

ASSIGNMENT- 10

1. *Describe and compare three different modes of digital payments, highlighting their mechanisms, advantages, and disadvantages. discuss the importance of security measures in digital payment systems.*

ANS:

Digital payment is referred to as those payments that take place using the various types of electronic medium. These methods do not require payment to be made in the form of cash or providing cheque.

There are different modes and types of digital payments that are prevalent in India.

1. Banking Cards: Banking cards are the most widely used digital payment system in India. It offers a great set of features that provides convenience as well as security to the users. Cards offer the flexibility of making other types of digital payments. Customers can store card information in the mobile application and pay for the services using the stored card information.

Banking cards (debit and credit cards) can be used for a variety of digital transactions like PoS terminals, online transactions, as a payment medium in mobile apps, which provide any kind of service like grocery, healthcare, rental cab booking, flight tickets, etc.

The most popular cards are issued by service providers like VISA, MASTERCARD, RuPay, AMEX etc.

2. USSD (Unstructured Supplementary Service Data): USSD is another popular digital payment method. It can be used for carrying out cashless transactions using mobile, without the need of installing any banking app.

The good thing about USSD is that it works without the requirement of mobile data. The main aim of this digital payment service is to include those sections of people of the society who are not included in the mainstream.

The striking feature of the USSD is that it can be availed in Hindi. The USSD can be used for the following types of activities:

- a. Initiating fund transfers
- b. Making balance enquiries
- c. Getting the bank statements

3. AEPS (Aadhaar enabled payment system): AEPS can be used for all the following banking transactions such as balance enquiries, cash withdrawal, cash deposit, aadhaar to aadhaar fund transfers. All such transactions are carried out through a banking correspondent which is based on Aadhaar verification.

This service can be availed if the aadhaar is registered with the bank where an individual has a bank account.

4. UPI (Unified Payment Interface): UPI is the latest digital payment standard where the user having a bank account can transfer money to any other bank account using UPI based app. UPI enabled payments occur throughout the day and all 365 days in a year.

Payment can be done using a Virtual Payment Address (VPA). To use UPI services one must have a bank account and a mobile number registered with that bank account.

5. Mobile Wallets: Mobile wallets are another popular payment option. Here the users can add money to their virtual wallet using debit or credit cards and use the money added in the wallet to perform digital transactions.

Some of the most popular mobile wallets are PayTM, Mobikwik, PhonePe, etc.

6. Point of Sale Terminals: PoS terminals are installed in shops or stores where payments for purchases can be done through debit and credit cards. There are

variations of PoS, one which can be Physical PoS and the other one is mobile PoS. The mobile PoS does away with the need of maintaining a physical device.

7. Mobile Banking: Mobile banking is a service provided by the banks through their mobile apps in a smartphone for performing transactions digitally. The scope of mobile banking has expanded extensively after the introduction of UPI and mobile wallets.

Mobile banking is a term used to describe a variety of services that are availed using mobile/smartphones.

8. Internet Banking: Internet banking is the process of performing banking transactions from the comfort of your home using a mobile phone/laptop/ desktop and an active internet connection. The major type of transactions can all be done using internet banking.

Internet banking services can be availed round the clock and all 365 days in a year, which makes it a popular choice for performing digital transactions.

Advantages of Digital Payments

- Increased consumer numbers

Over 60% of UK transactions used some sort of electronic payment in 2018, and that number is only expected to rise. As a result, you'll be able to serve a larger number of customers. People are carrying less and less cash, and companies that accept cash are becoming increasingly scarce. You don't want to be one of them, because you risk alienating clients who only accept electronic payments.

- Transactions that are both quick and convenient

When you use digital money to perform online transactions, you don't have to wait for the next banking day to complete the transaction. Any transaction you make at any time during the day is completed promptly.

- Tracking Payments

Because of digital currency, it is also much easier to track payments. All of this is feasible because to blockchain technology. It's simply a public ledger that anybody can access, allowing users to trace their payments more precisely and in real-time.

- Higher Security

E-payments have several levels of security. To begin with, unlike the currency, there is no chance of counterfeiting. Furthermore, for larger purchases, typical e-payment options such as credit and debit cards require PIN verification. Cardless payment systems, such as Apple Pay, are much safer, requiring biometric authentication such as fingerprint or facial ID. Not only that, but Apple Pay encrypts and fluidizes data, making it impossible to steal card information from a stolen phone.

- Low Fees

Of course, one of the key advantages of digital currency is that it has low fees. Transferring money from one person to another is usually subject to fees in traditional banking. This raises the cost of transactions significantly. When it comes to digital currency, though, these transactions are completely free.

