

Print ISSN: 2288-4637 / Online ISSN 2288-4645
doi:10.13106/jafeb.2021.vol8.no2.0851

A Latent Factor (PLS-SEM) Approach: Assessing the Determinants of Effective Knowledge Transfer

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Received: November 05, 2020 Revised: January 05, 2021 Accepted: January 15, 2021

Abstract

The Knowledge Transfer (KT) for higher education institutions (HEIs) is boundless. Still and all, the members of the staff affiliated with these institutions do recognize an array of hitches in relation to KT practices. The study in question underscores social interactions, training, and Information and Communication Technology (ICT) as the primary barriers and treats them as the independent variables of the study. The study posits that inadequate management of the above-mentioned barriers would impact effective KT unfavorably. Besides, putting forth some striking solutions needed to fix the obstructions that hamper the adequate management of the KT exercises is another aim of the study. For data collection purposes, the study picks out higher education institutions (public) of the Quetta district. The reckoned sample size is 317 subjects. The research type that has been used is cross-sectional research and, in this context, the cross-sectional explanatory sequential design has been used. Concerning the findings of the paper, the results of PLS-SEM show positive and significant relationships of social interaction and training with knowledge transfer, while ICT shows an insignificant positive relationship with the knowledge transfer. The most influencing factor for the knowledge transfer is social interaction as suggested by social interaction theory.

Keywords: Knowledge Transfer, Social Interaction, Training and Development, Information and Communication Technology

JEL Classification Code: C38, M10, M15, M53

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1. Introduction

The unpredictable environment of today considers knowledge as the cornerstone of success and a key to buoy the economy. Considering the overriding importance of knowledge, the developed societies seek to promote knowledge as a cure-all for survival and that one factor which they can rely upon to gain a competitive edge (Burns, Acar, & Datta, 2011; Makani & Marche, 2012). The knowledge has been outlined in a range of styles by varied researchers (Roberts, 2000). Al-Adaileh and Al-Atawi (2011) professed that knowledge is the blend of values, practices, and skills that help in future intercourse. Pai (2006) purported that it as the blend of data and details without excluding the skillfulness, beliefs, and adeptness likely to amplify the value of the data & information gathered via any Knowledge transfer exercise to augment mutually beneficial partnerships between companies, universities, and public sector. Just like knowledge management (KM), knowledge transfer arranges, creates, seizes, and disperses knowledge and ensures that it is available for prospective customers.

The primary drawbacks of the prior studies can be highlighted here. Hermann (2011) looked at the knowledge

barriers from a South African standpoint. He ascertained knowledge barriers following the standpoint of employees who were natives of those regions. The same holds in the case of McLaughlin and Paton (2008) who underscored a multitude of impediments. They looked at impediments from a supply chain perspective. Hong, Suh, and Koo (2011) administered their study on a financial company; therefore, it is hard to generalize results to other organizations. An additional concern is that they placed a premium on Knowledge Sharing (KS) and ignored KT barriers whatsoever. Yao, Kam, and Chan (2007) studied Asian corporations. Western organizations relative to Asian corporations use a different model of KS.

Becomingly, organizations must make out that a certain KT strategy may not befit every kind of organization. One cannot turn a blind eye to differences that exist among public sector, private sector, Multinational Corporations (MNC), Small and Medium Enterprises (SME), and not for profit organizations. Considering the stated facts, the application of KT goals and strategies into an organization's planning and strategic thinking will vary profoundly. It is worthy of note that this study has been conducted in HLIs of a developing country's city and can have its impediments related to an organization's structure, Information Technology (IT) tools, and individual factors. Ergo, the results and solutions of this study may differ from the results of these authors' studies. The objectives of the study are to investigate the impact of social interactions, training, and ICTs, with the knowledge transfer practices in higher education institutions of Baluchistan.

