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A study on digital cash

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Abstract
This study undertakes a comparative analysis of real cash management, involving the traditional handling and storage of physical currency, and digital cash management, which includes electronic transactions and virtual currencies, to understand their roles in modern financial practices. By integrating quantitative data transaction speed, security and usability of Digital Cash Management benefit can be identified. The findings reveal that digital cash management enhances transaction speed, offers stronger security through encryption and reduces costs by decreasing the need for physical currency handling. It also improves accessibility, promoting financial inclusion. However, real cash still proves crucial in areas with limited digital infrastructure and for ensuring transaction anonymity. Despite the benefits of digital methods, challenges such as the digital divide and the constant need for technological updates persist. The study concludes that both management systems are essential, recommending a hybrid strategy to capitalize on the strengths of each, thereby ensuring a robust and inclusive financial ecosystem.

Keywords: Digital cash, cash management, physical currency

Introduction

In our fast-paced and ever-evolving world, the management of cash has undergone a profound transformation. The conventional methods of handling physical currency are now being challenged by the rise of digital cash management systems. This study seeks to conduct a comparative analysis between the traditional approach of real cash management and the contemporary practice of digital cash management. Cash, as a means of exchange, has evolved from tangible coins and banknotes to digital representations. Real cash management involves physical handling, storage, and transportation of currency, while digital cash management relies on electronic transactions facilitated by online banking, mobile payment apps, and other financial technologies. One crucial aspect to scrutinize is the security measures employed in both real and digital cash management. Real cash management relies on physical security measures, such as safes, guards, and secure transportation systems. In contrast, digital cash management emphasizes encryption, authentication, and secure networks to protect financial transactions. This study aims to assess the effectiveness of these security measures and identify potential vulnerabilities in each system. Transaction speed is a key factor influencing the efficiency of cash management. Real cash transactions may involve manual counting, verification, and physical movement, which can be time-consuming. Digital cash management promises faster transactions through electronic processes. This study aims to quantify and compare the transaction speeds of both methods, exploring how speed impacts the overall effectiveness of cash management. As society embraces digital advancements, understanding the benefits of digital cash management becomes imperative. The study will delve into the advantages of digital systems, including accessibility, convenience, and the potential for integration with other financial tools. Exploring these benefits will provide insights into the reasons behind the growing popularity of digital cash management.

Statement of the problem

The traditional methods of real cash management and the contemporary practices of digital cash management present distinct challenges and opportunities. Understanding the potential security risks, variations in transaction speed, and the overall effectiveness of these systems is crucial for businesses and financial institutions. This study aims to identify and address the key issues surrounding the coexistence of traditional and digital cash management methods.

Significance of the study

This study is essential to meet the growing need for a comprehensive understanding of the evolving landscape of cash management. With the increasing prevalence of digital transactions, businesses and financial institutions must grasp the implications of transitioning from traditional to digital cash management systems. The insights gained from this research will equip stakeholders with valuable knowledge to make informed decisions, enhance security measures, and optimize the efficiency of cash management practices in a rapidly changing financial environment.

Objectives of the study

1. To study the user perception of speed, security, usability of real cash management vs digital cash management.

Research methodology

To study the objectives of our study the following methodology is opted:

1. Customer survey on the comparison, speed difference and security factors and user satisfaction using a questionnaire for measuring comparison.
2. Secondary data for the study are collected from various websites with the help of journal articles and research papers.

Limitations of the study

- The data collected is confined to specific geographic area, and therefore limiting the generalization of the results of the findings to a larger population.
- Constrains in data collection methods, such as self-reporting biases, Respondents errors, or limitation in access to data sources, can affect the accuracy and reliability of study results.
- Potential threats to the internal validity or reliability of the study, such as respondents' errors or researcher bias, can affect the accuracy and trustworthiness of the findings.

Literature review

"Performance of Digital Currency and Improvements" authorised By "Tobias Johannesson (2022) [7]", the analysis highlights the evolving landscape of digital currency. While Bitcoin dominates, scalability and efficiency remain concerns. Central Bank Digital Currency (CBDC) shows promise for surpassing traditional currencies in efficiency. Despite Bitcoin's market leadership, volatility underscores the need for refinement. In conclusion, the analysis emphasizes CBDC's potential, signalling a shift towards government-backed digital currencies. Addressing usability, security, and stability concerns is crucial for a more efficient future currency system.

