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Understanding the Dynamics of Digital Payment Adoption among Public University Students of Bangladesh: A Quantitative Study

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Abstract

Digital payment systems have gained significant acceptance over the course of time world-wide. Our daily life is being more dynamic than before due to the addition of these digital methods of payment. Bangladeshi universities are also mostly subject to the inclusion of digital payment systems. In the current world, universities are adopting technological advancements for the modernization of their daily activities, including the adoption of digital payment systems. This study aimed to investigate the utilization and effectiveness of digital payment system among university students at various public universities in Bangladesh. By forming a structured questionnaire, primary data were collected on the frequency of usage, reasons for adoption, perceived transparency compared to traditional methods of payment, impact on transaction speed, administrative burden minimization, major barriers to adoption, effect on financial management, ease of use, and potential for a shift to a cashless campus.

Keywords: Digital payments, Cashless transaction, Cash transactions student community, Transparency and efficiency

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1. Introduction

At present Bangladesh is witnessing digital transformation because of its connectivity with broadband and its larger accessibility to the existing digital methods of payment. The rapid transformation of digital technology has largely contributed to the expansion of digital payment systems toward various sectors, such as various educational institutions. Universities across the world are increasingly adopting digital payment systems to make financial transactions much easier and faster, which enhances convenience for students, faculty, and staff. Digital payment systems usually offer a greater number of benefits than traditional cash-based transactions and help people move toward improved transparency, faster transaction speeds, and minimization of administrative burdens.

2. Literature Review

Kumar (2019) observed that both time utility and rewards induce students to use digital payment systems,

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while a lack of security and additional charges demoralize them to restrain from using digital payment system. He also found that the male responder has found them comfortable while using digital payment system along with additional adaptability with it and education plays a vital role in influencing individual to pay digitally.

Odi and Richard (2013) found that electronic payment system bears great significance to the Nigerian economy and suggests that cashless payment system must go through a proper screening before formulating the e-payment system. Manual payment causes slowness to the transaction process which was a common scenario before the emergence of modern banking system.

Bezovski (2016) noted that larger user base of mobile phones has caused online payments to be popular. His findings also shows that this payment method is well suited for micropayments subject to successful implementation. The major reasons identified was time and place independence, frequent accessibility etc. On the other hand the barriers identified was security concern, inconsistency during larger payments and incompleteness of the available mobile payment market.

Doan (2014) states that adoption images of mobile wallet among the consumers in Finland is regarded as the preliminary stage of Innovation-Decision Process, This study also reveals that there is potential mobile wallet market in Finland because almost 88% respondent believes that mobile wallet can be a better alternative for the traditional method. A large portion of respondents are highly concerned about the security privacy as major factors regarding the use of mobile payment system.

Pandey (2022) concludes that digital payments follows a robust growth 26.2% in terms of size as compared to 2020-21. This study also found that post pandemic period due to the concern of people about health regulations fear about cash transactions diverted them to use the digital payments of system.

3. Research Gap

Since digital payment system is a newly introduced concept among the users there are few studies available regarding this. While reviewing literature related to the digital payment system adoption and availability in the public universities in Bangladesh the studies available were mostly fragmented and uncomprehensive. Another noticeable limitation found was that the existing studies did not focus on higher education (e.g., universities) institution which has the major portion of digital payment system users. As a result the researcher felt the significance of conducting a comprehensive study on several facets of the digital payment system focusing on the public university students of Bangladesh.

4. Objectives

Given the increasing significance of digital payments, there is a growing need to examine the extent to which they are embraced by individuals. Limited research exists on this specific field, particularly concerning students as the focal demographic. Hence, this study seeks to address these research gaps through the following objectives:

- To determine the frequency and extent of usage of the digital payment system among university students for various transactions.
- To assess the impact of the digital payment system on transaction speed, administrative burden reduction, and financial management practices within the university students.
- To examine user satisfaction, perceptions of transparency, and ease of use associated with the digital payment system among students.
- To identify and analyze major challenges hindering the widespread adoption of digital payment methods within the university students.

5. Methodology

Properly structured methodology bears great significance as it constitutes the base of research studies. So the researcher has formulated the following methodology to conduct the study.

