Process Mapping and Rating of Banking Activity from Knowledge Management Perspective

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Abstract

Background/Objectives: The knowledge management is a continuous process and to accomplish knowledge management activities organizations should practice knowledge management process for organizational growth successfully. Methods/Statistical Analysis: Process mapping of one of identified banking services which is Account Deposit offered on daily basis in commercial banks in Pakistan is done and rating Account Deposit activity for knowledge management standings by using rephrased measurements of Bohn's Eight-Scale Stages is also done in this research. Top five banks of Pakistan are selected for this study. Account Deposit process is mapped and analysed through thematic research approach. Findings: The findings reveal a strong link between knowledge management practices with the age, network and income of the banking sector of Pakistan. This study concludes that activities in banking sector can be performed more efficiently by including knowledge management process.

Keywords: Banking Sector of Pakistan, Commercial Banks, Knowledge Management, Knowledge Management Activities, Process Mapping

1. Introduction

Knowledge Management contains variety of practices performed by organizations to represent, identify, transfer and create knowledge. Various organizations have resources allocated to Knowledge Management, usually named information technology and banking sector is one of them. Knowledge Management moves to the enhanced organizational success in the developing knowledge economy stated by 1. Omotayo2 mentioned that the development of knowledge-based organizations is positioned on effective management of intellectual capital and assets to make sure that knowledge holders continue to create the right knowledge and value. The purpose of this study is to create a process map of one of many activities which occur on daily basis in commercial banks. Top five banks (Allied Bank Limited, Habib Bank Limited, Muslim Commercial Bank Limited, National Bank of Pakistan and United Bank Limited) from Pakistani Banking sector are selected based on three parameters i.e. network, age and income. Top activities are identified which are commonly practiced in selected banks, and one of the activities is measured by considering Bohn's Eight Scale Stages3. Auditing of knowledge in organizations can be done through many ways. One of them is Bohn's eight-
scale stages, this model audits knowledge and finds out the current stage of knowledge growth.

In stated that organizations which practice knowledge management process are higher on knowledge growth level. Knowledge management is hard to define as there are numerous definitions available in literature. The word ‘management’ gives the idea of activities, enlightening the processes of transfer and creation.

### 1.1 Different Concepts of Knowledge Management

The knowledge management is the continuous process to accumulate the knowledge to satisfy the needs and to identify the existing capital and asset of knowledge. Knowledge management pursues to assist knowledge movements and distribution to improve the efficiency of organizations and individuals. The management of Knowledge is further divided to create and develop novel knowledge, to maintain knowledge and to transfer knowledge from it. Knowledge management discusses the organized planning, monitoring, scheduling, environment and technology with suitable aims and feedback processes, to enable the sharing, retention, creation, identification and information measurement. Knowledge Management focuses on the activities of management related to knowledge such as organizing, sharing, creating and expending knowledge for value creation in an organization. Knowledge management contemporary area of study encouraging to maximize innovation to organizations.

The essence of all concepts and definitions are presented in points:

1) Knowledge management is related on the procedure of management and research.

2) Knowledge management further goes than management or information from technology management.

3) Human study and tacit knowledge are essential to obtain the maximum output of knowledge.

4) Knowledge management has the wide range of conception and is composed of diverse processes which are linked to the stock of knowledge.

5) Knowledge is mainly found in the people and is developed by the study.

The summary says knowledge management indicates a sequence of processes and directives which allow creation, dissemination and the institutionalization of knowledge in order to achieve the goals of organizations.

### 1.2 Bohn’s Eight Scale Stages

The practice and implementation of knowledge strategies lead organization towards the knowledge growth. Models and processes are suggested for evaluating and mapping knowledge levels in working environment. One framework was suggested by Bohn that includes Eight-Stage Model. Auditing knowledge in organizations can be done through many ways. One of them is Bohn’s eight-scale stages. This model audits knowledge and finds out the current stage of knowledge growth. Each stage represents the typical form of knowledge shown in Table 1.