2. Literature Review

2.1. Resource-Based Theory (RBT)

Broadly, the resource-based theory expects a firm's abilities and resources to have a glacial impact on the performance and progress of an organization (Barney & Clark, 2007). Furthermore, the basic idea of the RBT is based on the proposition that the total assets of a firm, its capabilities, practices, characteristics, knowledge, and so on supply the organization with the right kinds of tools to apply sound strategies that can amplify its effectiveness and efficiency. On this wise, the resources of an organization can comfortably be termed as "strategic resources" given they help the firm in securing sustained competitive advantage (SCA) (Albers, 2005). Incontestably, knowledge, in today's knowledge-intensive world can be regarded as the most strategic resource of a firm. Considering the whopping significance of knowledge, the concept of KM and its most argued constituents KS and KT enjoy overriding significance. Importantly, organizational learning is at the heart of the RBT (Ding, Akoorie, & Pavlovich, 2009).

2.2. Knowledge-Based View (KBV)

The crucial subject encompassing KBV which assesses the administration of KM effectively and efficiently is now profusely appealing to the researchers and managers worldwide (Grant, 2002). The knowledge-based view contends that the most crucial and strategic resource is knowledge without an iota of doubt (Grant, 2002; McEvily & Chakravarthy, 2002). The researchers espousing the KBV point out that the organization's future growth depends on the effective integration of knowledge resources and off-shoot decision-making ability (Spender, 1996). The dominant vista of the knowledge-based view is that a firm's unique knowledge and its ability to copy and capitalize on knowledge are mainly responsible for organizational development (Ding et al., 2009).

2.3. Training Programs

Training as defined by (Kraiger, 2003) is the sum of efforts directed at the acquisition of knowledge, skills, and attitude for which there exist closest or near-term implementation. The training exercises deemed void of the adequate policy if implemented, would lead to KT exercises left unutilized and unidentified to gain intended results through training (Ahn, Hu, Damianou, Lawrence, & Dai, 2019). Inadequate training activities can have an unfavorable impact on the competency of trainees to use deftness or knowledge acquired from the training project (He, Avestimehr, & Annavaram, 2020). It is not out of place here to mention that the successful improvement of the training program after its implementation is contingent upon the recognition of organizational practice (Abdullah, 2020).

The knowledge by the trainees is secured for various objectives. These objectives may include, among others, refreshing their knowledge base, grappling with problems adequately, improving their performance (Franklin, Garza, Goodson, & Bouffard, 2020). Knowledge transfer is the principal embodiment of a successful training program (Shafloot, 2012). Hariharan (2002) purported that KT accounts for forms of execution, sharing relevant knowledge, and improving business performance. Few researchers mention a couple of plans of action to rev up the knowledge (Friel, 2005; Smith & Tyler, 2011; Zemke & Gunkler, 1985). The contributions of Ellen, Parkes, and Bicker (2000) in this regard are that he resorted to the development of Knowledge Transfer Action Plans (KTAP) as a way to promote knowledge transfer by increasing accountability. A handful of other authors purport that the success of an intervention hinges not only on the fruitful acquisition of knowledge but on the ability to successfully move that knowledge to the performance environment as well (Ellis, Bell, Ployhart, Hollenbeck, & Ilgen, 2005).

Accountability can play a vital role insofar as trainees are required to use skills or knowledge learned by way of training. Ellen et al. (2000), in their study, examined that use of training is amplified in the workplace when accountability is practiced in the form of a KTAP presented at the end of a training drive. The KTAP delineates absolute action the members will begin doing for the sake of furthering community policing in their respective communities (Dohn, Markauskaite, & Hachmann, 2020). Through the examination of the data, she deduced that the KTAP is a brilliant procedure for ensuring that training knowledge is executed into work setups and is utilized subsequently. The findings of Parkes are enough to establish that KTAP is profusely significant (Paoloni, Cesaroni, & Demartini, 2019). Firstly, because it lays out clear goals for the training and transfer mechanism. Secondly, because it sets up a design to tap, and puts up measures to follow for intended outcomes.