5.1. Selection of Study Area

Public universities in Bangladesh appeal to both students and parents due to its economic viability, quality of education as compared to private universities, better job opportunities etc. These universities contributes to the making of skilled workforce and researchers who further plays important role the development of the country. Considering all these facts, the researcher conducted this study based on the student community of public universities in Bangladesh.

5.2. Data Collection

This study is based on both primary and secondary data sources. Primary data has been collected from 400 respondents from different public universities of Bangladesh through a well-structured electronic questionnaire using Google form. On the other hand required secondary data has been collected from articles, newspapers, magazines and journals which deals directly or indirectly with the particular topic related to and thereby analyzed the objectives of the present study.

5.3. Tools of Analysis

While conducting this study the researcher have used various tools such as tabulation and simple statistical measures like frequency, percentage and average to analyze the data. The researcher have also incorporated graphical illustration of pie chart and bar chart wherever necessary for better understanding and visualizing of the obtained results.

5.4. Limitations of the Study

The primary data collected from the respondents may not be rigorous due to the recall lapses. Due to the time and resource constraint the researcher was confined to only the public universities of Bangladesh and data was collected from only 400 respondents. So findings from this study may not be generalized for all the universities in Bangladesh.

6. Data Analysis and Interpretation

6.1. Usage of Digital Payment User among the Public University Students of Bangladesh

This section explores the tabular analysis of the digital payment system user among the student communities of public universities from the collected primary data.

Table 1 shows that all the respondents were undergraduate students and their age ranged from 19-24. Out of 400 respondents, 56% of the total respondents are consists of female students (Number of Female Respondents is 224) and 44% of the remaining respondents are consists of the male students (Number of Male Respondents is 176).

Variable	Categories	No. of Respondents	Percentage to Total (%)
Age	19-24	400	100%
Gender	Male	224	56%
	Female	176	44%
Educational Background	Undergraduate	400	100%

Source: Compiled from the primary data

6.2. Awareness and Usage of Digital Payments System

Technological innovation helps to shifts toward the cashless method of transaction. Thereby the researcher

have tried to examine the level of awareness and the most preferred method of digital payments among the students.

Table 2: Awareness and Usage of Digital Payments System	
Percentage of Students Known about Digital Payment System	Percentage of Students unaware about Digital Payment System
90% (No. of Respondents 360)	10% (No. of Respondent 40)
<i>Source: Compiled from the primary data</i>	

Above table reports that a large portion of the respondents (90%) are aware of the digital payment system available in their universities and the remaining 10% are not aware of the existing digital payment system. Since a large portions of respondents are using the available digital payment system, the researcher tried to examine the most preferred methods of payments and the result is illustrated by the following pie chart.