Disadvantages of Digital Payments

- Market Fluctuation

In the end, the digital currency does not have the same level of acceptance as traditional money. Given this, it's still a risky market to invest in. On any given day, the value of digital money might surge and plummet like a rollercoaster. As a result, it is a high-risk business that may not be suitable for investors with lower risk tolerances.

- Charges imposed by merchants

The main disadvantage of employing a payment processor is that it will cost you money. This could be a monthly rental price or merely a percentage of each transaction, as previously stated. These additional expenses can add up quickly, but most providers offer a reasonable package that won't break the bank.

- Possibility of deception

Despite the fact that e-payment systems are normally secure, there is always the possibility that their security measures will fail. Although systems may not be targeted directly, phishing techniques can be used to gain user names and passwords. Once a hacker has these details, e-payments allow them to make repeated payments before the legitimate account holder becomes aware.

- Dependence on the internet

These methods of transaction rely on the Internet. If your service goes down, it can bring your business to a standstill, resulting in frustrated consumers and a loss of revenue for you.

Although there are drawbacks to digital payment, no payment method is flawless, and the benefits greatly exceed the drawbacks. In any case, current consumer culture is becoming increasingly cashless, and keeping up with this trend pays off.

- Uncertain Future

Given the current volatility of digital currencies, it's difficult to predict what role they'll play in the future. Whatever the case may be, it appears that this specific form of cash is gaining greater recognition and notoriety with each passing day.

The importance of security measures in digital payment systems.

(A) Building Trust with Customers

1. Customers expect their financial information to be kept confidential and secure when they make a purchase online. By investing in secure payment processing, businesses can build trust with their customers, which can lead to repeat business and positive word-of-mouth recommendations.

(B) Compliance with Payment Card Industry Standards

1. The Payment Card Industry (PCI) has established security standards to protect against data breaches and fraud. Businesses that process payments online must comply with these standards to ensure the safety of their customers' financial information. Failure to comply with these standards can result in penalties and damage to a business's reputation.

(C) Reducing the Risk of Fraud

1. Online payment processing systems use fraud detection and prevention tools to identify and prevent fraudulent transactions. These tools can help businesses avoid chargebacks, reduce losses, and protect their reputation.

(D) Ensuring Business Continuity

1. A data breach or security incident can disrupt business operations and damage a business's reputation. By investing in secure payment processing, businesses can ensure that they are prepared to handle security incidents and maintain business continuity.

How can businesses and individuals ensure the security of their digital transactions?

The following online payment security best practices to protect your customers and business.

1. Use two-factor authentication.

Two-factor authentication (2FA) is an essential part of any business' cybersecurity plan. 2FA — also called multifactor authentication (MFA) — is essential when dealing with vendors, social media, financial institutions or any other platform where your business has an account. If a cybercriminal gets access to your accounts, your customers' sensitive information is at stake, along with your business' private data. If you deal with a vendor that doesn't offer 2FA or MFA, request it or find a more secure vendor.

With 2FA, you know immediately if someone is trying to access your account and can take steps to secure it by changing the password.

2. Verify every transaction.

E-commerce financial transactions are, by definition, card-not-present transactions, which are inherently less secure. Online businesses can improve security by verifying the transaction by the following means:

- Require customers to enter the credit card's security code
- Have customers enter the card's billing address and match it with address verification
- Get a phone number so you can call if there's a discrepancy
- Validate the provided email address

3. Choose a secure e-commerce platform and payment provider.

One of the best ways to protect your online store is to base it on a secure e-commerce platform. The best e-commerce platforms are established companies with excellent reputations that implement innovative security measures.

Platforms with excellent security are rarely the cheapest, but this cost is a crucial part of your cybersecurity budget. Secure e-commerce platforms can save you money in the end by protecting your reputation and your customers.

4. Buy cyber liability insurance.

Even when you do your best to secure your operations, you may still be vulnerable to savvy hackers or dishonest employees. Cyber insurance will help cover your bases. Cyber liability insurance typically covers costs associated with a data breach, such as loss of income, costs associated with notifying customers, the cost of recovering compromised data and repair costs for damaged computer systems.

5. Use a personal verification system.

Requiring customers to set up an account with you before purchasing lets you verify them with their login credentials. Alternatively, you can ask customers to verify their identity by providing a photo of their driver's license or other government-issued identification for big-ticket items.

6. Don't store customer payment data.

It's best not to store any customer payment data so it's not a target for cybercriminals. Don't store electronic data or paper files, such as when you take credit card payments over the phone. However, if you must store payment data to enable easy repeat purchases, use a third-party company that uses encryption to protect the data.