### 1.3 Knowledge Management in Banking Sector

According to research on the international ordering of Dated Corporation’ S (IDC) mentioned more than 600 banks in Western Europe, only 20% of banks are currently applying principles of knowledge management. This tendency is really more widespread amongst enormous banks. A greater conscience of importance of knowledge management, the IDC takes into account that this situation changes in future, and the knowledge management activities shall be on main concern for the banking sector.

It is significant that the usage of technology in banks and the social process of the use of technology are synchronized. With adapted policies, technologies can support to transfer knowledge and maximize the advantages of several initiatives of management. The banking
sector is one that is characterized by the high need of management experience and agility to cope with the fast-paced competition raised by the international alliances in this business. 

1.4 Research Gap

Durst mentioned in 2013 that the areas of knowledge management perception, knowledge management implementation and knowledge transfer are comparatively well researched areas; whereas knowledge storage, knowledge identification, knowledge retention and knowledge utilization are not well researched. Given the dominance there should be more research done on this area.

1.5 Research Objectives

Following are the research objectives;

1) To identify banking services offered on daily basis in commercial banks in Pakistan.

2) To develop process map of one of identified banking services which is Account Deposit offered on daily basis in commercial banks in Pakistan.

3) To rate Account Deposit activity for knowledge management standings by using Bohn’s Eight-Scale Stages.

2. Materials and Methods

State bank of Pakistan audits each bank yearly. JCR-VIS, Japan Credit Rating Agency, Ltd. (JCR) - Japan’s premier rating agency, Vital Information Services (Pvt.) Limited (VIS) 16, credit rating company published the Pakistan Banking Industry’s profile (October, 2016), on the basis of records mentioned in report top five banks are selected on three key performance indicators which are mentioned in Table 2.

In order to understand the contribution of knowledge management practices the Bohn’s Eight Scale Stages are rephrased and applied for the Account Deposit application. The Bohn’s Eight Scale Stages measure the knowledge management practices from the level of complete ignorance to the level of complete knowledge.

| Stage | Name             | Typical Form of Knowledge                  |
|-------|------------------|--------------------------------------------|
| 1     | Complete Ignorance | Does Not Exist                              |
| 2     | Awareness         | Tacit (primary)                             |
| 3     | Measure           | Written (primary)                           |
| 4     | Control of the Mean | Written and Embodied in Hardware           |
| 5     | Process Capability | Hardware and Operating Manuals             |
| 6     | Process Characterization | Empirical Equations (numerical)          |
| 7     | Know Why          | Scientific Formulas and Algorithms         |
| 8     | Complete Knowledge | Ideal Stage                                |

Source: Bohn 1992
Table 2. Top five banks from Pakistani banking sector

| Indicators | Top Five Banks of Pakistan |
|------------|-----------------------------|
| 1. Age     | 1. Habib Bank Limited<br>  2. Allied Bank Limited<br>  3. MCB Bank Limited<br>  4. National Bank of Pakistan<br>  5. United Bank Limited |
| 2. Income  | 1. MCB Bank Limited<br>  2. Habib Bank Limited<br>  3. United Bank Limited<br>  4. Allied Bank Limited<br>  5. National Bank of Pakistan |
| 3. Network | 1. Habib Bank Limited<br>  2. National Bank of Pakistan<br>  3. United Bank Limited<br>  4. MCB Bank Limited<br>  5. Allied Bank Limited |

Table 3. Rephrased measures

| Bohn’s Measurements        | Rephrased Measurements                                      |
|-----------------------------|-------------------------------------------------------------|
| 1 Complete ignorance        | Employee is Unaware                                         |
| 2 Awareness                 | Employee is Aware                                           |
| 3 Measure                   | Employee is Assisted by Machine Based Measurement            |
| 4 Control of the mean       | Machine Measures and Control                                |
| 5 Process capability        | Machine Detects Error                                        |
| 6 Process characterization  | Machine Intelligently Shares Error                          |
| 7 Know why                  | Machine Resolves Error                                       |
| 8 Complete knowledge        | Machine Takes Decision                                       |
rance to the level of complete knowledge. The rephrased measures are mentioned in Table 3.