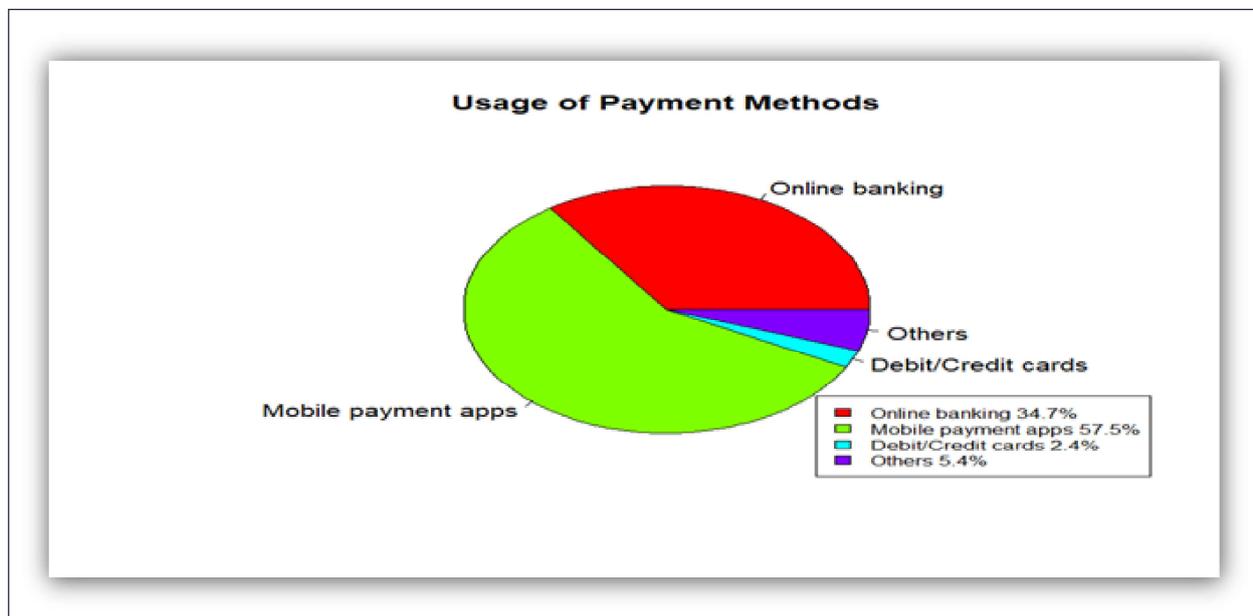


Figure 1: Most Preferred Digital Payment System

The above pie chart illustrates that more than half of the respondents (57.5%) prefers mobile banking app while performing their academic transaction. The second most used (34.7%) method of payment is the online banking. On the other hand only a few respondents use payment method such as credit and debit card as shown by the Figure (2.4%). Apart from these payment methods, some users prefer to use other payment tools (5.4%). So it can be concluded that students mostly prefers using mobile payment apps such as Bkash, Nogod, Rocket, etc., to perform their transaction related to academic purposes.

6.3. Frequency of Using Digital Payment Tools

This section tries to find out how frequently the students use the digital payment tools to perform their transaction related to academic needs. The findings are shown in a pie chart below:

The above figure indicates that nearly half of the respondents (48.4%) rarely uses the digital payments tools to perform their academic transaction such as registration fee, credit fee, library fee, grade sheet fee etc. The reasons behind is that almost in all public universities the students pay their semester or credit fee twice a year that's why nearly half of the respondents answered that they use these payment tools rarely or once after every six months. But another portion of students (36.8%) uses the digital payment tools monthly to pay their semester fee, credit fee, grad sheet fee etc. So it's a positive sign that a moderate portion of the students are using the modern payment method. Similarly it is also found that a smaller portion the respondents (2.7%) uses the