7. Get an SSL certificate for your site.

A secure sockets layer (SSL) certificate provides security by encrypting communication between the customer and your business. In addition to this very real benefit, an SSL certificate also makes customers feel more confident doing business with you because they see the certificate displayed in the browser. For extra security, install a firewall around your company data and implement an intrusion detection and prevention system.

8. Ensure PCI compliance.

Anyone accepting credit cards is required to comply with Payment Card Industry Data Security Standards (PCI DSS). These standards cover proactive steps businesses must take to do the following:

- Build and maintain secure networks and systems

- Protect account data
- Scan for and protect against malicious software
- Control access to sensitive data
- Test networks to spot intrusions
- Respond quickly and appropriately in the event of an attack

9. Accept secure forms of payment.

In addition to credit cards — which you can verify with additional information — consider accepting payment forms with built-in security. This includes electronic checks verified through the automated clearing house (ACH) network and digital wallets like Apple Pay, Google Pay and Samsung Pay, which are secured through blockchain technology

10. Educate employees about security protocols.

Human error leads to many data breaches. Train employees on identifying and dealing with suspicious emails or calls that might be phishing for login credentials. Warn them against clicking on unexpected email attachments that might contain malware or sharing sensitive information with unauthorized people. Ensure they log out of their workstation when leaving their desks and never leave work-related USB drives or devices unattended.

11. Watch for customer purchase patterns.

Monitor customer purchase patterns. When you see something out of the ordinary, like an unusually large order from an existing customer, call them to verify its legitimacy.

2. Explain the fundamental concepts underlying digital payments

Ans:

The most secure online payment methods

Protect your customers and business by accepting secure payment forms. Some of the most secure include the following:

- **Credit cards:** Credit cards are an exceptionally secure payment option. The best credit card processors comply fully with the PCI DSS and help you attain PCI compliance. Credit card purchases also benefit your customers because they don't immediately withdraw money from their bank accounts. Instead, the money initially comes from the credit card company.
- **Debit cards:** Small business owners benefit from accepting debit card payments because they're also governed by PCI compliance. Debit card purchases are among customers' most secure online payments; in some cases, debit card use from an unfamiliar internet protocol address can trigger identity verification measures. Additionally, Visa and Mastercard don't hold debit and credit card customers accountable for unauthorized purchases.

- **Wire transfers:** Wire transfers are usually a secure online payment form when your company's and customer's banks are reputable institutions. Banks with solid reputations presumably lack an extensive history of data breaches and other security gaps, likely because they have active safeguards against fraud and other security concerns.
- **Mobile wallets:** Digital wallets like Apple Pay and Amazon Pay are widely seen as among the most secure online payment methods available. Customers benefit because they mask credit and debit card numbers and your company benefits because customers must use a fingerprint or PIN to verify their purchase. Mobile wallets must be linked to a genuine debit account, eliminating the possibility of accepting a fake credit card.
- **Electronic checks:** Accepting electronic checks protects you and the customer because the processing ACH system verifies every transaction. The system keeps account numbers confidential so they can't be stolen. If there is any fraud, you are protected by federal law. This is also an excellent payment method for online business-to-business transactions.

Discuss the key components and processes involved in a typical digital payment transaction, from initiation to settlement.

Step-by-step guide on the process of making a digital payment

When making a digital payment, the process typically involves the following steps:

1. **Initiation:** the payment process begins when a customer initiates a transaction, whether it's purchasing goods or services online, or selecting a digital payment method, such as credit cards or a mobile device with wallets.
2. **Authorization:** once the transaction is initiated, the payment information is securely transmitted to the payment processor or acquiring bank for authorization.
3. **Processing:** upon authorization, the first payment network or processor processes the transaction by debiting the client's account. This step may involve communication between various parties, including banks, payment networks, and merchant service providers.
4. **Settlement:** settlement typically involves the transfer of funds from the issuer bank to the merchant's bank.
5. **Confirmation:** once the settlement is completed, both parties receive confirmation of the transaction.

Analyze the advantages and challenges of digital payments compared to traditional cash-based transactions.

- 1. Reduced Transaction Costs**
- 2. Secure ePayment Transactions**
- 3. Saved Time and Resources**

1. Reduced Transaction Costs

Paper checks dominate business practices. Large businesses make half their payments via paper checks, while small businesses make 80 to 90% of their payments via paper checks!