Measures which are used to rate the activity Account Deposit are mentioned in Table 4.

2.1 Process Mapping

Process mapping is done of activity named Account Deposit because it is one of those activities which are performed on daily basis in all top five banks. Figure 1 shows the process mapping of the activity Accounts Deposit. The process starts from the generation of token number and ends on either depositing cash/check to account or check turns unpaid.

<insert figure 1 here>

3. Results and Discussion

3.1 Data Analysis

Table 5 represents mean values of measures collected from HBL (Habib Bank Limited). The scale of measurement is from 1 – 8, the rephrased version of Bohn’s Eight-Scale Stages are used. The measure Issuance of Token Number has highest mean value which is 4.2, which means machine measures and controls the issuance of token number. The other five measures have above 2.5 mean values which means employee is assisted by machine based measurement.

<insert table 5 here>
Figure 1. Process map of account deposit.

Table 5. Mean values of measures from HBL

| Measure                                      | N  | Mean  |
|----------------------------------------------|----|-------|
| Availability of Deposit Slip                 | 30 | 2.0000|
| Issuance of Token Number                     | 30 | 4.2000|
| Authenticity of Currency Notes               | 30 | 2.9000|
| Verification of Cheque                       | 30 | 2.7000|
| Sending Currency Notes to Vault              | 30 | 2.0000|
| Sending Cheques to NIFT                      | 30 | 2.0000|
| Positive Declaration by NIFT                 | 30 | 2.0000|
| Negative Declaration by NIFT                 | 30 | 2.0000|
Table 5 Continued

| Measure                                      | N  | Mean  |
|----------------------------------------------|----|-------|
| Depositing Cash                              | 30 | 2.7000|
| Generating Memo                              | 30 | 2.4000|
| CBC: Call Back Confirmation                  | 30 | 2.8333|
| Informing Customer about Unpaid Cheque       | 30 | 2.8000|
| N = Number of Survey                         | 30 |       |

Table 6 represents mean values of measures collected from ABL (Allied Bank Limited). The measures Issuance of Token Number, Verification of Currency Cheque, Depositing Cash and Generating Memo have above 3 mean values which means employee is assisted by machine based measurement.

Table 6. Mean values of measures from ABL

| Measure                                      | N  | Mean  |
|----------------------------------------------|----|-------|
| Availability of Deposit Slip                 | 30 | 2.0000|
| Issuance of Token Number                    | 30 | 3.4333|
| Authenticity of Currency Notes              | 30 | 2.7333|
| Verification of Cheque                       | 30 | 3.2000|
| Sending Currency Notes to Vault              | 30 | 2.0000|
| Sending Cheques to NIFT                     | 30 | 2.0000|
| Positive Declaration by NIFT                | 30 | 2.0000|
| Negative Declaration by NIFT                | 30 | 2.0000|
| Depositing Cash                              | 30 | 3.3667|
| Generating Memo                              | 30 | 3.3333|
| CBC: Call Back Confirmation                 | 30 | 2.6667|
| Informing Customer about Unpaid Cheque      | 30 | 2.7000|
| N = Number of Survey                         | 30 |       |
Table 7. Mean values of measures from NBP

| Measure                                      | N  | Mean  |
|----------------------------------------------|----|-------|
| Availability of Deposit Slip                 | 30 | 2.0000|
| Issuance of Token Number                     | 30 | 4.9000|
| Authenticity of Currency Notes               | 30 | 3.2000|
| Verification of Cheque                        | 30 | 3.1000|
| Sending Currency Notes to Vault              | 30 | 2.0000|
| Sending Cheques to NIFT                      | 30 | 2.0000|
| Positive Declaration by NIFT                 | 30 | 2.0000|
| Negative Declaration by NIFT                 | 30 | 2.0000|
| Depositing Cash                              | 30 | 3.0667|
| Generating Memo                              | 30 | 3.1000|
| CBC: Call Back Confirmation                  | 30 | 2.9333|
| Informing Customer about Unpaid Cheque       | 30 | 2.9000|