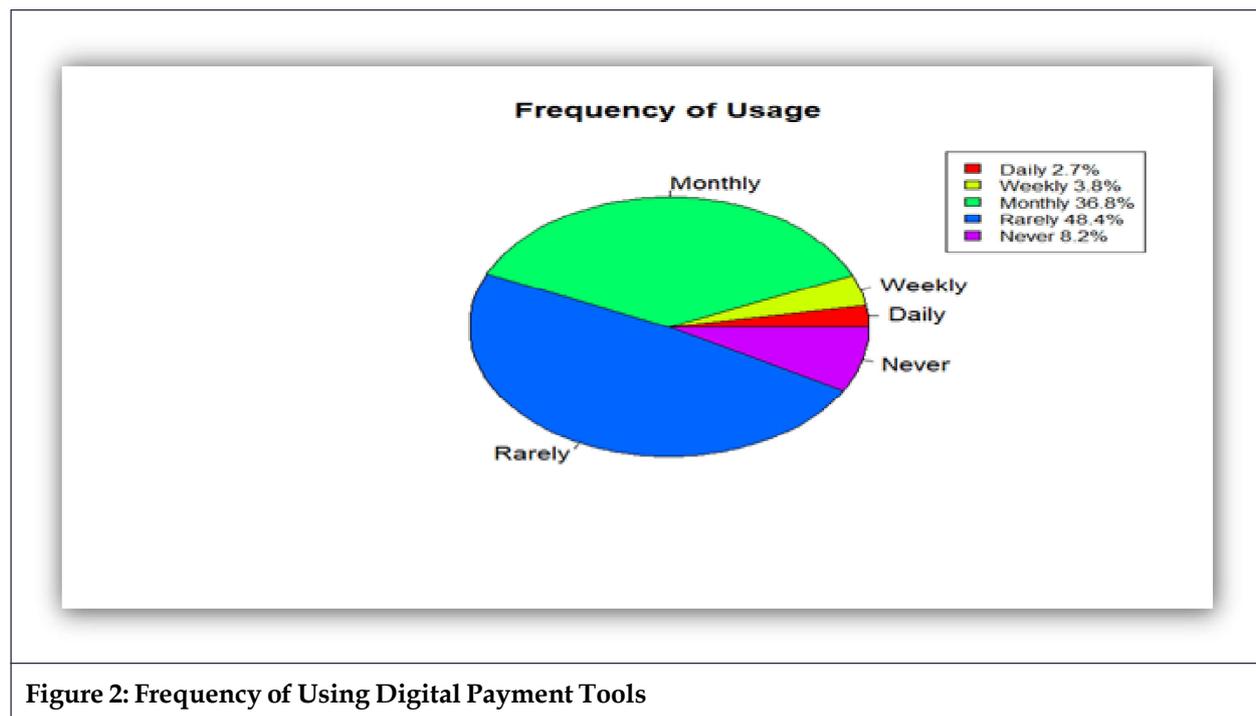


Figure 2: Frequency of Using Digital Payment Tools

available digital payment method in their academic purposes. But 8.2% of the respondents confessed that they never use the modern payment system to their academic activities.

6.4. Primary Reasons for Using Digital Payment Methods and its Transparency

This section attempts to figure out why the respondents prefer to use the digital payment tools and how they evaluate the transparency of the digital method of payments. The findings of this section is recorded below:

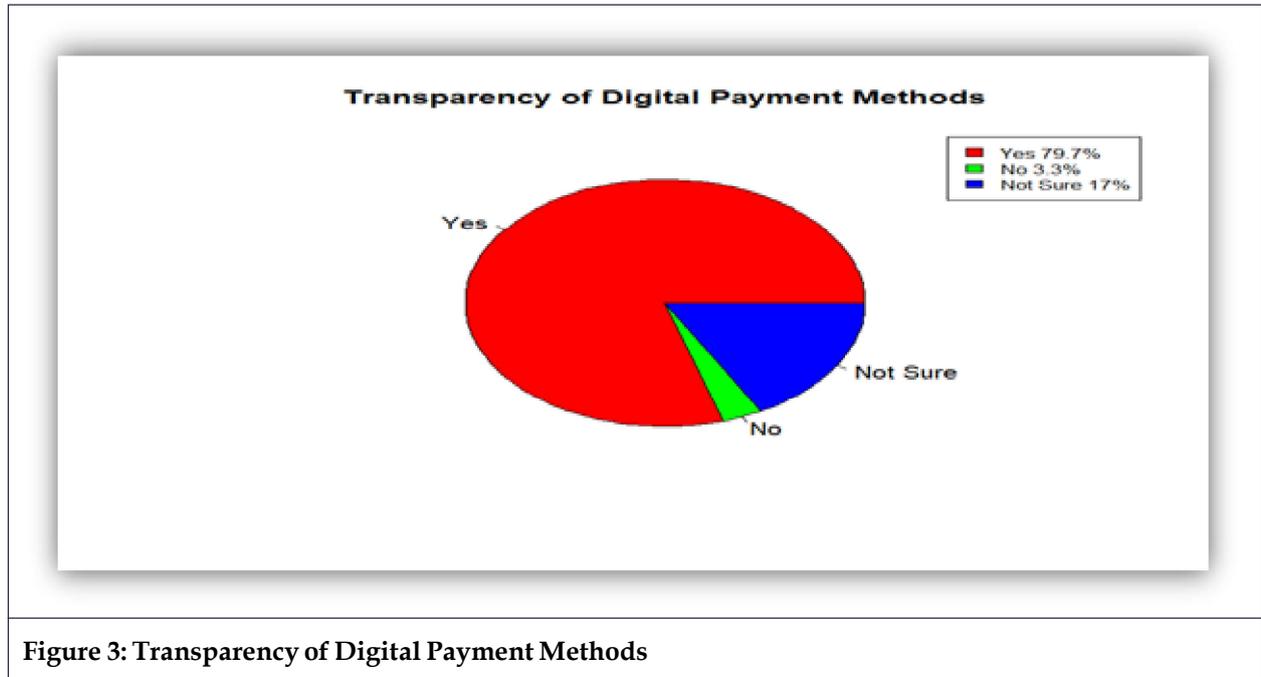
Table 3 explains the primary reasons for using digital payment methods. For example nearly half of the respondents (45.1%) believes that digital payment methods are easy to use, as a result a large portion of the students use these payment methods. Another reason is the concern of security and only 9.3% have found digital payment tools are secured. Speed of transactions also play a vital role in convincing the students to use these payment tools and 23.1% of the respondents considers speedy transaction as the primary reason. The most attractive feature of digital payment tools is that it saves the time as compared to manual transaction. So relatively large portion of the respondents agreed that they consider savings of time as crucial factor. A smaller portion of the respondents use the digital payment tools because they find them useful in the reduction of transportation or transaction cost. Lastly 41.2% of the total respondents supported all the above reasons as the primary factors for the use of the digital payment systems.