Paper-based payments are a hassle for both businesses and suppliers. Though there are many disadvantages to using checks for B2B payments, collecting and processing paper checks is an extremely costly activity for most businesses and their suppliers, costing about \$13 just to send an invoice and \$5 to process a single check. Not only are paper-based payment methods expensive, but they are also slow. It can take upwards of two weeks for a check to clear.

By contrast, accepting a paperless process with electronic payments is relatively simple. Digital payment methods have the advantage of being faster, safer, easier to collect, and less expensive to the business. By incorporating electronic payment

methods into your business's account payable process, your AP department can realize saving on every invoice.

2. Secure ePayment Transactions

Electronic payments are much more efficient and safe than their traditional, paper-based counterparts. ePayment methods and systems offer multiple ways of securing your payments, such as payment tokenization, encryption, SSL, and more.

Although digital solutions are not immune to hackers and security breaches, most electronic payment providers also have a host of data experts and engineers working to keep your payment information safe.

3. Saved Time and Resources

By adopting electronic payment methods, your business saves time for its teams, its customers, and its leadership. Processing supplier payments the traditional way takes a lot of time.

And we found that was just the case with one of our MineralTree clients. The House of Cheatham processes more than 750 invoices a month, averaging about 6 hours a week just to prepare payment runs. By switching to an electronic payment solution, they're able to prepare their weekly payment run in just 5 minutes.

With a modern ePayment solution, much of the repetitive and manual tasks that plague accounts payable departments are automated, giving you and your accounts payable department more time to focus on important value-add areas of operations

4. Speed of ePayments

Since electronic payments are made digitally, funds are transferred much faster relative to traditional payment methods like checks. ePayments allow users to make payments online at any time, from anywhere in the world, and also remove the need to go to banks.

Faster electronic payments, like virtual cards, empower businesses to improve security, visibility, and efficiency all while lowering costs and saving time on manual processes.

5. Complete Visibility into Electronic Payment Process

Electronic payments provide complete visibility and transparency throughout the entire payment process for both your business and your suppliers, thus improving the supplier relationship.

Transparency is an essential factor when it comes to supplier payments, electronic or otherwise. When you automate electronic payment processing, you gain greater insight into each step of the invoicing process. Automated processes provide greater control over outgoing cash flow compared to tedious, error-prone manual processes. This combination of process transparency, greater control over

payments, and reduction of manual tasks means that it will be easier for your AP department to identify suspicious or fraudulent activity.

6. Improved Supplier Relationships with ePayments

Unlike paper checks that take time to write, process, and eventually post to your supplier's bank account, electronic payments are fast, transparent, and secure. Paying suppliers on time and offering them complete visibility into the payment process, will naturally improve your relationships with suppliers. Beyond that, streamlining the payment process with electronic payments will reduce the number of late payments and therefore lower the number of supplier inquiries to your AP team. That's a big time save considering 43% of AP teams spend over 6 hours a week answering vendor questions regarding payments. Improving and maintaining a strong supplier relationship is crucial, especially in the midst of an industry-wide supply chain disruption.

7. Electronic Payments Support Remote and Hybrid Work Environments

It has become evident that remote and hybrid work environments are here to stay for businesses around the world. And with remote invoice approvers and payment authorizers, traditional manual processes are no longer feasible, causing invoice

and payment processing delays. This slows down the entire payment processing workflow and creates a disorganized structure for approving payments. Meanwhile, an electronic payment platform is entirely digital, allowing approvers to authorize payments from anywhere in the world, at any time. And not only that, invoices are coded and captured in a central system, organizing invoice processing and making it easy for authorizers to approve, pay, and execute payments to suppliers.

Advantages And Disadvantages Of Digital Payment System

Advantages Of Digital Payment Systems

The digital payment system has emerged as a transformative force, bringing a myriad of **advantages that resonate across businesses** globally. Let us unravel the multifaceted benefits associated with digital payments and delve into how these advantages positively impact **businesses across diverse sectors** and geographical boundaries.

1. Efficiency and Speed:

One of the primary advantages of the digital payment **system is the unparalleled efficiency it introduces to financial** transactions. Unlike traditional methods that involve manual processing and delays, digital payments enable swift and real-time transactions.

This speed is a game-changer for businesses, ensuring that transactions, whether local or international, occur promptly, fostering a dynamic and responsive financial environment.

2. Cost-Effectiveness:

Digital payments contribute significantly to cost reduction for businesses. Traditional payment methods often incur hefty transaction fees, especially for

cross-border transactions. In contrast, digital payments are generally more cost-effective, with lower transaction fees and reduced operational costs.

This cost efficiency allows businesses to allocate resources strategically, optimizing their financial operations.

