SURVEY RESEARCH

The impact of marketing mix and TAM on purchase intention through point of sale machine arbitrated by attitude and social engineering

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In Bangladesh, 57% respondents reported an increase of 20% or more in their creativity due to mobile devices and technology, while 26% indicated a rise of over 50%. When asked about the positive influence of mobile devices and technology on career and skills development, 69% of Bangladeshi respondents reported significant advancements. In terms of gender-based inputs, 73% of women and 67% of men agreed they had gained remarkable advancement in their careers and skills development through technology. The people of Bangladesh are quick to adopt new technology. The use of point of sale (POS) machines has increased rapidly, primarily due to convenience offered by the internet. Most supermarket owners now use POS machine, as they save labor cost and enhance customer safety. This paper focuses on a sample taken from three major cities of Bangladesh: Dhaka, Chattogram, Rajshahi. Research data analyses were conducted using variousmethods, including correlation R test, independent t-test, path coefficient, and Cronbach alfa test.

Keywords: customer behavior, technology, marketing strategy, POS, social engineering, attitude, TAM

Introduction

A point of sale (POS) system is a method of shopping controlled by a machine in stores or markets. The POS machine is designed to process debit or credit card transactions from banks or financial institutions, allowing customers to make payment for their purchases.

As of 2023, the population of Bangladesh stands at 172,954,319, reflecting A growth rate of 1.03% since 2022. The country achieved a GDP growth rate 7.2% in the fiscal year 2021–2022. Despite the global pandemic, Bangladesh remains one of the fastest-growing economies in the world. From January to November 2021, monthly transactions via POS machines ranged between 2.5 and 3 crore, with

transaction amounts between Tk 25,454 and Tk 19,778 crore. In contrast, monthly transactions in 2020 varied between 1.16 crore and 2.63 crore.

The use of POS machines in Bangladesh has significantly increased due to several factors, including the rise of cashless payments systems. Another prominent reason for this growth is the integration of mobile POS systems with other business functions such as inventory management and customer relationship management.

Several factors influence the growth of mobile POS payment systems in Bangladesh. A primary factor is their ease of use. Additionally, advances in cloud-based technology have made it easier for businesses to manage records and monitor transactions more proficiently.

Objective of the research

1. To evaluate customer intentions when transacting through POS machines in Bangladesh.

2. To inspect the associated risk factors of using POS machines in Bangladesh.

3. To identify the factors that affect customer attitudes toward POS machines in Bangladesh.

Research question

1. To what extent does social engineering negatively influence customers' attitude regarding POS machines in terms of their shopping intentions?

2. To what extent do POS machines meet the needs of customers and sellers?

3. To what extent does the 4Ps Marketing Mix positively impact customers' attitudes towatd POS systems?

4. To what extent does TAM have constructive impact on customers' attitude regarding POS machines?

Literature review & hypothesis development

Literature review

A POS system is a machine that allows a shopper to complete the purchase of goods and services, where sales taxes may also become applicable. Customers can complete their purchases electronically using a POS system that generates a receipt either automatically or in hard copy. Professional merchants prefer cloud-based POS systems, which enable businesses to accept payments and monitor sales. Although this seems straightforward, the setup may vary depending on whether a business operates online, has a physical storefront, or both. A POS system is used to refer to the cash register at a store (1).

There are four main types of POS systems that small businesses commonly use today: legacy-, tablet-, mobile-, and cloud-based POS systems. Each has its key features and associated costs, with various examples available.

In general, a POS system is designed to improve customer operations, leading to reduced waiting times, quicker item scanning, and faster payments. These operational improvements result in a better customer service experience, encouraging customers to return to future A POS system is a combination of software and hardware that facilitates business operations. It includes such as a computer, a physical terminal, a scanner, a printer, and other devices needed to operate the POS software. The software helps track and organize information about the store.

Understanding what a POS system is important, but it's even more crucial to recognize the benefits it can bring to your business. Implementing a POS system can significantly enhance your retail business operations and simplify daily tasks, increasing revenue.

Better inventory management

A POS system makes it easy to keep track of the inventory your store has. It allows retail businesses to manage their inventory in real-time, providing accurate insights into the number of products available at any given moment.

When the retail shop owner receives new inventory, they can simply scan their items and enter their quantities into the POC system, which saves time and reduces the likelihood of errors compared to manual tracking. In the end, there will be fewer errors in their inventory.

