

A Study of
RPA Adoption and User Experiences (UX)
A Case of Retail Banking and Finance Organization in
Sri Lanka

Pussadeniya Mudiyansele Tasheela Oshadi Pussadeniya

219141P

Degree of Master of Business Administration in Information Technology

Department of Computer Science and Engineering

University of Moratuwa

Sri Lanka

August 2024

A Study of
RPA Adoption and User Experiences (UX)
A Case of Retail Banking and Finance Organization in
Sri Lanka

Pussadeniya Mudiyansele Tasheela Oshadi Pussadeniya

219141P

The dissertation was submitted to the Department of Computer Science and Engineering of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Business Administration in Information Technology.

Department of Computer Science and Engineering

University of Moratuwa

Sri Lanka

August 2024

DECLARATION

I declare that this is my own work, and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Also, I hereby grant to University of Moratuwa the non-exclusive right to reproduce and distribute my thesis/dissertation, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works (such as articles or books).

.....

Tasheela Pussadeniya

(Signature of the candidate)

Date:08/08/2024

The above candidate has carried out research for the Master's thesis under my supervision.

Dr. Adeesha Wijayasiri

08-08-2024

(Supervisor Name)

Date

Signature of the Supervisor

COPYRIGHT STATEMENT

I hereby grant the University of Moratuwa the right to archive and to make available my thesis or dissertation in whole or part in the University Libraries in all forms of media, subject to the provisions of the current copyright act of Sri Lanka. I retain all proprietary rights, such as patent rights. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

ABSTRACT

This study investigates the adoption of Robotic Process Automation (RPA) in the banking sector, specifically focusing on lease and loan processing at ABC Bank in Sri Lanka. The primary aim is to evaluate the impacts and benefits observed during the post-RPA adoption period. By employing a mixed-methods approach, this research assesses operational efficiency, error reduction, processing time, and customer satisfaction efficient compliances management.

The interviews were conducted according to the plan activity of data collections using the tools of both in person interviews about ten and the six on call telephone interviews. It was on all sixteen branches in the province of Western Sri Lanka.

The first set of questions were targeted to unearth the adoption readiness of the employees while other set worked for the internal factors and constraints of adoption along with the user experiences examination. The technical abilities of the BOT development and its supported pathways were discovered during a telephone interview with two branch officers. These followed queries to find out performances levels of individuals involved retail leasing and finance along with that of BOT operated processes. Comparing the BOTs were not encouraged at the interviews but later in the analysis, (Axial coded data), it was found out to be a remarkably different in the efficiency improvement.

The open coding and the axial coding were done to identify a measuring of performance queries from the management staff of BOT operation staff. This was done by way of comparative analysis of the phenomenon. These were enriched by writing short memo notes during interviews. And the memo notes were too considered during analysis. During the interviews certain changes too were added to interview questions to increase the cohesion and answerability of the quarries. This approach was a success as the respondents were more enthusiastic about participating in the interviews. Axial coding was generated on the open codes collected from the collected data and finally with main categorized data it was taken from them. After an axial coding analysis. (Tables 4.3, 4.4, 4.6 and 4.7). To check and confirm these axial encoding and final categories, a scale from zero to three was used. The researcher had to go through the gathered data and the branches of the selected bank were asked to identify whether they agreed with these categories.

The categories, which got more than 50% as agreed and neutral, were identified as factors to be considered when conducting loans & lease products retailing. The findings provide valuable insights into the effectiveness of RPA in enhancing banking operations and offer recommendations for future implementations. This study contributes to the growing body of knowledge on technological advancements in the financial services sector, highlighting the transformative potential of RPA in improving banking processes.

In conclusion, this research on the adoption of Robotic Process Automation (RPA) in lease and loan processing at ABC Bank, Sri Lanka, highlights significant improvements in efficiency and effectiveness. Through qualitative data gathered via questionnaires and interviews, the study reveals that the implementation of RPA soft bots has streamlined operations, reduced processing times, and minimized errors. The findings underscore the potential of RPA to transform traditional banking processes, offering a robust framework for enhanced operational performance. This study not only validates the benefits of RPA in the banking sector but also provides insights for future implementations, ensuring that banks can leverage technology to stay competitive and improve service delivery.