Primary Reasons	Percentage of the Total Respondents
Easy to Use	45.1%
Security	9.3%
Speed of Transactions	23.1%
Time Savings	38.5%
Cost Reduction	5.5%
All of The Above	41.2%

Source: Compiled from the primary data

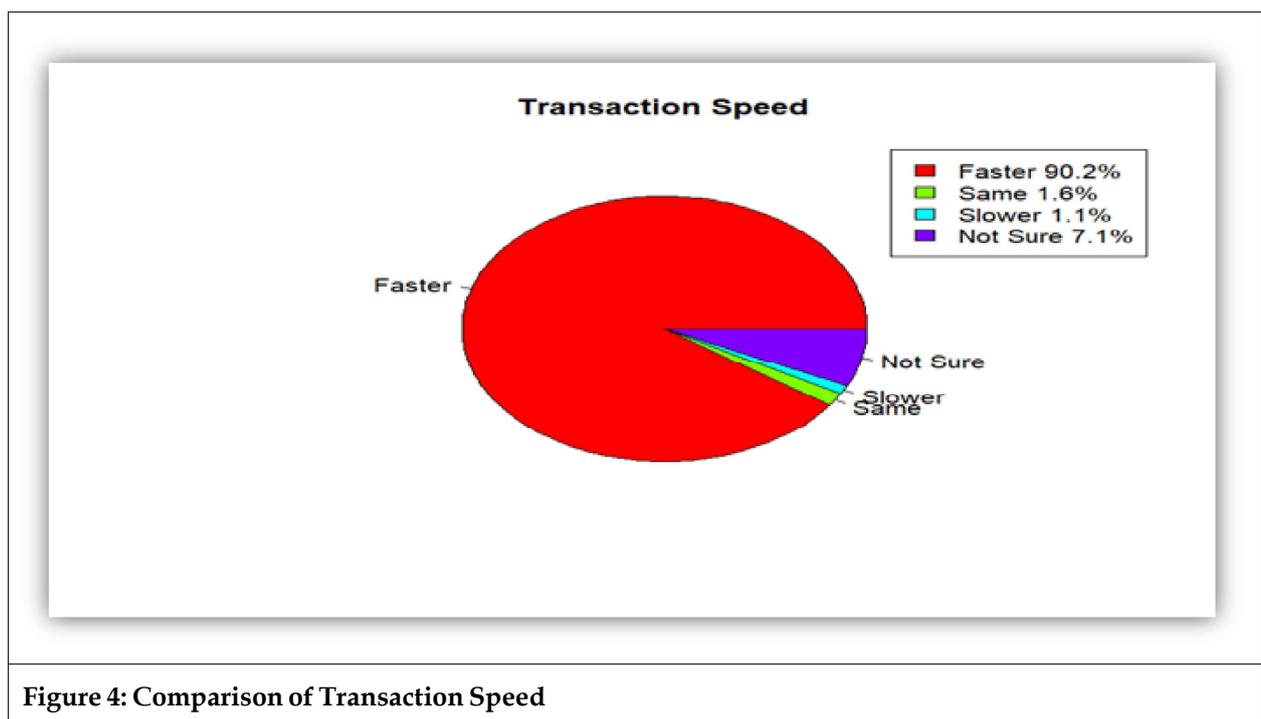
6.4.1. Transparency of Digital Payment Methods

A large portion of the respondents (79.7%) believes that the available digital payments are more transparent than the traditional cash transaction because it has made their life much easier and faster than before. By contrast, very few respondents (only 3.3%) find the digital payment system not transparent to use. Interestingly 17% of the remaining respondents find themselves inconclusive while determining either digital payment methods are transparent or not. So it can be concluded that majority of the students believes in the transparency of the digital payment system available in their universities.