"Applying Digital Twins for Inventory and Cash Management in Supply Chainsunder Physical and Financial Disruptions" authorised by "Ehsan Badakhshan and Peter Ball (2022) [3, 4]", Supply chain disruptions like COVID-19 cause challenges by altering customer behaviour and disrupting operations, leading to inventory shortages and financial imbalances. A supply chain digital twin framework was developed to understand these impacts and help optimize inventory and cash replenishment policies to minimize disruptions' effects on performance.

"A Study on Cash Management" authorised by "Sarumathi and S. Praveen Kumar (2020) [8]", studied cash management's importance in business operations. They used both primary and secondary data, including consultations and financial statements, and conducted ratio analysis. The study revealed the company's reliance on internal funds, efficient cash flow management, and balanced debtor-creditor dynamics. It emphasizes the crucial role of effective cash management for organizational survival and growth, stressing proactive strategies for maintaining a resilient financial position

"Fast And Streaming Analytics In ATM Cash Management" authorised By "Terpsichori- Helen Velivassaki And Panagiotis Athanasoulis (2019) [1]" The paper discusses implementing the Cash Management system on the CloudDBAppliance platform, outlining its architecture and how it leverages platform advantages in banking. It also suggests that insights from this implementation could benefit other applications, with plans to validate the system's functionality on the platform.

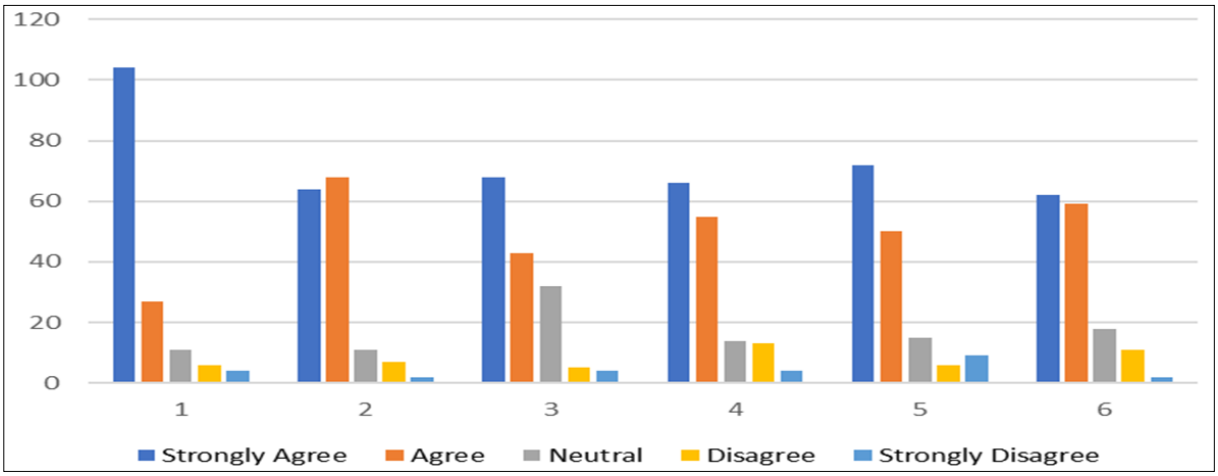
"Effect Of Cash Management Automation On Financial Management In Meru County Government" authorised "By 2dr. Paul Gichohi 3mrs Susan Kambura (2019)," The study emphasizes the importance of cash management automation for institutions, particularly during times of financial strain when accessing credit becomes challenging. In the public sector, effective cash management is crucial to ensure employees receive their salaries on time, and the adopted model helps by aligning levy payments with their consumption periods, easing cash flow management.

