terminology for wild hoofed animals (sejgo 'male' of a deer, an antelope; zunti 'female of an elk / camel', etc.), designation of large and average predators; hunting and fishing terminology; seasonal and pasturable cattle breeding; the terms connected with riding (as a special nomadic sign); dairy and meat food; the

dwelling, relationship terms (existence cross-causin marriage, terms for wives, indicating polygamy), the weapon and religious terminology.

Identification and the characteristic of the main paleo-cultural lexemes allows to build a conceptual semantic field by means of which it is possible to interpret a conceptual and language picture of the world of the Altaic people in an extreme antiquity. Deserves special attention of research of the scientist in the field of historical phonetics and morphology. A.V. Dybo reconstructs proto Altaic vocalism, reconstructs its disharmony system: * i, *e, *, *o, *a with three diphthongs meeting only in the first syllable (*ii, * io, * ia,). By means of reception - impact of vocalism of a non-first syllable on vocalism of the first syllable the scientist reconstructs parent languages of separate groups of the Altai family: proto languages and others. Distinctive feature of vocalism Altai, in particular, Proto-Turkic and Pro-Mongolian languages is harmony of vowels depending on a combination to guttural and palatalized consonants. Vowel harmony observed in modern Turkic (including Kazakh) languages, reveals their historical links with Proto-Turkic language.

The important place in the reconstruction of historical phonology of proto - languages is taken by reconstruction of system of a consonantism, detection of its features (a reduction of phonologic systems in anlaud, restrictions on compatibility of phonemes and a tendency to an open syllable), studying of the morphonological phenomena (a compression and the simplification of combinations leading to reduction of phoneme structure of a root: stop consonant+stop consonant, sonant+stop, stop+sonant, sonant+sonant). A.V. Dybo investigates not only historical phonetic alternations in structure of the Proto-Altaic, Proto-Turkic word, but also, focusing attention on morphonological processes in these proto languages, defines pre-agglunatative condition of the Proto-Altaic word, shows that it isn't simple to draw lines between root and affixal morphemes. According to A.V.Dybo, for a Proto-Altaic state it is characteristic a homonymity of roots, a root union with affixal elements that complicated allocation of semantics of an affix; the impression was made that the major lexical meaning bears not a root, and an affix. Really, these phenomena were observed in the Proto-Turkic roots: ke/ki; to; qo; ja; jo (j ö /ju/jü) and many others at connection with consonant became eaningful: ҡe +l 'come'; ke+s 'cut'; ke+t 'leave'; ki+r 'enter'; to+j 'be sated', 'feast'; to+q 'full'; to+z 'be exhausted'; 'to put' qo+d (d/□/j); ja+n 'burn'; 'to light' ja+q; jo+r 'go'. The stop and sonorant consonants which initially weren't entering into structure of a root, allocated with grammatical meanings of an affix, form a new root basis on the C+V+C model later. Therefore, in Turkic languages root morphemes phonetic unchangeable later were created: - kel, - ket, - kir, - toj, - qod/qo /qoj, - jor/jö r/jur/jür, etc.

The homonymy of roots noted by A.V.Dybo proceeds from a syncretism of verbal-nominal bases, or the verbal-nominal homonymy covering all prototurkic period: *žar* 'dissect',
žar 'darling/friend/girlfriend'; 'to be sated' with that, that 'feast'; tɪŋ 'breath', tɪŋ 'to have a rest'; *oi* 'thoughts/thoughts', *oi* 'hollow/hole'; *köš-* 'movement', *köš-* 'to move/wander', etc. The verbal-nominal homonymy remained during an Old Turkic period and there were unproductive modern times though some relic phenomena meet in Turkic languages still. So, for example, in modern Kazakh language are observed a semantic allomorphism in homoforms: *qoi-* 'sheep', *qoi* 'put'; *at* 'horse', *at* 'shoot', etc.

Conclusion

In the history of research of Orhon Old Turkic monuments, the following periods of research can be distinguished in accordance with the aspects of studies and historical events:

a) The first period from 1678 to 1893 captures the discovery of monuments and specially organized expeditions to study above-mentioned monuments.

b) The second period from 1893 to 1945 in the history of Old Turkic Inscriptions research is concerned with deciphering of the unknown runic writings, reading and translations of the texts and different hypothesis about the origin of this runes.

c) In the next period of research history from 1945 to 1991 scholars studied and wrote the grammar of Old Turkic monuments and begun to study Turkic languages in comparative – historical aspect.

d) The last period of Old Turkic inscriptions research which begins from 1991 up to now is described as a post-soviet period because in this period Turkic republics got their independence and the scholars have started to study the Old Turkic Inscriptions in new aspects.

