AI BASED DISCOURSE FOR BANKING INDUSTRY

TEAM LEAD: **V.SURYA(411519104092)**
TEAM MEMBERS: **TR. PRADEEP (411519104066)**
S. SUNIL(411519104089)
D.SANJAY (411519104080)

LITERATURE SURVEY:

- Banking technologies' adoption by customers

- The banking industry has been profoundly influenced by technological evolution in recent decades and consumer adoption of banking technologies is a widely researched topic in the literature. Thus, a more in-depth look into the processes behind the adoption of banking chatbots can be gained through the review of the existing literature on the adoption of other technologies applied in the banking sector, such as i-banking and m-banking.

- Several theories have been implemented in order to analyze the adoption of different IT systems. According to Hanafizadeh and Khedmatgozar (2012), the most influential theoretical models applied in i-banking adoption studies, are the Diffusion of

innovation theory (DIT), the Technology acceptance model (TAM), the Decomposed theory of planned behavior (DTPB), the Extended technology acceptance model (TAM2) and the Unified theory of user acceptance of technology (UTAUT), the latter becoming dominant in the literature in recent years. Shaikh and Karjaluoto (2015) analyzed and synthesized existing studies of m-banking adoption and concluded that the most frequently used adoption models were TAM, followed by DIT and UTAUT, while several studies applied a combination of different technology acceptance models (e.g. TAM and DIT).Several of the above mentioned models are composed of intention to use or actual usage as the dependent variables. Consequently, the key dependent variables in the i-banking adoption literature (Yousafzai, 2012) are behavioral intention to use and actual usage of the technology, while in m-banking adoption, besides the two earlier mentioned dependents, attitude is also adopted in order to analyze technology acceptance (Shaikh and Karjaluoto, 2015).

- Based on the literature review, it could be concluded that usefulness and ease of use are fundamental variables in studying technology acceptance in the banking sector. It should also be highlighted that compatibility was found as a key determinant for m-banking (Koenig-Lewis et al., 2010; Shankar and Kumari, 2016; Giovanis et al., 2019) and i-banking (Giovanis et al., 2012) adoption. Therefore, it is expected that compatibility will influence banking chatbot adoption as well. However, technology acceptance could be inhibited directly or indirectly (Moldovan and Săplăcan, 2018) by several factors, such as different types of risk factors. In some cases, perceived privacy risk was found to be a barrier for m-banking (Arif et al., 2016; Shankar and Kumari, 2016) and i-banking (A. N. Giovanis et al., 2012) adoption. Supposedly, perceived privacy risk will be a barrier in adopting banking chatbot as well.

Chatbot technology: description and previous research

- A chatbot application is a computer program that mimics human conversations in its natural format, including text or spoken language, using artificial intelligence techniques, such as Natural Language Processing (NLP), image and video processing and audio analysis (Bala et al., 2017).
- Banking products have moved far ahead from the conventional banking of India (KUMAR, 2018). Application of innovative technologies by banks in implementation of their strategies to achieve efficiency is praiseworthy (Lagarde, 2018) and is expected to create their globally unified practices, policies and framework with the help of Al (Erdélyi & Goldsmith, 2018). Strong positive relationship (R- coefficient = 0.859) has been observed between Al and proper record keeping (Longinus, 2018) and Al has strong potentials of transforming all banking operations (Ghurair, 2018) refining investment strategies, managing customers' data, carrying out risk assessment, curbing money laundering issues and adding value by reducing costs of money transfer while increasing accuracy levels (Sophia, 2018), thus increasing profitability, improving the quality

of decisions made at different operational levels of management (VEDAPRADHA & HARIHARAN, 2018), sparing human resources for innovating & executing intended strategies aligned with organizations vision & betterment of economy as a whole (Kurode, 2018). At present human employees of banks are performing many unproductive tasks of repetitive nature whereas availability of human manpower for owning creative and decision making roles is limited (Kurode, 2018).

- The para above provides insight about technical, practical and strategic aspects of Al and its contribution towards business strategy to help banks for taking call to adopt or not to adopt AI. Considerable work has already been done by the scholars and much more is getting added to the knowledge repository with each passing day. One study has found that the adoption of Al in banking sector may add approx. Sitrillion to India's economy by 2035 (Lakshminarayana & Deepthi, 2019). Reserve Bank of India has proactively promoted application of technology for implementing

regulations and creating policy frameworks in India's banking sector under leadership of Dr Raghuram Rajan and Urjit Patel (Aazhvaar, 2019). But Strategy formulation is much easier than its successful implementation. Same is the case with country like India, having huge population with high percentage of rural or non tech savvy population, impeding pace of implementing services powered by technology (Kurode, 2018).