2.4. Social Interaction

Face-to-face Interactions, a communication channel comes into existence. This channel facilitates the flow of non-codified, tacit knowledge (Redcay & Schilbach, 2019). All the same, vigorous social communications yield the right set of events for the social establishment of knowledge in a learning confab (Noorderhaven & Harzing, 2009). Björkman, Barner-Rasmussen, and Li (2004) examined that inter-department tours, international boards, training teams, and other groups accounting for copious fragments incontestably impact knowledge flows from a central system. Persson (2006) examined the profitable impacts of leagues and short-lived teams accounting for officers from different units on the circulation of knowledge between divisions. Schulz (2003) observed knowledge intrusions/inroads (vertical and lateral) at a central division and examined a favorable influence of informal linkages between the departments. Venkatraman and Subramanian (2001) explored the positive influence of cross-national teams on cross-border knowledge flows. It was deduced that for all occasions, what lasts is the direct informal mode of the social communications amplified by the main system.

Albers (2005) the deduction that socialization sanctions knowledge flows do strike as being inevitable. On this point, socialization proves to be a true impetus for KT, a “passage” with the needed capability to move contextual complex knowledge (Wass, Whitehorn, Haresign, Phillips, & Leong, 2020). Nevertheless, the presence of a conduit or passage can barely be deemed an explanation of the flows it serves. In the rationale of the model, other aspects that beget knowledge motions must hold, and a transmission passage can merely favorably modulate the impacts of these dormant aspects (Sun, Wang, & Jeyaraj, 2020). Socialization takes on a profoundly pivotal role. Instead of just being the

only conduit for the KT processed at one scene and used at another, it establishes a vital requirement for the viability of knowledge-sharing and integration (Noorderhaven & Harzing, 2009).

2.5. The Social Learning Approach

Social learning theory (SLT) promotes learning when knowledge actualizes through meetings and communication between people (Easterby-Smith, Crossan, & Nicolini, 2000). Noorderhaven and Harzing (2009) substantiate that the relationship between the coworkers in SLT makes the motivation and readiness to be activated. This relationship also increases the fervor to share knowledge with the rest. SLT does not rebuke the role that receivers, senders, and mediums play in knowledge motions; rather it posits that the knowledge shared between coworkers is lean towards a tacit component of it (Brown & Duguid, 2001). In all likelihood, It's hard to grasp, transfer, or convert tacit knowledge but it can be displayed and manifested in what we do (Tsoukas, 2005). For learning to materialize, tacit knowledge occasions to be interpreted, manufactured, and merged (Becker-Ritterspach, 2006). Its credibility can be seen in a dialogue in which both parties take on the roles of sender and receiver. Thence, socialization takes up an extensively vital role rather than just being a “pipeline” for the KT created at one site and used up at another. Importantly, it establishes an important precondition for the viability of knowledge sharing and integration (Noorderhaven & Harzing, 2009). Whence, considering the findings of SLT, knowledge transfer would kick in only when employees associated with various departments resort to actual interaction (Sjönell & Qvarnström, 2013).

2.6. Information Communication Technology

A decisive role is being played by Information and Communication Technologies (ICTs) in the rising research-oriented financial state whereby the generation and exploitation of knowledge are serving a central role in the production of wealth. Even so, the ICT breakaway must not be taken as like the broadening of the knowledge-based economy; both cases are crisply tied in. ICTs facilitate the speedy accumulation, collection, storage, and diffusion of data, thus facilitating the formation and diffusion of knowledge. Akin to innovations of the past, such as the printing press, especially beefed up the transfer of knowledge across space and time, so too have new ICTs. For a case in point the images, video clips, text, and data can now be transferred without a hassle across significant distances via the internet, computer-to-computer data exchange, or satellite television (Roberts, 2000). ICTs are offering a whole lot of opportunities to the customers for selecting educational initiatives. One can chalk up any sort

of degree through E-learning eliminating the need to attend institutions. As is a common understanding that learning is a perpetual process and it is not quite probable for individuals to attend the traditional institutions in their distant future (Syed et al., 2021)

Information communication technologies are an integral part of the KT process. All the same, ICTs cannot rule out the significance of face-to-face interactions between members (Quamar, Schmeler, Collins, & Schein, 2020). Importantly, the new ICTs may communicate more social and taciturn elements in the communication process now, but this process is sluggish, and the issue of tactics occupies a central position in connecting certain functions and activities in the firm (Agarwal, 2019). The procedures that are in place to manage the use of ICTs retain a substantial impact on their success procedures for knowledge transfer and communication (Roberts, 2000).

