Knowledge Management Enablers for Knowledge Creation
Externalisation in Nepalese Hospitality Industry

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ABSTRACT
This paper examines the relationships between the knowledge management enablers and knowledge creation externalisation in the hospitality industry such as hotel, travel and trekking agencies in Nepal. The study is based on primary data with 382 responses. The self-administered questionnaires were used to collect the perceptive opinions from the respondents. The study concludes that the key knowledge management enablers such as collaboration, trust, learning, centralisation and information technology do influence to the knowledge creation externalisation positively. Managers should promote collaboration, trust, learning and information technology facilities for employees to create knowledge in organisation.

Keywords: Collaboration, centralisation, externalisation formalisation, IT support, learning, trust

I. INTRODUCTION
Externalisation (tacit to explicit knowledge) is a process of formalisation of tacit knowledge in explicit concepts or understandable for organisation or any individual, through the own articulation of this one and its move to support quickly understandable (Nonaka & Konno, 1998). Dialogue and deductive and inductive techniques such metaphors, analogies, or construction of archetypes and stories shared (Nonaka, 1991; Nonaka & Takeuchi, 1995) facilitated the expression of ideas or images in words, concepts, figurative and visual language and they are basic tools that support externalisation. In socialisation and externalisation knowledge is shared within the organisation. The socialisation of tacit knowledge from collective experiences and mental models is disseminated in the company through externalisation (Nonaka, 1994; Nonaka & Takeuchi 1995; Nonaka & Konno, 1998). To formalise explicit concepts, the externalisation needs tacit knowledge achieved through socialisation (Nonaka & Konno, 1998) to share it in the organisation (Nonaka & Takeuchi 1995; Nonaka & Toyama, 2003). Processes of socialisation affect processes of externalisation because the participants of these ones must share time and space to work through direct experience for the interaction of this tacit and explicit knowledge (Nonaka & Toyama, 2003).

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Therefore, tacit knowledge of socialisation is articulated into explicit forms through externalisation activities (Li et al., 2009).

Externalisation also assists staff to convey pictorial information or thoughts as considerable conceptions and ideas that are desired for new product development and improvement (Tsai & Li, 2007). In externalisation, the employment of metaphors in discussions is fundamental at a conceptual stage of a project (Li et al., 2009). In other words, externalisation is beneficial to new product development and continuous quality improvement initiatives due to the convenience and easily comprehensible methods available from forming explicit knowledge. Migdadi (2005), Choi (2002) and Berraies et al. (2014) found that collaboration is positively related with externalisation. But, Lee and Choi (2000) found that collaboration has no effect on knowledge creation externalisation. Choi (2002), Lee and Choi (2000), Berraies et al. (2014) and Migdadi (2005) found that trust is a significant predictor of externalisation. Migdadi (2005) evaluated that learning significantly impact the externalisation. However, Lee and Choi (2000), Choi (2002) and Berraies et al. (2014) found that learning does not affect the externalisation mode.

Kandel (2015) suggested that the Nepalese telecom industry should be aware in making good use of intranets to disseminate the information on products and processes within their organisations. There is still need to develop metaphors and analogies to describe. Chalise (2006 & 2011) suggested that Nepalese banking industry should be aware in making good use of intranets to disseminate the information on products and processes within their organisation.

In the context of Nepal, there is a need to study whether the impact of knowledge management enablers on the knowledge creation externalisation is significant or not. Therefore, this study seeks to examine whether knowledge creation externalisation, in a Nepalese context, have been applied or not, and if applied, what the consequences of them are. Nepalese hospitality industry is very competitive. Knowledge is a resource to gain competitive advantage in this sector. It requires obtaining comprehensive information on how knowledge is managed and utilised in hospitality industry. It is also necessary to examine the organisational culture, structure and information technology that are essential in managing the knowledge creation process in hospitality industry in order to make it more efficient.

The objective of the study is to evaluate the relationship between knowledge management enablers and knowledge creation externalisation in the business enterprises of sectors such as hotel, travel and trekking agencies. Remaining part of the paper has been divided in three sections. Second section presents the research methodology, third section reveals results and the final section presents the conclusion of the study.