6.5. Comparison of Transaction Speed

Due to the technological advancements transaction has become much faster than the traditional one. In this section of study the researcher tries to find out how faster has become the daily life after adopting the digital payment methods. The findings are shown by using diagrammatically:



According to the findings, a large portion of respondents believes that digital payment system has made their transaction faster than before resulting in higher utility. It also saves the valuable time of the student’s community by making their transaction faster. By contrast, 7.1% of the students argued that they were unable to find any change in the transaction speed as compared to before the adoption of modern payment methods. A very smaller portion have found that digital payment methods are responsible for slowing down the transaction speed and the remaining 7.1% are uncertain either their speed of transactions has become faster or not. So it can be convincingly concluded that transaction speed has become faster than before.

6.6. Paperwork and Administrative Burden

Modern payment methods can reduce use of paper by completing activities in cashless way and it may also affect the administrative burden. So this section provides gathered information about the paperwork and administrative burden.

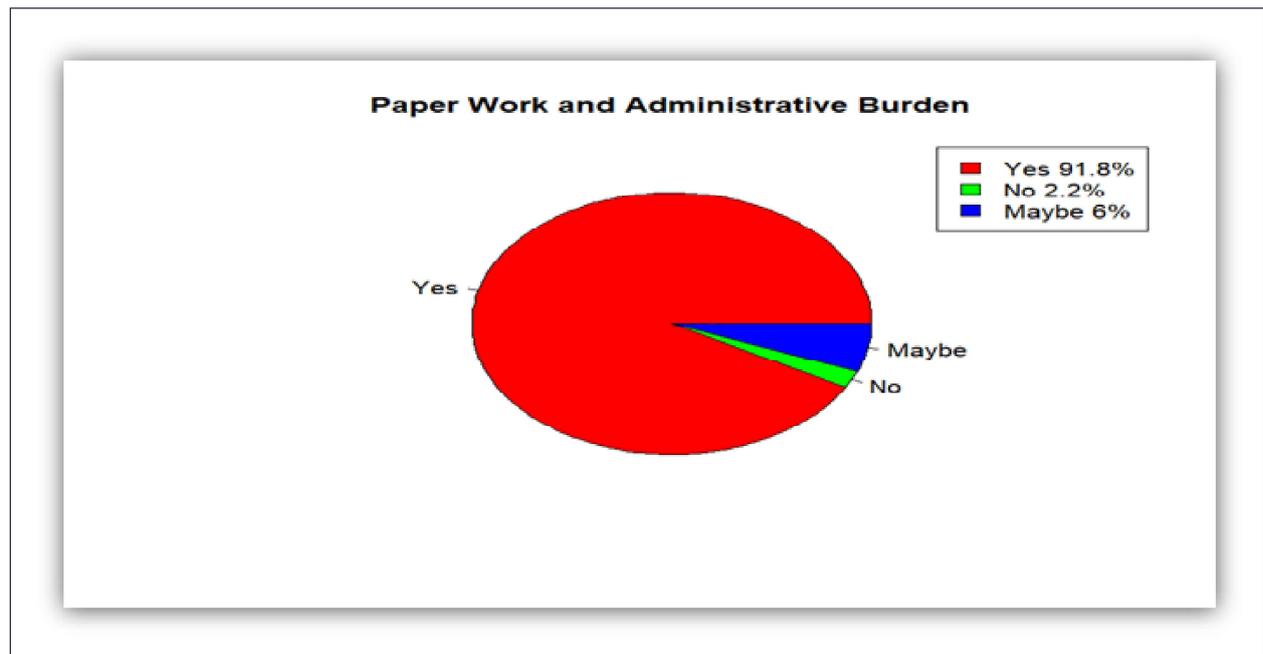


Figure 5: Paper Work and Administrative Burden

The findings in this section revealed that the majority of the respondents (91.8%) believes that due to the adoption of modern payment method, There is minimization of both paperbased work and administrative burden. It has also enabled administration to be more efficient in terms of activities than before. On the other hand only a few portion(2.2%) finds that it doesn’t contribute to lower paperbased work and administrative burden. Finally, 6% of the remaining respondents thinks that probably there is lower paperbased work and administrative burden.