ACKNOWLEDGEMENT

My first dedication is to the knowledgeable research advisor and supervisor Dr. Adeesha Wijayasiri who instrumental in terms of advice, knowledge and insight of this research work, also mentioned here that, this study would not have been materialized had there not been the exceptional guidance provided by him. His attention to details and the right deaccessioning at right times too has been an enthusiastic experience for me. Nevertheless, the faculties of the University of Moratuwa have been a limelight for the future of my studies and the professional life as well. Therefore, I must respect the unparalleled support the university offered to me as an institute of high calibre and world-renowned place for graduate studies. It is par brilliance all what they offer in academic excellent institute in Sri Lanka.

I am also grateful to my parents who encourages me all the time to step forward in the path of academic high ranks. And the Gratitude from heart will be rendered to the anonymous peer revivers at Books, Texts and web portals. Lastly, the generosity and expertise of my major supervisors and those remain anonymous too are greatly appreciated for the interests and the backing provided to me during this valuable task of completing this research.

Tasheela Pussadeniya

TABLE OF CONTENTS

DECLARATION	III
COPYRIGHT STATEMENT	IV
ABSTRACT.....	V
ACKNOWLEDGEMENT	VII
TABLE OF CONTENTS	VIII
LIST OF FIGURES.....	X
1. INTRODUCTION.....	13
1.1. Background	13
1.1.1 Research Scope	15
1.2 Problem Statement.....	16
1.2.1 Research Objectives.....	17
1.2.2. Significance of the research.....	17
1.2.2 Outline.....	18
2. LITERATURE REVIEW	19
2.1 Banks and the other Industries	20
2.2 Bank’s Performance, Employee’s Productivity and Efficiency.....	21
2.3 Bank’s use of AI and legacy of ICT use	22
2.4 The Banking and Mortgage - finance industry in Sri Lankan.....	24
2.5 Qualitative data analysis methods and Grounded Theory.....	26
2.6 Summary	27
3. RESEARCH METHODOLOGY	28
3.1 Research Problem.....	29
3.2 Research Method.....	30
3.3 Data Collection	30
3.4 Questions for Interviews	31
3.5 Theoretical Sampling	32
3.6 Data Analysis	33
3.5.1 Constant Comparative Analysis.....	33
3.5.2 Encoding	33
3.5.3 Category and Memo.....	34
3.6 Summary	35
4. DATA ANALYSIS	37

4.1	Data Preparation for Analysis	37
4.1.1	RPA application BOT & User Experience (UX).....	41
4.1.2	Organizational Constraints.....	43
4.1.3	Expertise in BOT adoption to existing legacy platform	44
4.2	Summary	46
5.	RECOMMENDATIONS AND CONCLUSION	50
5.1	Conclusion	50
5.2	Limitations of the research.....	53
5.3	Future Work.....	54
	REFERENCES	55
	APPENDIX A: QUESTIONNAIRE.....	59
	APPENDIX B: INTERVIEW SUMMARY.....	63

LIST OF FIGURES

Figure 3.1: Methodology framework.....	30
Figure 4.1: Type of operations processes by RPA in the concerned.....	40
Figure 4.2: User experiences capture.....	42
Figure 4.3: Expert support at adoption stage revealed.....	45

LIST OF TABLES

Table 2.1: Different developments of Grounded theory.....	28
Table 3.1: Interview Details.....	33
Table 4.1: BOT processing leas& loan.....	39
Table 4.2: Factor analysis - Dependent/Independent & Moderating.....	39
Table 4.3: Open, Axial and selected coding matrix table for RPA - BOT adoption in a Bank.....	41
Table 4.4: Open, Axial and selected coding matrix table for user experiences (UX).....	42
Table 4.5: Organizational issues & constraints.....	44
Table 4.6: Open, Axial and Selected coding for Investment factor management.....	44
Table 4.7: Axial coding for Expert/outsource factors.....	46