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LITERATURE SURVEY

TITLE	**:** AI based discourse for Banking Industry
DOMAIN NAME	**:** Artificial Intelligence
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ABSTRACT

Artificial intelligence (AI) has been a subject of interest in the research field for the past few years. It has now been brought closer to commercial use due to recent technological advances and speedier data accessibility. Its relevance to global business models is underlined by the significant investments in it made by Internet powerhouses including Google, YouTube, Amazon and Facebook. In the banking sector where data is of substantial value, AI has been incorporated in pilot projects but its true applications have yet to see the light of day. In this study, the drivers and barriers to successful AI implementation in the banking sector is analysed using a panel data of 28 semi-structured interviews with AI experts in the field of banking and finance. AI-oriented role models and process capabilities were revealed to be essential prior to having the trained algorithms reach the level whereby the AI applications can run devoid of human involvement and moral trepidations.

INTRODUCTION

Digital technologies are connecting billions of consumers and allow the deployment of low cost connected devices in every business sector. The current generation is adjusted to the digital environment and naturally expects services and products to meet the current digital technology standards. Further, investments into digital technologies and businesses have risen and are rewarded by the public markets (PWC Editorial, 2016). Artificial intelligence (AI) technologies are part of this development and the banking sector is hereby deemed to see a major impact. According to a report by Accenture, a global management consulting and professional services company, four out of five bankers assume that AI is going to revolutionise the way banking is executed. The report suggests that artificial intelligence will affect banking by enhancing the customer experience. Banking products and service may become increasingly personalised giving customers the impression that their banking institutes know their specific habits and needs (Accenture, 2016). But the introduction of AI technologies comes with potential challenges and risks. Banks are processing highly sensitive data. Thus, privacy and data security concerns are essential elements of the process.

Additionally, customers might prefer the contact with persons regarding certain issues, leading to a rejection of AI based interfaces (Kelly, 2017). Hence, the introduction of such technologies into the active process should be executed with consideration of the possible risks.

LITERATURE SURVEY

Banks are constantly forced to transform their operations in order to stay relevant in a complex and competitive sector. To do so, the key is in maintaining customer loyalty which includes addressing the aspects of customer trust, satisfaction, commitment and perceived value [1]. Constant improvements on customer service and the use of advanced technologies can redefine the processes of banking services as proven by Google and Facebook. Yet, many conventional banking services providers fail to provide the needed flexibility and innovative capabilities. Hence, FinTech's are deemed as the more viable breakthrough to conventional banking service sectors [2].

FinTech's skip on legacy architectures and instead use advanced technologies along with lean and agile procedures to produce improved customer positioning, reduced costs and accelerated innovations speeds. They have catalysed major innovations in diverse areas including wealth management, payment, lending and crowdfunding [2] as well as stimulated AI and machine learning adoption in banking services. The highly customer-oriented FinTech organizations have spurred traditional banking services to transform. The incessant prevalence of computed data between customers and banks demonstrates a huge prospect for assessments, analysis and product endorsements. Conversational interfaces are now being reshaped from a rigid and complex form-based communication to a conversation-oriented communication due to the redesigning of digital experiences; in short, AI enables a more natural communication between consumers and banks via writing, conversations and gestures [3].

Additionally, the digital natives i.e., the customer segment from 1995 forwards want the banking service providers to give them similar experiences with that offered by Microsoft, Facebook and other digital suppliers including user-friendly financial products, refined information organization, enhanced procedures with shorter throughput, and product/service customization pre- and post-purchase [4].

Based on the interviews with banks software vendors in this study, an emphasis was clear on the accretion of customer-based AI application. We found that most of the banking systems are developing initial AI prototypes that are yet being implemented by the banking service sectors. Prototypes are typically built in an experimental setting for internal use so as to determine and test their prospective usages examples of which include front office applications such as transactions, credit scoring and client chatbots. Chatbots are virtual assistants which are one of the usages of AI interfaces already employed by banks. Nevertheless, many have complained about and expressed disappointment with the existing chatbots' simplicity, which corroborates the financial stability report which states that existing chatbots are too simple with provision of too general policy information or basic answers. Technology industry experts particularly their subgroups have emphasized on the significance of operations-driven appliances because back-end operations and risk management often run on inefficient human support. Improved cost savings and greater productivity are among the benefits of AI technology due to smart process automation and automated customer services. The faster response times and personalized offerings lead to improved customer experience and engagement, and ultimately higher interest and profits.

Conventional banking sectors will hence need to gradually employ the use of AI to retain public trust and remain competitive. The definition of AI encompasses numerous sub-fields with various

emphases based on the corresponding historical and technical origins. This study defines artificial intelligence as how to make computers do things at which, at the moment, people are better. Adaptability to environments and behaviours remains a particular human quality, but it is now gradually being substituted by machine learning. machine learning entails the capability of systems or applications to learn minus any explicit programming [5].

AI engines are now being offered by all major software providers including Amazon, IBM Watson and Microsoft Azure. Many of the providers in turn enjoy the same market visibility as the start-ups.

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