II. REVIEW OF LITERATURE

Culture is important for facilitating sharing, learning, and knowledge creation. Culture is values, beliefs, norms, and symbols (Price Waterhouse Change Integration Team, 1996). In general, culture highly values knowledge, encourages its creation, sharing, application, and promotes open climate for free flow of ideas. The development of such culture is the major challenge for knowledge management efforts. Organisational cultures change over time as organisations adjust to environmental contingencies. Every organisation has its own particular culture and
its own unique practices (Schein, 1985). An effective culture for knowledge management consists of norms and practices that promote the transfer of information between employees and across department lines (Yeh, Lai & Ho, 2006). Building an effective culture where people operate in an organisation is a critical requirement for effective knowledge management (Gupta & Govindarajan, 2000). Many studies conducted to investigate causes of knowledge management initiative failure, have recognised that organisational culture is the main barrier to knowledge management success (Tuggle & Shaw, 2000).

Collaboration is an important feature in knowledge management adoption. It is defined as the degree to which people in a group actively assist one another in their task (Hurley & Hult, 1998; Lee & Choi, 2003). A collaborative culture in the workplace influences knowledge management as it allows for increased levels of knowledge exchange, which is a prerequisite for knowledge creation. This is made possible because collaborative culture eliminates common barriers to knowledge exchange by reducing fear and increasing openness in teams (Lee & Choi, 2003).

Trust can be defined as maintaining reciprocal faith in each other in terms of intention and behaviours (Kreitner & Kinicki, 1992). By alleviating the fear of risk and uncertainty, trust encourages a climate conducive to better knowledge creation. Trust is critical in a cross-functional or interorganisational team because withholding information because of a lack of trust can be especially harmful to knowledge articulation, internalisation, and reflection (Hedlund, 1994). Distrust leads people to hide or hoard their knowledge (Jarvenpaa & Staples, 2000). In a distrusted environment, knowledge will not be created, or will be created in a restrictive manner. Therefore, facilitating trust among cross-functional or interorganisational team members is important for the foundation of knowledge creation (Ichijo et al., 1998; Lubit, 2001; Nelson & Cooprider, 1996; Scott, 2000).

The capacity of knowledge creation can be increased by various learning means such as education, training, and mentoring. Krogh (1998) proposed training programs as a means of knowledge creation. Swap et al., (2001) highlighted mentoring as a key means in creating organisational knowledge. Intense mentoring enables professionals to obtain a higher level of knowledge. For the organisations to be successful in knowledge creation, traditional training and development activities may no longer suffice; they need to nurture an environment with continuous and persisting learning (Lubit, 2001; Eppler & Sukowski, 2000).

Centralisation refers to the locus of decision authority and control within an organisational entity (Caruana, Morris, & Vella, 1998). The concentration of decision-making authority inevitably reduces creative solutions while the dispersion of power facilitates spontaneity, experimentation, and the freedom of expression, which are the lifeblood of knowledge creation (Graham & Pizzo, 1996). Therefore, many researchers proposed that a centralised organisational structure makes it harder to create knowledge (Teece, 2000). Moreover, centralised structure hinders interdepartmental communication and frequent sharing of ideas due to time-consuming communication channels (Bennett & Gabriel, 1999); it also causes distortion and discontinuousness of ideas (Stonehouse & Pemberton, 1999). Without a constant flow of communication and ideas, knowledge creation does not occur.
Formalisation is an obstacle on the way towards externalisation, integration, and internalisation processes. Zucker et al. (1996) have found that less centralisation and formalisation can lead to higher degrees of knowledge management implementation and process flow at all levels of the organisation.

Technology is a powerful enabler of knowledge management success. It is generally accepted that databases, intranets, knowledge platforms and networks are the main blocks that support knowledge management. Information Technology facilitates quick search, access of information, cooperation and communication between organisational members (Yeh, Lai, & Ho, 2006). There is an extensive collection of information technologies such as data warehousing, intranet, internet, which can be implemented and integrated in an organisation’s technological platform and work together as knowledge management system. Luan and Serban (2002) grouped information technologies into more than one category: business intelligence, knowledge base, collaboration, content and document management, portals, customer relationship management, data mining, workflow, search, and e-learning.

