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*UDC:*

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**OPTIMIZATION OF BANKING MOBILE APPLICATIONS BASED ON  
DIGITAL TECHNOLOGIES**

Written for an academic master's degree in the specialty  
70310106 - Information technology and systems in economics

**D I S S E R T A T I O N**

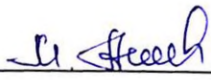
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## ABSTRACT

This master's dissertation work examines the optimization of banking mobile applications based on digital technologies. Mobile banking applications (apps) are the latest technology to be offered by the retail banking sector. However, little research has been done to understand the adoption of this technology. System quality and information quality were multidimensional structures with the user interface, response time, and security contributing significantly to system quality while understandability and completeness contributed significantly to information quality. The findings suggest that system quality significantly impacts perceived innovativeness while information quality greatly influences satisfaction. Both perceived innovativeness and user satisfaction significantly affect the intention to continue using banking apps. Perceived innovativeness also has an indirect impact, through satisfaction, on the intention to continue using.

**Keywords:** Bank, mobile application, digital technologies, optimization, mobile banking, digital economy, payment, software, pharmacy, information technologies, information system, traditional trading, e-commerce, m-commerce.

## ANOTATSIYA

Ushbu magistrlik dissertatsiya ishida raqamli texnologiyalar asosida bank mobil ilovalarini optimallashtirish ko'rib chiqilgan. Mobil bank ilovalari (applications) chakana bank sektori tomonidan taklif qilinadigan eng yangi texnologiyadir. Biroq, ushbu texnologiyaning qabul qilinishini tushunish uchun juda kam tadqiqot olib borildi. Tizim sifati va axborot sifati ko'p o'lchovli tuzilmalar bo'lib, foydalanuvchi interfeysi, javob vaqti va xavfsizlik tizim sifatiga sezilarli hissa qo'shdi, tushunarlik va to'liqlik esa axborot sifatiga sezilarli hissa qo'shdi. Topilmalar shuni ko'rsatadiki, tizim sifati qabul qilingan innovatsionlikka sezilarli ta'sir ko'rsatadi, axborot sifati esa qoniqishga katta ta'sir qiladi. Qabul qilingan innovatsionlik va foydalanuvchi qoniqishi bank ilovalaridan foydalanishni davom ettirish niyatiga sezilarli darajada ta'sir qiladi. Qabul qilingan innovatsionlik,

shuningdek, qoniqish orqali foydalanishni davom ettirish niyatiga bilvosita ta'sir qiladi.

**Kalit so'zlar:** Bank, mobil ilova, raqamli texnologiyalar, optimallashtirish, mobil banking, raqamli iqtisodiyot, to'lov, dasturiy ta'minot, dorixona, axborot texnologiyalari, axborot tizimi, an'anaviy savdo, elektron tijorat, m-tijorat.

### **АННОТАЦИЯ**

В данной магистерской диссертации рассматривается оптимизация банковских мобильных приложений на основе цифровых технологий. Мобильные банковские приложения (applications) — это новейшая технология, предлагаемая розничным банковским сектором. Тем не менее, было проведено мало исследований, чтобы понять принятие этой технологии. Качество системы и качество информации были многомерными структурами, при этом пользовательский интерфейс, время отклика и безопасность в значительной степени влияли на качество системы, а понятность и полнота в значительной степени влияли на качество информации. Полученные данные свидетельствуют о том, что качество системы значительно влияет на воспринимаемую инновационность, в то время как качество информации сильно влияет на удовлетворенность. Как воспринимаемая инновационность, так и удовлетворенность пользователей существенно влияют на намерение продолжать использовать банковские приложения. Воспринимаемая инновационность также оказывает косвенное влияние через удовлетворение на намерение продолжать употребление. Литература об онлайн-платформах и их роли в торговой системе.

**Ключевые слова:** Банк, мобильное приложение, цифровые технологии, оптимизация, мобильный банкинг, цифровая экономика, оплата, программное обеспечение, фармацевтика, информационные технологии, информационная система, традиционная торговля, электронная коммерция, m-коммерция.



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## Introduction

**Subject topicality.** Information technology has been long considered an important force that can impact a firm's success. The retail banking sector is one of the leaders in adopting and utilizing various information technologies. Automatic teller machines (ATMs), Internet banking, and mobile banking are recent technological innovations which have moved banking services from largely face-to-face to more technology-based interactions. Both banks and their customers can benefit from technology-based interactions.

Particular relevant his work acquires connection with the decision of the President of the Republic of Uzbekistan "On measures for further implementation and development of modern information and communication technologies". Given the rapid growth of information systems and the complexity of the services in the web space, the question of their effective functioning and providing rapid responses to user requests are provided. Obvious examples of such systems demand in our country and important for its development, we can see in the Resolution of the Cabinet of Ministers "On Measures for the organization of the Centre of the electronic government", and the ruling PP-2158 President of the Republic Uzbekistan from April 3, 2014 "On measures to further the implementation of information and communication technologies in the real economy". In the era of rapid innovation development and great change, the digital economy and its many advanced digital technologies are rapidly entering our daily lives. Therefore, in order to accelerate the development of the country, the government made a number of important decisions and this year was called the Year of Active Investment and Social Development. The President of the Republic of Uzbekistan, in his Address to the Oliy Majlis on December 28, 2018 spoke about the development of digital economy in our country on the most important priorities for 2019: "We need to develop a National Digital Economy Concept, which provides for digitalization of all sectors of the economy. On this