Each time a product is sold, the inventory count is automatically updated, enabling accurate stock management.

Simple invoicing

POS software allows the retail shop owner to record and categorize all invoices conveniently. There are several categories of invoices, including those for purchases, sales, repairs, rentals, consignments, and others, depending on the software.

Efficient invoice management is crucial for business accounting operations, as invoice serve as proof of sales and contain important details such as the transaction value, the number of goods sold, descriptions of the goods, and so forth.

Using a POC system simplifies the invoicing process, making it faster and more reliable than manual methods.

Quick payments

A POS expedites the payment process. Employees can quickly select the products a consumer wishes to purchase, and the system automatically calculates the total price. Invoices can be printed directly on the spot with a receipt printer or sent via email, and customers can pay using cash, credit, or debit cards, depending on the system's integration. This efficiency not only reduces waiting times for consumers but also allows employees to complete transactions more efficiently (2).

Better customer management

With a POS system, businesses can document customer information, including names, phone numbers, purchases, and e-mail addresses, in a centralized database. This data helps business owners gain a clearer understanding of their target market and identify different customer groups, such as new and loyal customers.

By leveraging this information, owners can send promotions to encourage repeast visits and build customer loyalty. The system can help them track each customer to offer targeted promotions. Having proper customer information management allows them to thoroughly

understand their target customers and make better business decisions.

Better customer orders

Sometimes retail customers may request items are out of stock. If a product is popular, the hsop owner may choose to place a new order. In Alice POS, this is referred to as a customer order. The shop owner can enter the order into the POS system and hold it for the customer until the product arrives.

Better purchasing and supplier order management

Purchasing equipment for retail shop business is essential. This is why a POS system is useful for effectively managing purchases from suppliers, allowing business owners to keep track of all their orders placed. Some POS software even features an open API that connects directly to suppliers.

When customers place their orders at the shop's POS, sellers can view all invoices for customer orders in their POS system. This gives shop owner control over purchasing and helps them keep track of items ordered from suppliers.

Better customer experience

Having a POS system can significantly enhance the customer experience in retail stores. A smooth customer experience fosters satisfaction, and as mentioned earlier, a fast POS allows sellers to complete transactions quickly. Consumers dislike long wait times, so having a rapid POS becomes a major advantage.

The retail shop owners can also use their POS to offer related products through cross-selling features, which allow sellers to offer items that are related to the item the consumer is buying. For example, if a customer buys a fishing rod, business employee can offer him lures with his product. This not only increases sales but enhances customer satisfaction (2).

Additionally, integrating the shop with an e-commerce platform allows customers to shop online and view products anytime, improving the overall shopping experience.

Better customer satisfaction & loyalty

A POS system makes it easier to exceed consumer expectations by providing quick, accurate, and efficient service. When these factors come together, customers are more likely to be satisfied and return to the store.

With better satisfaction, customers will likely be loyal to the seller's store. This can be a huge advantage for retail businesses because it is often easier to keep current customers than to acquire new ones. Thus, a loyal customer base reduces the risk of losing customers and revenue (3).

Better security

Data security is critical for any business. Shop owners needs to ensure their data is accessible only to authorized users. A POS system enhances data security against unauthorized access, often featuring double user authentication. This measure helps reduce the risk of malicious attacks, while administrators can swiftly manage user access.

Better employee management

Managing employee schedules and performance can be challenging without concrete data. With a POS system, it can be easier to manage business staff and optimize their schedules. A POS system, such as Alice POS, simplifies the process by providing visibility into sales by employee, hours worked, and peak sales time. This data enables owners to identify high performers and optimize staffing accordingly.

Better promotion management

Managing multiple promotions can be overwhelming, but a POS system allows shop owners to streamline this process. Sellers just have to select the items they want to promote in the software, indicating the type of discount and the duration. Once the sellers have set up their promotions, all sellers have to do is activate them.

With this function, the sellers can save time in the management of their promotions. It should also be easier to navigate to find seller's promotions. This allows sellers to keep track of their active promotions (3).

Better service

A POS system facilitates improved customer service by addressing several operational factors. These systems reduce waiting time, enable quicker item scanning, and expedite payment processes. With these operational improvements, customers will tend to get better service and come back to their store for their next purchase (4).

Better company organization

Implementing a POS system can help retail shops organize their operations more effectively. Improved organization higher productivity and better communication among team members.