Externalisation is a process of converting tacit knowledge into explicit notions and often occurs in the conceptual stage generated by discussion or brainstorming (Choi & Lee, 2002). Externalisation results in the creation of ‘conceptual knowledge’ (Nonaka & Takeuchi, 1995). In short, externalisation involves the conversion of knowledge that cannot be easily codified (tacit knowledge) into knowledge that can be easily codified (explicit knowledge). The externalisation process aims at reducing an organisation’s reliance on individual team members, thus making knowledge independent from individuals (Berends, et al., 2007). According to Salmador and Bueno (2007), externalisation is a practice of elucidating the knowledge obtained from know-how into concepts, hypotheses, models, metaphors or analogies via communication. Externalisation happens when the organisation conveys formally its internal rules of performance or when it unequivocally sets goals or targets (Martin-de-Castro et al., 2008). Bolloju et al. (2002) stated that knowledge externalisation refers to the use of existing knowledge to produce organisational yields. They elaborate that it occurs once people utilise descriptions in articulating standpoints on revealing concealed and hard-to-communicate tacit knowledge. Therefore, externalisation can also be driven by organisational policies or strategies in addition to the practice of the employees in codifying their knowledge and information for the benefit of the project as well as the organisation.

The studies on knowledge management enablers for knowledge creation externalisation revealed that the knowledge creation externalisation is associated with collaboration (Lee & Choi, 2000; Migdadi, 2005). Similarly, the study exposed that trust is significantly related to the knowledge creation externalisation (Lee & Choi, 2000; Migdadi, 2005; Chen et al. 2011), who found that trust, is significantly related to the. Limited studies are conducted regarding knowledge management in Nepal. Chalise (2006 & 2011) conducted the study about impact of knowledge management on banking innovation and performance. Shakya (2012) conducted the research on organisational learning and performance. Chaudhary (2016) performed the research on strategic alignment of knowledge management for organisational performance. However, as reviewed this study in the area of enquiring enablers of knowledge management in Nepalese perspective and their implications on knowledge creation externalisation is amiss. In order to meet the identified gap, this study has been initiated.
III. RESEARCH METHOD

To examine knowledge management enablers for knowledge creation externalisation in Nepalese hospitality industry, the study used the descriptive research design based on the survey. The quantitative research design is applied to develop an understanding of the research issue.

The study has used primary data collected from executives, managers, department heads, sales officers, marketing officers, finance officers, guest relation officers, public relation officers and human resource managers in the hospitality industry organisations. In the process of gathering information, a structured questionnaire was used as the main instrument. The primary data were collected by ‘delivery and collection’ methods.

The total of 458 responses was collected from 97 firms. Due to incomplete data, 76 responses were eliminated. Consequently, 382 responses from 97 firms were taken for further analysis. The total response rate was 83 per cent. Self-administered questionnaires were used to collect the perceptive opinions from the respondents.

Questionnaire items developed included a list of 56 items to measure the different constructs in the study: collaboration, trust, learning, centralisation, formalisation, information technology and knowledge creation externalisation. The development of the items was done by re-evaluating intensively the literature review related to the concepts and constructs stated in the integrative view. The aim of this empirical research is to test whether the dimensions proposed in the above-mentioned integrative view support a significant distinction between different kinds of knowledge management enablers.

To validate the proposed research model, this study conducted a pre-test. The pre-test was conducted in the month of November, 2014. For the pre-test survey, this study developed questionnaire and collected data from 36 potential respondents of the selected samples: both hotels (20) and travel/trekking agencies of 16 respondents. Based on the findings of the pre-test survey, research questionnaire was modified to improve reliability and validity of the study. After the pre-test, the questionnaire was finalised and the main study was conducted.
The study used regression analysis to test the interrelationship of knowledge management enablers (independent variables) similarly their impact on knowledge creation externalisation (dependent variables). The application of regression analysis to the present study is desirable as they significantly help researchers evaluate the causal effect of one variable on other variables.

**Hypotheses**

The study hypotheses were largely derived from theoretical statements made in the literature on knowledge management. In the first hypothesis, the study analysed the collaboration dimension of knowledge management enabler. In the second and third hypotheses, the study analysed the trust and learning dimension. In the fourth, fifth and sixth hypotheses, the study analysed the centralisation, formalisation and information technology support dimension.

**Hypothesis 1: Collaboration**

The study proposes to analyse the collaboration for knowledge creation externalisation. The following hypotheses have been formulated:

*Null hypothesis, H₀*: Collaboration does not affect knowledge creation externalisation.
*Alternative hypothesis, H₁*: Collaboration affects knowledge creation externalisation positively.

The acceptance of alternative hypothesis associated with hypothesis 1 implies that collaboration will have positive effect on the knowledge creation externalisation and it points to the effective role of collaboration on knowledge creation externalisation. On the other hand, if the tests reject the alternative hypotheses and it may suggest that the collaboration is not helpful for knowledge creation externalisation.