6.7. Major Barriers to the Adoption of Digital Payment Methods

Some barriers are always plays role to prevent users from adopting modern payment methods. This section focuses on the major barriers that play vital role in adopting modern payment methods.

Among the various barriers to the adoption of digital payment methods, lack of awareness is one of the most important barrier as 42.9% of the respondents believe that students are unable to adopt the available modern payment methods because they are ignorant of it. Another major portion (18.7%) believes that security concerns also impose barriers to the adoption of modern payment methods since it is newly introduced concept, there is always fear of losing money while transacting. It is also found that some universities are unable to incorporate all the common method of payments for the students, as a result they don’t find it useful. Again there is a portion (21.4%) who are familiar with the available digital payment methods, but they don’t have sufficient knowledge to utilize properly the benefit of digital payment system. Only 1.3% respondents believes that not being used to the modern payment system causes them to engage with it. The other reasons

Table 4: Major Barriers to the Adoption of Digital Payment Methods	
Major Barriers	Percentage (%) of the Total Respondents
1. Lack of Awareness About Digital Payment System	42.9%
2. Security Concerns	18.7%
3. Limited Acceptance	13.2%
4. Insufficient Knowledge	21.4%
5. University Authority are Unable to Continue the Online Banking System	0.5%
6. Sometimes it Faces Technical Difficulties	0.5%
7. Facing no Barriers to Use	0.5%
8. Bugs in the System	0.5%
9. Don't Have Personal Account	0.5%
10. Not Used to	1.3%
<i>Source: Compiled from the primary data</i>	

found were bugs I the system, having no personal account etc. which constitutes a very smaller portion the total respondents (Each having 0.5%).

6.8. Potential Shift Towards a Completely Cashless Campus in the Future

The respondents were also asked if there will be a potential cashless campus in future. Majority of the students (88%) answered that they foresee a potential complete cashless campus in future. On the other hand only 7% of the respondents believe that there will not be a complete shifts to cashless campus in future and the remaining part of the respondents are uncertain either there will be a shift or not.

7. Recommendations

Considering the importance of public universities in Bangladesh, following steps to be taken to improvise the current scenario of the digital payment systems in the public universities of Bangladesh:

- I. Conducting awareness campaign about the usefulness of the digital payment system.
- II. Infrastructural development to provide reliable and secured modern payment transaction.
- III. Integration of digital payment system with the canteen/cafeteria, student portals and libraries.
- IV. Arrangement of training on data security, usages and access.
- V. Providing incentives and rewards in the form of cashback, loyalty points and discounts on various university services.

8. Conclusion

Digital payments methods are increasingly being popular to the student community of the public universities of Bangladesh. By analysing the usages of digital payments tools among the public university students, it was found that majority of the student community use various methods of payment conduct their academic transactions. The intensity of the users was also different because students mainly pay their semester and credit fee twice a year. But it was noticeable that a healthy portion the student community use these payment methods mostly mobile banking apps to pay library fine, grade sheet fee, etc. It was also found that they consider the digital payment system both transparent and speedy with some exception. Another noticeable findings is that majority of the student community believes in the idea that paper base work and administrative burden have been reduced due to the adoption of modern payment methods. The student community mostly believes that there will be a potential shift to cashless campus in future. Finally a number of barriers were

found which are problematic to the adoption of modern payment systems. So recommendations have been provided to improvise the current scenario and make a user friendly universal environment to get the maximise benefit from digital payments in public universities of Bangladesh.

Author Contribution

The author completely contributed to finish the all part of the research paper.

Ethics Statement

This study received ethical approval from the Institutional Review Board (IRB) of Shahjalal University of Science and Technology, Sylhet, Bangladesh.

Consent Statement

All participants in this study provided informed consent prior to their involvement. For participants under the age of 18, consent was obtained from their legal guardians.

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