Each period is distinguished for particular research aspects the scholars addressed to inscriptions' language. Consequently, research works conducted on the linguistic aspect of the language of the Old Turkic Monuments in each period were fruitful and made a great contribution to Turkological Studies. However, there are few works devoted to Orhon Inscriptions separately, the language of the monuments, as the earliest valuable written data, are studied in Old Turkic language research works, Altaic language family studies and in reconstruction of Proto-Turkic and Proto-Altaic languages.

REFERENCES

Saurykov, Y. (2014) Secrets of the Runic Monuments found in Central Asia. *Procedia - Social and Behavioral Sciences* 122, 167 – 171

Yeskeeva, M. (2011) Linguo-philosophical Basis of Old Turkic Written Monuments. Astana: Saryarka.

Kononov, A.N. (1980) Грамматика языка тюрксих рунических памятников (The Grammar of the Language of the Old Turkic Runic Inscriptions). L: Nauka

Zholdasbekov, M., Sartkhozhauly, K. (2005) Atlas of Orhon Monuments. Astana:Kultegin

Sartkhozhauly, K. (2012) Orhon monuments. Almaty:Abzal-ai

Orkun, H.N. (1986) Eski Türk Yazıtları. Istanbul

Malov, S.E. Памятники древнетюркской письменности (тексты и исследование). – М.-Л., 1951. (Monuments of Old Turkic Writing (texts and research works). M.-L.: 1951)

Tekin, T. (1983) Küzey Mogolistanda yenı bir Uıgur anıtı:Tarayat kitabesi.Ankara:Türk Tarıh Kurumu Basımevi.

Clauson, Sir Gerard (1972) An Etimological dictionary of Pre-Thirteenth Century Tukish. Oxford: Oxford University Press.

Torbat, T. and others. (2009) A Rock Tomb of the Ancient Turkic Period in the Zhargalant Khairhan Mountains, Khovd Aimag, with the Oldest Preserved Horse-Head Fiddlein Mongolia – A Preliminary Report // Current Archeological Research in Mongolia. Bonn, 365-383.

Sartkhozhauly, K. (2010) The Old Dombyra.http://www.tilop.kz.

Klyashtorny, S., Levshits V. (1978) Discovery and research Old Turkic and Sogdian Epigraphic Monuments. Archeologia i etnographia Mongolii. Novosibirsk.

Aristov, N. (1896) Notes on Ethnic Composition of Turkic Tribes and People and Population Record. ZhS 3-4, 277-456

Shaimerdinova, N. (2009) Representation in the Language of Old Turkic Worldview. Astana.

Amanzholov, A. (2003) History and theory of Old Turkic manuscript. "Mektep" Press

Tenishev, E. (1976) About Supradialectual Character of the Language of Old Turkic Runic Inscriptions. Turkologica. Devoted to the 70 anniversary of academician A.N. Kononov, 164-172

Lim, A.K. (2011) The meaning structure of the Old Turkic denominal verb formatives. Part1.*Turkic Languages* 15, 3-50

Erdal, M. (1991) Old Turkic Word Formation. Weisbaden: Otto Harrassowits.

Aiylmaz, C. (1994) Orhun Yazıtlarında Söz Dizimi. Doktora Tezi. Ankara

Olmez, M. (1995)Eski Türk Yazıtlarında Yabancı öğeler (1). Türk Dilleri Araştırmaları 5, 227-229

Aidarov, G. (1971) The Language of Orhon Old Turkic Monuments of VIII c. Almaty: Nauka.

Amanzholov, A. (2009) The History An Experience on Turkic Languages Studies. Astana: Foliant.

Sagyndykhov, B. (2004) Phonology of the Development of Lexis in Turkic Languages. Almaty: Kazakh Universiteti

Yeskeeva, M. (2007) Monosyllabic Basis Old Turkic and Modern Kipchak Languages. Almaty: Arys Press.

…………………………………………………………………