3. **Enhanced Security:**

Security is a paramount concern for businesses, and the digital payment system addresses this with advanced security protocols. Encryption technologies, secure authentication processes, and **fraud detection** mechanisms ensure the integrity of transactions. The result is a secure financial environment that protects businesses and their customers from potential threats, instilling confidence in the digital transaction landscape.

4. **Global Accessibility:**

Digital payments break down geographical barriers, providing businesses with a global reach. Whether a small local business or a multinational corporation, digital payment systems enable seamless transactions across borders. This accessibility opens up new markets, expands customer bases, and facilitates international trade, fostering economic growth and diversification for businesses of all sizes.

5. **Financial Inclusion:**

The digital payment system plays a pivotal role in promoting financial inclusion. In regions with limited access to traditional banking services, digital payments provide a lifeline, allowing individuals and businesses to participate in the formal economy. This inclusivity is a powerful force for economic empowerment, as it enables a broader segment of the population to engage in financial transactions and access a range of financial services.

6. **Data Insights and Analytics:**

Digital payments generate a wealth of data that businesses can leverage for strategic decision-making. Analysing transaction data provides valuable insights into customer behaviour, preferences, and market trends. Businesses can use this data to tailor their offerings, enhance customer experiences, and refine their marketing strategies, thereby gaining a **competitive edge in the market**.

7. **Streamlined Business Operations:**

The integration of digital payments into business operations streamlines processes such as invoicing, inventory management, and reconciliation. Automation of these tasks reduces manual errors, enhances accuracy, and frees up valuable time for businesses to focus on core activities. The streamlined operations contribute to overall efficiency and productivity.

The advantages associated with the digital payment system create a transformative impact on businesses across the board. From efficiency and cost-effectiveness to enhanced security and global accessibility, **businesses that embrace digital payments position themselves for success** in the modern economy.

As the digital payment landscape continues to evolve, businesses stand to benefit from a more connected, efficient, and resilient financial ecosystem.

Disadvantages Of Digital Payment Systems

While the digital payment system has brought about transformative changes in the financial landscape, it is crucial to examine the potential disadvantages and their impact on businesses. In this segment of our exploration, we'll delve into the challenges associated with **digital payments** and how they can negatively affect businesses across the board.

1. Security Concerns:

One of the primary disadvantages of digital payments revolves around security issues. Businesses and consumers alike face the constant threat of cyberattacks, including phishing, hacking, and data breaches. This vulnerability can lead to unauthorized access to sensitive financial information, posing a significant risk to businesses and eroding customer trust.

2. **Technological Infrastructure Gaps:**

In certain regions, including parts of Africa, inadequate technological infrastructure can impede the widespread adoption of digital payment systems. Businesses operating in areas with poor internet connectivity or limited access to advanced technologies may struggle to fully integrate **digital payment** solutions, potentially hindering their competitiveness in the market.

3. **Digital Divide:**

The digital payment divide, where some segments of the population have limited access to digital technologies, can negatively impact businesses targeting diverse customer demographics. Those without smartphones, internet access, or digital literacy may be excluded from the benefits of digital payments, affecting the reach and potential customer base for businesses.

4. **Transaction Costs:**

While digital payments can be cost-effective in some aspects, businesses may still encounter transaction fees, particularly with certain payment gateways or international transactions. Cumulative transaction costs over time can impact the overall profitability of businesses, especially for small and medium enterprises (SMEs) operating on thin profit margins.

5. **Dependence on Technology:**

The reliance on technology for digital payments exposes businesses to the risk of disruptions. Technical glitches, server downtimes, or system failures can temporarily halt transactions, leading to potential financial losses for businesses and inconvenience for customers.

6. **Privacy Concerns:**

Digital payment systems involve the collection and storage of vast amounts of personal and financial data. Businesses must navigate strict privacy regulations and ensure robust data protection measures to avoid legal ramifications and maintain customer trust. Any perceived mishandling of sensitive information can result in reputational damage.

7. **Resistance to Change:**

Not all customers or businesses readily embrace digital payment methods. Some individuals, especially in older demographics or traditional markets, may resist the shift from familiar cash-based transactions. This resistance can limit the market reach for businesses relying solely on digital payments.

While acknowledging the disadvantages associated with digital payment systems, **businesses can proactively address** these challenges. Implementing robust cybersecurity measures, investing in education and digital literacy

initiatives, and diversifying payment options to cater to various customer preferences can help mitigate the negative impact on businesses.

By navigating these challenges thoughtfully, businesses can harness the benefits of digital payments while safeguarding against potential drawbacks.

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