Information and communication technologies account for synchronous media and asynchronous media. Synchronous media account for audio/video conferencing, shared applications, telephone, and instant messaging (IM) (Ul-Hameed, Shabbir, Imran, Raza, & Salman, 2019). Asynchronous media account for email, voicemail, calendaring systems, shared document repositories, and threaded discussion forums (Massey & Wells, 2008). Moreover, that is means of collaboration that already exists or is a new offer a whole set of opportunities and challenges. The use of technologically mediated communication will fall out to be exceedingly propitious if it is between agents who share social, cultural, and linguistic characteristics (Suleimen, 2019). It will be useless when representatives belong to a different milieu, specifically in the initial steps of intercourse (Al-Rahmi, Alzahrani, Yahaya, Alalwan, & Kamin, 2020). Slowly, the representatives will evolve an adoration of their trading associate's social backdrop. Collectively, they will establish their own beliefs of each other and social norms, thus nurturing the exchange of knowledge (Abdullahi, Shehu, & Usman, 2019).

Information and communication technologies lay an influence on knowledge in a litany of ways. First up, the rapid rise of nominal suburbanized computational power fosters the collation, collection, storage, and diffusion of data on a scale that was unimaginable some decades ago. This creates new information and new knowledge thereby (Tsigie & Dagnaw, 2019). Next, Information and communication technologies facilitate KT by way of data exchange. If knowledge can be codified, using ICTs it can be disseminated the world over at the lowest possible cost. Notwithstanding, the transfer of tacit knowledge is not all that simple for the overt reason that the transformation from knowledge to information and on to data will be incomplete (Lee, Kogler, & Lee, 2019). Thereupon, the presence between the receiver and transmitter is mainly a precondition to the transfer of tacit knowledge.

Video conferencing rooms and virtual projects may facilitate the transfer of tacit knowledge (Chen, Chen, Lin, & Liu, 2019). However, at present such technologically supported communication substitutes the face-to-face interactions that are mostly deemed a necessary condition for the infallible motion of tacit knowledge (Roberts, 2000). The interchange of tacit knowledge takes place using pictures, drafts, and other mediums (Rajabion, Wakil, Badfar, Naeini, & Zareie, 2019). To assist the exchange of knowledge, a computer application can be used partly, in the form of graphic files for example. To be sure, the process of decrypting data into knowledge and information wholly is required to be accomplished by the human mind (operator) (Changpetch & Seechaliao, 2020). Transfer and creation of tacit knowledge, ICTs can be relied upon. However, it is to be kept in mind that ICTs alone fail to completely understand the climate needed for the successful sharing of tacit knowledge (Djiwandono, 2019). Essentially, a duo on extreme ends of the world can read the same codified knowledge enclosed in a report communicated to them via email at the same time. Nevertheless, these individuals face difficulty in effectively sharing the tacit knowledge even with the help of desktop video conferencing, unless a common social and cultural context is shared by them (Kumar & Aravind, 2019). If this condition is fulfilled, the tacit knowledge can be shared by them by comprehending codified knowledge and resultantly creating new tacit knowledge that in the main will be the same (Roberts, 2000).

2.7. Effective Knowledge Transfer

As reported by the research of (Smits & de Moor, 2004) effectiveness entails embedding KM exercises in an organizational context. Thence, effective knowledge transfer alludes to being aware of who knows what, who wants to know what, and how to transfer that knowledge. Effective KT can prevent the reinvention of ideas and systems as well as the repetition of mistakes. Effective KT will save a great deal of time as well as contribute to better performance of HEI. Albers (2005), an organization may not be responsible for people's lives, transferring the right piece of information to the right people at the fitting time is still deemed a lynchpin component to an organization's sustenance (Wang et al., 2020). If a key figure of the organization resigns or the production and finance department does not communicate except casually during lunch breaks, an organization can fail. That is where effective knowledge transfer comes into play. Effective KT is pivotal for a secure future (Syed et al., 2021)

2.8. Hypothesis

H1: Training influences the effective KT in HEIs.

H2: Social Interaction influences the effective KT in HEIs.

H3: ICT influences the effective KT in HEIs.