**Hypothesis 2: Trust**

After determination of the collaboration for knowledge creation externalisation, the study proposes to evaluate the trust dimension of knowledge creation externalisation. To test the trust for knowledge creation externalisation, the testable hypotheses have been formulated:

*Null hypothesis, H₀*: Trust does not affect knowledge creation externalisation.
*Alternative hypothesis, H₂*: Trust affects knowledge creation externalisation positively.

The acceptance of alternative hypothesis associated with hypothesis 2 implies that trust will have positive effect on the knowledge creation externalisation and it points to the effective role of trust on knowledge creation externalisation. On the other hand, if the tests reject the alternative hypotheses and it may suggest that the trust does not play important role for knowledge creation externalisation.

**Hypothesis 3: Learning**

After determination of the trust for knowledge creation externalisation, the study proposes to evaluate the learning for knowledge creation externalisation. To test the learning for knowledge creation externalisation, the testable hypotheses have been formulated:

*Null hypothesis, H₀*: Learning does not affect knowledge creation externalisation.
*Alternative hypothesis, H₃*: Learning affects knowledge creation externalisation positively.

The acceptance of alternative hypothesis associated with hypothesis 3 implies that learning will have positive effect on the knowledge creation externalisation and it points to the effective
role of learning on knowledge creation externalisation. On the other hand, if the tests reject the alternative hypotheses and it may suggest that the learning does not play important role for knowledge creation externalisation.

**Hypothesis 4: Centralisation**

After determination of the learning for knowledge creation externalisation, the study proposes to evaluate the centralisation for knowledge creation externalisation. To test the centralisation for knowledge creation externalisation, the testable hypotheses have been formulated:

*Null hypothesis, $H_0$: Centralisation does not affect knowledge creation externalisation.*

*Alternative hypothesis, $H_4$: Centralisation affects knowledge creation externalisation negatively.*

The acceptance of alternative hypothesis associated with hypothesis 4 implies that centralisation will have negative effect on the knowledge creation externalisation and it points to the negative effect of centralisation for knowledge creation externalisation. On the other hand, if the tests reject the alternative hypotheses and it may suggest that the centralisation does not play important role for knowledge creation externalisation.

**Hypothesis 5: Formalisation**

After determination of the centralisation for knowledge creation externalisation, the study proposes to evaluate the formalisation for knowledge creation externalisation. To test the formalisation for knowledge creation externalisation, the testable hypotheses have been formulated:

*Null hypothesis, $H_0$: Formalisation does not affect knowledge creation externalisation.*

*Alternative hypothesis, $H_5$: Formalisation affects knowledge creation externalisation negatively.*

The acceptance of alternative hypothesis associated with hypothesis 5 implies that formalisation will have negative effect on the knowledge creation externalisation and it points to the negative effect of formalisation for knowledge creation externalisation. On the other hand, if the tests reject the alternative hypotheses and it may suggest that the formalisation does not play important role for knowledge creation externalisation.

**Hypothesis 6: IT Support**

After determination of the formalisation for knowledge creation externalisation, the study proposes to evaluate the IT support for knowledge creation externalisation. To test the IT support for knowledge creation externalisation, the testable hypotheses have been formulated:

*Null hypothesis, $H_0$: IT support does not affect knowledge creation externalisation.*

*Alternative hypothesis, $H_6$: IT support affects knowledge creation externalisation positively.*

The acceptance of alternative hypothesis associated with hypothesis 6 implies that IT support will have positive effect on the knowledge creation externalisation and it points to the effective role of IT support for knowledge creation externalisation. On the other hand, if the tests reject the alternative hypotheses and it may suggest that the IT support does not play important role for knowledge creation externalisation.
**Regression Equation Model between KCE and KMEs**
Regression equation between the knowledge creation externalisation and knowledge management enablers as follows:

\[ KCE = \alpha + \beta_1 \text{COL} + \beta_2 \text{TRU} + \beta_3 \text{LEA} + \beta_4 \text{CEN} + \beta_5 \text{FOR} + \beta_6 \text{ITS} + E \]

Where,
- \( KCE \) = knowledge creation externalisation
- \( \alpha \) = constant number
- \( \beta_1 \) = change in knowledge creation externalisation associated with unit change in collaboration
- \( \beta_2 \) = change in knowledge creation externalisation associated with unit change in trust
- \( \beta_3 \) = change in knowledge creation externalisation associated with unit change in learning
- \( \beta_4 \) = change in knowledge creation externalisation associated with unit change in centralisation
- \( \beta_5 \) = change in knowledge creation externalisation associated with unit change in formalisation
- \( \beta_6 \) = change in knowledge creation externalisation associated with unit change in information technology
- \( \text{COL} \) = collaboration
- \( \text{TRU} \) = trust
- \( \text{LEA} \) = learning
- \( \text{CEN} \) = centralisation
- \( \text{FOR} \) = formalisation
- \( \text{ITS} \) = information technology
- \( E \) = prediction error (residual)