Data analysis & interpretation

Table 1: User perception of speed over real cash management vs digital cash management

User perception of speed over real cash management vs digital cash management						
	Particulars	**SA**	**A**	**N**	**D**	**SD**
1.	Compared to traditional payment methods, I believe that transactions will be fast if I use digital Payment	104	27	11	6	4
2.	I believe that using digital Payment will improve the speed of transaction	64	68	11	7	2
3.	Digital payment facilitates timely workers' salary payment	68	43	32	5	4
4.	Receiving monthly salary is now very fast	66	55	14	13	4
5.	The speedy alert that salary has been paid is fantastic	72	50	15	6	9
6.	I cherish receiving alert for early salary payment	62	59	18	11	2

Source: Survey Data



Source: Survey Data

Fig 1: User perception of speed over real cash management vs digital cash management

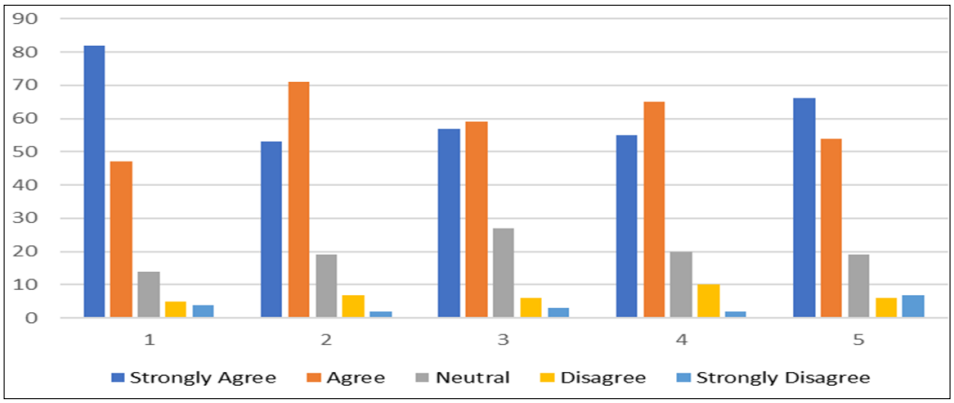
Interpretation

Referring to the table and chart above, it can be analyzed that 104 respondents agree that Digital Transaction System is better than Traditional Transaction Method.68 respondents Strongly Agree that digital payment improve speed of transaction.68 respondents Strongly Agree that it will make timely salary payment. Majority of respondents strongly agrees that it will make salary payment fast.

Table 2: User perception of security over real cash management vs digital cash management

User perception of security over real cash management vs digital cash management					
Particulars	**SA**	**A**	**N**	**D**	**SD**
1. I believe that digital Payment methods have security controls to maintain data confidentiality	82	47	14	5	4
2. I believe that digital Payment methods will incorporate sufficient security	53	71	19	7	2
3. I believe that digital Payment methods will have security controls to prevent fraud	57	59	27	6	3
4. Digital payment provides great security for salary payment/other transaction	55	65	20	10	2
5. The privacy and integrity of my personal information can be compromised	66	54	19	6	7

Source: Survey Data



Source: Survey Data

Fig 2: User perception of security over real cash management vs digital cash management

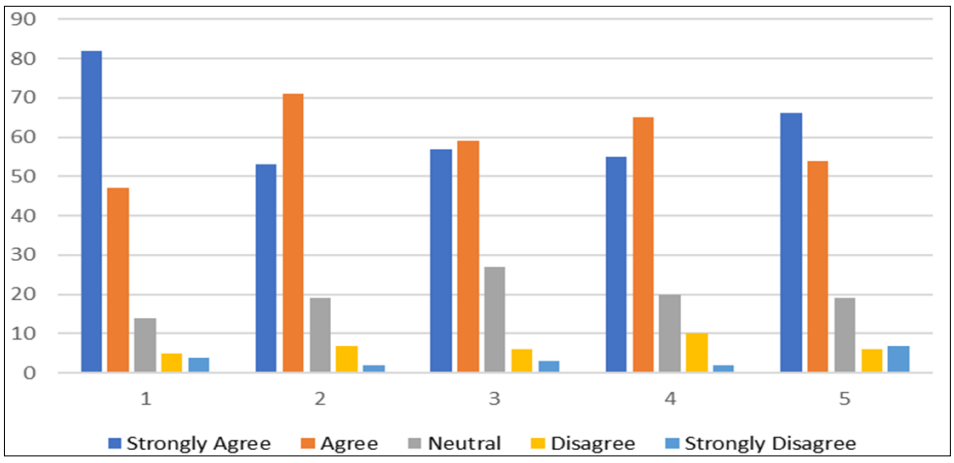
Interpretation

Referring to the table and chart above, 82 respondents strongly agrees that digital payment help to maintain data confidentiality.71 respondents' digital payment incorporate sufficient data. 70 respondents agree that Digital Transaction System is Secure.59 respondents agree that it prevent from fraud.65 respondents Agree that it will provide security for salary payment.66 respondents Strongly Agree that their privacy and integrity of their personal information can be compromised.