3. Method

The research has been conducted using a quantitative design. The study uses research known as cross-sectional and it employed a cross-sectional explanatory sequential design (Creswell, 2015). In tandem with the explanatory sequential design, in this research, the data gathered through self-administered questionnaires from a population of 1535 employees of all public universities of Quetta city. From this population, the sample size as has been determined is 317 subjects who participated in data collection employing questionnaires. The inquiry reported to slovin’s formula (Apriliadi, 2019) to compute the sample size. The 291 questionnaires were received using a 5-point Likert scale.

4. Data Analysis and Discussion

The study used descriptive and path analysis to achieve the objective of the research (Hair Jr, Howard, & Nitzl, 2020). The descriptive analysis uses to identify the mean and standard deviation of the scales, while for path analysis, we used smart-pls software partial least square structural equation modeling (PLS-SEM) (MULYONO, HADIAN, PURBA, & PRAMONO, 2020). Table 01 below exhibits the mean and the standard deviation of the independent variables (social interaction, ICT, and Training) and the dependent variable (knowledge transfer).

Table 2 presents the multicollinearity diagnosis issue among the independent variables. As recommended by (Hair Jr et al., 2020) VIF value should not exceed 3. The findings show that there is no issue to proceed further.

4.1. Partial Least Square Structural Equation Modeling

The first step into PLS-SEM to measure the outer error of the model (Hair, Risher, Sarstedt, & Ringle, 2019). The validity and reliability of the latent construct are to validate the model for testing the path relationships. The use of PLS-SEM in social science is widely adaptable (REHMAN et al., 2020; RUSTANTONO, SOETJIPTO, WAHJOEDI, & SUNARYANTO, 2020).

Table 1: Descriptive Statistics

| Variables | Mean | Std. Deviation |
|---------------------|------|----------------|
| Knowledge Transfer | 3.9 | 0.691 |
| Social interactions | 3.91 | 0.725 |
| Training | 3.4 | 0.977 |
| ICT | 3.85 | 0.736 |

4.2. Measurement Model

Table 3 shows the measurement model output of the research framework. The factor loading of items of each latent construct should be higher than 0.5 for retaining the items (Hair Jr et al., 2020). After the initiated phase of internal item consistency, the next step is to evaluate the composite reliability, average variance extracted, and discriminant validity (Hair et al., 2019). Table 3 also reports Cronbach’s Alpha, ρ_A , and composite reliability for assessing the latent construct reliability and Average variance extracted (AVE) for convergent validity (Hair et al., 2019). All the remaining items achieved the validity and reliability of the latent construct of the study. The accepted Cronbach’s Alpha, ρ_A , and composite reliability should be 0.7 (Hair Jr et al., 2020) and the values range from 0.75 to 0.90 for all reliability indicators. The values range for convergent reliability from 0.51 to 0.64 as recommended by (Fornell & Larcker, 1981).

Table 4 shows the discriminant validity for the latent constructs through (Fornell & Larcker, 1981) criterion and HTMT-ratio analysis (Ab Hamid, Sami, & Sidek, 2017). The results present that all values of the square root of the AVE are greater than correlation values and HTMT-ratio also shows that the values are less than 0.85 according to (Hair Jr et al., 2020). The results show an adequate level of discriminant validity.

4.3. Structural Model

The second step to evaluate the model in PLS-SEM analysis has been used as a structural model to test the relationship of the independent and dependent variables (Hair Jr et al., 2020). Using the smart-pls bootstrapping technique, the impact of independent variables (training, social interaction, ICTs) on the outcome variable (effective knowledge transfer) is examined. Figure 1 shows the conceptual framework and results of PLS-SEM.