POS systems offer many features for managing sales, inventory, customers, and suppliers all within a single platform, simplifying business operations.

Improved company image

By implementing a POS system in a retail store, customers may tend to have a better perception of this business. Consumers may have a positive attitude toward this store against a store that relies on traditional methods. With quicker waiting times, efficient transactions, and fast item scanning, a POS system helps build trust, reputation, and credibility. Customers could recommend this company to their relatives and can bring this company potential consumers in the future.

Regular updates

POS systems may require updates to work properly. Some POS providers offer support to users by providing updates, which may contain bug fixes, new features, and the like. Some vendors ensure that shop owners have up-to-date POS software. Updating a cloud-based POS is easier than a server and a POS installed on site. However, this depends on the seller's provider and the services they offer (4).

24/7 access to data

Some POS are cloud-based, others are installed on site with a local server. However, the POS installed on site is exposed to multiple risks such as data loss, difficulties in tracking inventory, risk of errors, and others. Alice POS offers a cloud-based POS where sellers can consult their data anywhere with better protection (2).

Simplification of operations

With a POS, retail business operations can be simplified. Indeed, a POS can reduce the number of operations sellers perform in their stores. By simplifying customers' operations, the shop owners will probably have more time to accomplish their projects. Also, their store can be much more productive and efficient.

Personalization of customer purchases

A POS can help sellers personalize their customers' shopping experience. With the information from each customer, sellers can direct them to the products they are interested in. This can lead to increased customer satisfaction because the seller offers a product that matches their preferences and tastes (2).

Increase in notoriety

By combining the numerous advantages of a POS system, such as the speed at checkout, reduced waiting time, and customized shopping, customers may tend to be more satisfied with the store. They will most likely have positive comments about the seller's establishment.

Satisfaction can also be spread through social networks, television, and other means. Awareness is an important aspect of the success of a business.

Fewer errors

A POS system can help shop owners reduce the number of errors in their business activities. The system can assist them with multiple functions to help them reduce mistakes automatically.

Increased efficiency

With a POS system, the efficiency of a retail store will tend to improve compared to a store without a POS system. It can help this store be faster and more productive.

Time-saving

By using a POS, sellers are likely to save more time in-store. The system can help them with several features that reduce the number of operations. The software can assist shoppers in these different management tasks and reduce their workload.

Cost reduction

A POS can help shoppers reduce their operating costs. According to a study by Intuit Market Research, a retailer with revenues of $300,000 can reduce costs by almost 10%, saving $30,000 a year by having a POS system.

Increased revenues

By reducing business operating costs, sellers will probably save money. By saving that money, sellers can have more income in their pockets. Also, a POS software can offer various functionalities that can help increase business sales.

Advanced reports

With a POS system, the software allows businesses to create reports automatically to have a global view of their business. With a POS system, reports are automatically created for several aspects of the business, including sales, contacts, prices, purchases, inventories, and so forth.

Multi-store functions

It can become difficult to manage several stores in a network, where each has specific needs according to their customers. Few POS companies offer the possibility to manage networks of stores or "multi-store" management. These features can significantly reduce the workload for companies that own several establishments. Alice POS is a software made for networks such as franchises, buying groups, and corporate networks (5).

Technical & technological support

Several POS systems offer technical and technological support. Some suppliers provide services for their customers to keep their POS systems running at peak performance. Some POS systems offer a support team for their customers.

Use of POS machine in Bangladeshi supermarkets

Hence in Bangladesh, POS transaction can be an alternative for cash transaction. Research showed that purchase through POS machine become popular in Bangladesh. But POS transaction is not very familiar among all classes of people on account of absence of promoting and unawareness of customers to operate the POS machine.

4Ps Marketing Mix

This research investigates the impact of the marketing mix on the intention to use a POS machine. This paper analyses the impact of 4Ps Marketing Mix, as well as Technology Acceptance Model (TAM; independent variable) as an independent variable, on transaction/shopping intention (dependent variable), arbitrated by attitude using the TAM and the Unified Technology Acceptance Use of Technology (UTAUT) theory (5).

The research also examines significant features of POS machines, social engineering, and demographic attributes.

According to Kotler, marketing mix is a arrangement of manageably planned marketing tools, consisting of four components: product, price, place, and promotion. The demands of target market response is produced by the combination of the components of sales strategy.

TAM defines how users come to accept and use technology. TAM determines that the acceptance of a new technology is predicted by the users' behavioral intention. The intention is determined by the perception of technology usefulness in performing the task and perceived ease of its use (6).