Table 3: User perception of usability over real cash management vs digital cash management

User perception of usability over real cash management vs digital cash management					
Particulars	**SA**	**A**	**N**	**D**	**SD**
1. I believe that using digital Payment will be convenient	76	39	25	8	4
2. Digital payment makes salary payment easier than before	50	57	32	11	2
3. Digital payment system has reduced errors in the payment of workers' salary to a barest minimum	52	45	41	10	3
4. Digital payment is rigid and inflexible	48	52	32	17	3
5. Digital payment system is an easy means of salary payment	57	38	39	9	9

Source: Survey Data



Source: Survey Data

Fig 3: User perception of usability over real cash management vs digital cash management

Interpretation

Referring to the table and chart above, 76 respondents strongly agrees that digital payment will more convenient. 57 respondents agrees that digital payment make salary payment easier. 52 respondents are agreeing that digital payment is inflexible.

Sample Profile

The samples collected from the survey data includes the following:

- Total respondents of our Survey data collected is 152.
- The majority age of respondents was 18 - 28 Years.
- Majority of the respondents were single which is 83%.
- More than half of the respondents' highest Educational Qualification was Bachelor's Degree which is 50%.
- 36.8% of the respondents are employed.
- Most of the students have the Physical mode of cash management which is 82%.
- The Monthly income of the respondents depicts that 29.6% were having an income up to ₹10,000 - ₹15,000.
- Nature of Work to majority of the respondents as Work from Office which is 48%.
- More than half of the respondents are aware about Digital Cash Management than Real Cash Management.

Findings

- Users are concerned about the digital payment platform speed, security and usability for their cash management.
- Though, among the respondents' citizens above the age of 18-28 are partially shifting to digital transactions.
- Users find it beneficial for transacting huge amount of funds, for example for those who have more than Rs.20,000 as their basic pay, their income directly gets credited into account as of nowadays.
- Majority of the respondents who are employed prefer digital cash over real cash.
- Most of the students have the Physical mode of cash management.
- Among the respondent's majority of them agrees that the transaction will be fast if use the digital payment method.
- From this the large number of respondents agrees that digital payment is highly secured.
- Substantial portion of respondents say that using digital payments is very convenient and easier.
- It is found that a significant portion of the respondents are aware about Digital Cash Management than Real Cash Management.

Suggestion

- Implement robust security measures to address users' concerns regarding the safety of digital payment platforms, emphasizing encryption and multi-factor authentication.
- Enhance user education initiatives to empower individuals, particularly older demographics, to navigate digital platforms confidently and securely.
- Introduce government incentives, such as cashback schemes, to incentivize digital payment adoption and stimulate the digital economy.
- Integrate digital transactions seamlessly into daily activities to enhance user experience and promote habitual use, emphasizing convenience and accessibility.
- Focus on improving the speed and usability of digital payment platforms to meet users' expectations for efficient and hassle-free transactions.
- Conduct targeted educational campaigns to highlight the benefits and advantages of digital transactions, particularly for those handling significant funds, such as individuals with higher incomes.
- Continuously upgrade and innovate digital payment systems to ensure they remain user- friendly, secure, and adaptable to evolving technological advancements and user preferences.

Conclusion

The findings from the study reveal a clear trend towards digital cash transactions, underpinned by technological advancements and increasing consumer preference for convenience. However, concerns regarding the speed, security, and usability of digital payment platforms persist, necessitating the implementation of robust security measures and enhanced user education initiatives. Government incentives, such as cashback schemes, have proven effective in driving digital payment adoption and fostering economic growth in the digital sphere. Moreover, integrating digital transactions seamlessly into daily activities enhances user experience and encourages habitual use, further facilitating the transition towards a cashless society. In conclusion, while the momentum towards digital payments is undeniable, addressing security concerns, improving user education, and prioritizing customer support are essential for building trust and broadening acceptance. Continued innovation and education efforts, particularly targeting older demographics, will be crucial in ensuring the accessibility, efficiency, and security of digital transactions, thus driving sustained growth in the digital economy.

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