Table 5 presents the results that, Training and social interaction is significant positively related with effective knowledge transfer with ($\beta = 0.092, p < 0.018$) and ($\beta = 0.651, p < 0.000$) respectively. ICT is positively related to knowledge transfer, but the relationship was found insignificant

Table 2: Multicollinearity Evaluation: Experimental and Outcome Variable

| Variables | Collinearity Statistics | |
|---------------------|-------------------------|-------|
| | Tolerance | VIF |
| Social Interactions | 0.703 | 1.422 |
| Training | 0.822 | 1.216 |
| ICT | 0.645 | 1.552 |

Table 3: Measurement Model

| | Loadings | Cronbach's Alpha | rho _A | CR | (AVE) |
|--|----------|------------------|------------------|-------|-------|
| Information & Communication Technologies | | 0.752 | 0.756 | 0.843 | 0.573 |
| ICT1 | 0.802 | | | | |
| ICT2 | 0.760 | | | | |
| ICT3 | 0.759 | | | | |
| ICT4 | 0.703 | | | | |
| Knowledge Transfer | | 0.831 | 0.838 | 0.879 | 0.551 |
| kt1 | 0.803 | | | | |
| kt2 | 0.817 | | | | |
| kt3 | 0.788 | | | | |
| kt4 | 0.693 | | | | |
| kt5 | 0.790 | | | | |
| kt6 | 0.521 | | | | |
| Social Interaction | | 0.810 | 0.828 | 0.862 | 0.510 |
| sc1 | 0.746 | | | | |
| sc2 | 0.695 | | | | |
| sc3 | 0.699 | | | | |
| sc4 | 0.731 | | | | |
| sc5 | 0.746 | | | | |
| sc6 | 0.662 | | | | |
| Training | | 0.868 | 0.905 | 0.900 | 0.644 |
| td1 | 0.848 | | | | |
| td2 | 0.820 | | | | |
| td3 | 0.801 | | | | |
| td4 | 0.841 | | | | |
| td5 | 0.692 | | | | |

Table 4: Discriminant Validity

| 4a (Fornell & Larcker) | Effective KT | ICT | Social | Training |
|------------------------|--------------|--------------|--------------|--------------|
| Effective KT | <i>0.743</i> | | | |
| ICT | 0.435 | <i>0.757</i> | | |
| Social | 0.707 | 0.541 | <i>0.714</i> | |
| Training | 0.318 | 0.363 | 0.320 | <i>0.802</i> |
| 4b | HTMT-Ratio | | | |
| Effective KT | | | | |
| ICT | 0.544 | | | |
| Social | 0.821 | 0.688 | | |
| Training | 0.356 | 0.500 | 0.368 | |

Note: Italic value in 4a shows the square root of the AVE and other values represent the correlation values among the variables. The value in 4b shows the HTMT-ratio for assessing discriminant validity.

($\beta = 0.049$, $p < 0.151$). Consistent with the literature the results found significant contribution to literature and the findings are like the (Hariharan, 2002; Persson, 2006; Schulz, 2003; Shafloot, 2012; Sjönell & Qvarnström, 2013). The consistent findings indicate that the training and social interaction is an important factor for knowledge transfer but the most important factor we can provide from the findings is social interaction (Persson, 2006).

4.4. Predictive Relevance and Model Fit

Table 6 below denotes that independent variables of the scrutiny are likely to bring a change of 51% in a dependent variable after adjustment of degree of freedom the adjusted are square reports 50.6% variance, which indicates the less change and better model fit. Table 6 also reports the Q -square and value is greater than (0) zero, which indicates that all independent variables have predictive power for the dependent variable in of sample model (Hair Jr et al., 2020).