**IV. DATA ANALYSIS AND DISCUSSIONS**
The regression results of knowledge creation externalisation on collaboration, trust, learning, centralisation, formalisation, and information technology are presented in Models 1 to 6 include various combinations of the fundamental variables. Model 7 includes various combinations of fundamental cultural variables. Model 8 has various combinations of fundamental structural variables and model 9 includes all the six fundamental variables simultaneously.

**Table 1**
Estimated Relationship between KCE and Fundamental Variables

The results are based on pooled cross-sectional data of 97 enterprises with 382 observations by using linear regression model. The model is, \( KCE = \alpha + \beta_1 \text{COL} + \beta_2 \text{TRU} + \beta_3 \text{LEA} + \beta_4 \text{CEN} + \beta_5 \text{FOR} + \beta_6 \text{ITS} + E \). Where, \( KCE, \text{COL}, \text{TRU}, \text{LEA}, \text{CEN}, \text{FOR} \) and \( \text{ITS} \) are knowledge creation externalisation, collaboration, trust, learning, centralisation, formalisation and information technology respectively. Results for various subsets of independent variables are presented as well.
In the context of collaboration, trust, learning, centralisation, formalisation, and information technology variables are found to be essential for knowledge creation externalisation. ($\beta=0.511$, $p < 0.05$) in model 1, which supports $H_1$. It indicates that the good coordination among different units and people in the hospitality industry promote expression of ideas and concepts. The result is similar to Migdadi (2005), Choi (2002) and Berraies et al. (2014), which found that collaboration is a positively related with externalisation. But the study result contradicts with Lee and Choi (2000), which found that collaboration, has no effect on the knowledge creation externalisation.

In model 2, trust is a positively significant predictor of the knowledge creation externalisation ($\beta=0.397$, $p < 0.05$), which supports $H_2$. It indicates that the mutual faith promotes to formalise of the tacit knowledge in explicit concepts. This result is similar to Choi (2002), Lee and Choi (2000), Berraies et al. (2014) and Migdadi (2005), which found that trust is a significant predictor of externalisation. From Table 4-6 (c), it is clear that learning is a positively significant predictor of the knowledge creation externalisation ($\beta=0.585$, $p < 0.05$) in model 3, which supports $H_3$. In the Table, centralisation positively affects the knowledge externalisation.
creation externalisation in model 4 (β = 0.080, p < 0.05), which is contrary of the study expectation, centralisation has a positive effect on the knowledge creation externalisation, indicates that it does not support H4. From Table 4-6 (c), it is clear that formalisation does not affect the knowledge creation externalisation in model 5 (β= 0.055, p > 0.05), which is contrary of the study expectation, formalisation has no effect on the knowledge creation externalisation; it indicates the lack of support H5. However, in model 6 information technology is a positively significant predictor of the knowledge creation externalisation (β= 0.514, p < 0.05), which supports H6.

The knowledge creation externalisation is positively influenced by collaboration, trust, learning, centralisation and information technology, and not significantly influenced by formalisation. The overall results show the positive relationship of knowledge creation externalisation with collaboration, trust, learning, centralisation and information technology, and not with formalisation.

V. CONCLUSION

The study has concluded that the key knowledge management enablers such as collaboration, trust, learning, centralisation and information technology do influence to the knowledge creation externalisation positively. The study result supports to Lee and Choi (2000) and Migdadi (2005) from the collaboration point of view. Similarly, the study result supports to Lee and Choi (2000), Migdadi (2005), and Chen et al. (2011), who found that trust, is significantly related to the knowledge creation externalisation. Centralisation positively affects the knowledge creation externalisation, which is contrary of the study expectation, centralisation has a positive effect on the knowledge creation externalisation. Formalisation does not affect the knowledge creation externalisation, which is contrary of the study expectation, formalisation has no effect on the knowledge creation externalisation

In addition, the study results have revealed the culture as the most vital enabler of knowledge creation externalisation. Thus, building and supporting a culture which rewards and encourages employees for seeking, sharing, formalising and creating knowledge attributes will most probably lead to the successful capture, absorb, creation and implementation of knowledge management.

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