N = Number of Survey

Table 7 represents mean values of measures collected from NBP (National Bank of Pakistan). The measure Issuance of Token Number has highest mean value which is 4.9, which means machine measures, controls and detects error the issuance of token number. The other four measures have above 3

Table 8. Mean values of measures from UB

| Measure                                      | N  | Mean  |
|----------------------------------------------|----|-------|
| Availability of Deposit Slip                 | 30 | 2.0000|
| Issuance of Token Number                     | 30 | 4.3333|
| Authenticity of Currency Notes               | 30 | 3.4000|
| Verification of Cheque                        | 30 | 3.2333|
Table 8 Continued

| Service Description                        | N  | Mean  |
|--------------------------------------------|----|-------|
| Sending Currency Notes to Vault            | 30 | 2.0000|
| Sending Cheques to NIFT                    | 30 | 2.0000|
| Positive Declaration by NIFT               | 30 | 2.0000|
| Negative Declaration by NIFT               | 30 | 2.0000|
| Depositing Cash                            | 30 | 3.2333|
| Generating Memo                            | 30 | 3.2667|
| CBC: Call Back Confirmation                | 30 | 3.3000|
| Informing Customer about Unpaid Cheque     | 30 | 3.2000|
| N = Number of Survey                       | 30 |       |

Table 9. Mean values of measures from MCB

| Service Description                        | N  | Mean  |
|--------------------------------------------|----|-------|
| Availability of Deposit Slip               | 30 | 2.0000|
| Issuance of Token Number                   | 30 | 4.1000|
| Authenticity of Currency Notes             | 30 | 2.7333|
| Verification of Cheque                     | 30 | 2.8333|
| Sending Currency Notes to Vault            | 30 | 2.0000|
| Sending Cheques to NIFT                    | 30 | 2.0000|
| Positive Declaration by NIFT               | 30 | 2.0000|
| Negative Declaration by NIFT               | 30 | 2.0000|
| Depositing Cash                            | 30 | 3.1000|
| Generating Memo                            | 30 | 2.8667|
| CBC: Call Back Confirmation                | 30 | 2.8000|
| Informing Customer about Unpaid Cheque     | 30 | 2.8667|
| N = Number of Survey                       | 30 |       |
mean values and two measures have 2.9 mean values which means employee is assisted by machine based measurement.

Table 8 represents mean values of measures collected from UBL (United Bank Limited). The measure Issuance of Token Number has highest mean value which is 4.3, which means machine measures and controls the issuance of token number. The other six measures have above 3 mean values which means employee is assisted by machine based measurement.

Table 9 represents mean values of measures collected from MCB (Muslim Commercial Bank). The measure Issuance of Token Number has highest mean value which is 4.1, which means machine measures and controls the issuance of token number. The one measure Depositing Cash has 3.1 mean value and other five measures have above 2.5 mean values which means employee is assisted by machine based measurement.

4. Conclusion

This research concludes that top five Pakistani banks which are selected on the basis of age, network and income by State Bank of Pakistan perform many activities on daily basis. One of these activities is studied, mapped and measured through rephrased version of Bohn's Eight-Scale Stages which shows that Account Deposit is done with the help of employee but assisted by machine. This activity plays major role in any bank's growth. On the basis of this research, it is concluded that knowledge management occurs in the major activity in Pakistani banks which supports organizational growth. This research recommends that using machine should become the part of daily performed activities in all Pakistani banks. Machine shouldn't only control the activity but it should also detect error and make decisions as well. For further research, it is recommended that other activities which are performing in banks should also be measured through rephrased version of Bohn's Eight Scale Stages.

5. Acknowledgement

This paper has been presented and discussed during the International Conference on Communication, Management and Information Technology- ICCMIT 2019, Vienna, Austria.

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