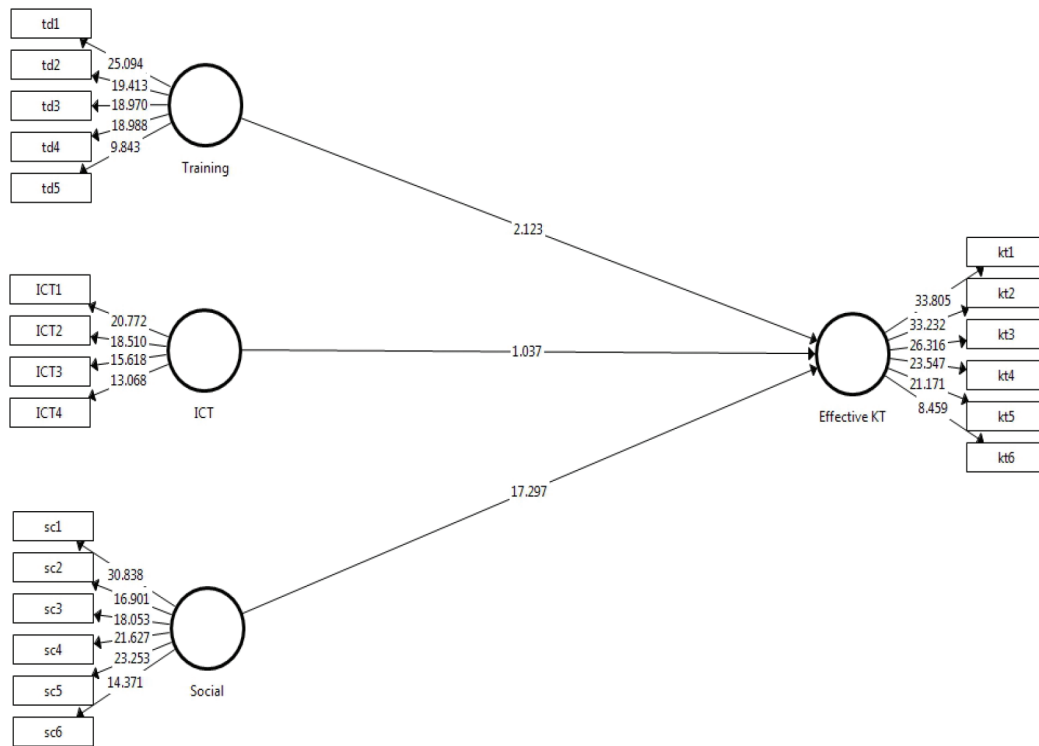


Figure 1: Structural Model

Table 5: Structural Model

| Hypothesis | β | Stdv | t-values | p-values | Decision |
|----------------------|---------|-------|----------|----------|---------------|
| ICT → Effective | 0.049 | 0.050 | 1.030 | 0.151 | Not Supported |
| Social → Effective | 0.651 | 0.653 | 17.442 | 0.000 | Supported |
| Training → Effective | 0.092 | 0.096 | 2.090 | 0.018 | Supported |

Note: β = Slope Coefficients, stdv = sample error, t & p values are used to excess the significance of distribution and decision reports the support of the hypothesis.

Table 6: predictive relevance and Model Fit

| R Square | Adjusted R Square | Q-square |
|----------|-------------------|----------|
| 0.511 | 0.506 | 0.234 |

5. Conclusion

The study aimed to ascertain the impact of training, social interaction, and ICT on knowledge transfer exercises in HLIs of Quetta city with the intent to propose some seemly solutions that may enable HEIs to coordinate their KT exercises in a better manner. To be true, the paper proffers interesting results that can contribute to advances in these research areas. Considering the results obtained,

an interesting conclusion can be drawn: all independent variables viz., social interactions, training, and ICTs do not act as barriers to inhibit KT in the current system of HLIs. Put differently, instead of inhibiting, they facilitate KT. Likely, the institutions are resilient. Albeit these HLIs are running their operations in a marginalized province yet keep stepping up efforts to update and advance their profiles by investing in the faculty and infrastructure. Despite all odds, people do not give in and win lucrative foreign scholarships by persistent efforts and come back to serve their land.

In other words, the researchers would seize the opportunity to recommend to the management of HEIs to consider a revision in their policies to offer more flexibility, which is a long-standing demand of the employees. In any case, the decision-making process must be fruitful. To this end, the officialdom can convene meetings with employees,

have them voice their concerns in these meetings; hear out their perspectives and concerns. Further, institutions need to do away with an orthodox system that breeds red-tapism. The training opportunities must be open to all without the element of biasness. Finally, I hope that my research can aid in making the process of KT more effective and sounder, allowing institutions to attain more competitive power and achieve parity concerning other institutions of the country in terms of quality, standard, and merit.

A comparative analysis between public and private institutions is another option for extending this research further. Given the fact that KM is seen as a perpetual concern, that is known as a longitudinal inquiry may be deemed another possible recourse to examine the causality between variables considered significant to knowledge transfer. The impact and relationship of these barriers can also be studied on what is known as knowledge capital or intellectual capital.

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