Social engineering

Social engineering refers to all techniques aimed at talking a target into revealing specific information or performing a specific action for illegitimate reasons. Hackers might use the phone, email, snail mail, or direct contact to achieve illegal access.

Device theft or loss: Another security risk of using a mobile POS system is the theft or loss of our device, such as a tablet, smartphone, or card reader. If our device falls into the wrong hands, it could expose your data, compromise your network, or enable fraudulent transactions. To prevent device theft or loss, we should always keep our device with us or in a safe place, and use a lock screen, password, or biometric feature to prevent unauthorized access. It is also advisable to enable remote wipe or lock capabilities, allowing one to erase or disable the device if it goes missing.

Malware infection: A third security risk of using a mobile POS system is the infection of our device by malware, such as viruses, worms, or ransomware. Malware can corrupt our data, disrupt our operations, or extort money from us. To prevent malware infection, we should avoid downloading or opening suspicious files, links, or apps on our device. We should also use a reliable antivirus software and update it regularly. We should also backup our Wi-Fi interference (5).

Wi-Fi interference: A fourth security risk of using a mobile POS system is the interference of our Wi-Fi connection by hackers, who can intercept, alter, or block our data transmissions. This could affect performance, accuracy, or availability of our mobile POS system. To prevent Wi-Fi interference, we should use a secure and private Wi-Fi network and avoid using public or unsecured Wi-Fi hot spots.

Customer distrust: A fifth security risk of using a mobile POS system is the distrust or dissatisfaction of our customers, who may be concerned about the safety and privacy of their personal and payment information. This could affect Bangladeshi customer loyalty, retention, and referrals.

Compliance violations: A sixth security risk of using a mobile POS system is the violation of compliance regulations or standards, such as PCI DSS, GDPR, or HIPAA. These are rules and guidelines that govern how we collect, store, process, and share data, especially sensitive or personal data. A compliance violation could result in fines, penalties, or lawsuits. To prevent compliance violations, we should familiarize our self with the relevant regulations or standards that apply to our industry, location, or customers. We should also implement policies and procedures that ensure compliance, and train our staff and partners accordingly. We should also audit and review our compliance status regularly, and make any necessary adjustments.

Test of hypothesis

The following hypothesis are formulated:

H1: 4Ps Marketing Mix has a favorable influence on attitude regarding POS system.

H2: TAM has a favorable influence on attitude as regards POS.

H3: A favorable attitude regarding POS machine enhances intention to shop through POS.

H4: Attitude regarding POS machine arbitrated the influence of 4Ps Marketing Mix on intention to transact through POS.

H5: Attitude regarding POS arbitrated the impact of TAM on intention to transact through POS.

H6: Attitude regarding POS machine arbitrated the impact of social engineering on intention to transact through POS.

H7: There is no significant relationship between perceived ease of use and attitude of customer's toward POS machine.

H8: There is no significant relationship between perceived usefulness and attitude of customers toward POS machine system.

H9: There is no remarkable association between customers' attitude as regards using the POS machine and their intention to use POS.

H10: There is no remarkable association between social engineering and the attitude of customers toward POS machine.

H11: There exist no significant relationship between gender and the attitude of customers toward POS machine.

H12: There exist no remarkable relationship between residence and intention to use POS machine.

H13: There exist no significant relationship between education level and attitude of customers' toward POS machine.

H14: There exist no significant relationship between profession and mindset to use POS machine.

H15: There exist no remarkable relationship between age and type of intention to use POS machine.

Data analysis

In this research the author used a sample of 120 respondents scattered across Bangladesh. The researcher selected samples through intentional random sampling using a 1–5 Likert scale questionnaire. Research data analysis is performed by using correlation R test, independent t-test, path coefficient, and Cronbach alfa test. A 1–5 Likert scale questionnaire is sent to the respondents. The respondents filled up the questionnaire about their experience with POS machine. The study was conducted from March 2023 to January 2024.

A quantitative descriptive research method is used in this paper.

The range of interpreting the Likert scale mean score is as follows: 1.0–2.4 (Negative attitude), 2.5–3.4 (Neutral attitude), and 3.5–5.0 (Positive attitude).

Here, the author got 3.5 mean for all the statements, which indicates a positive attitude with perceived ease of use of the POS machine. A low standard deviation means there was a lot of agreement about the answers. High SD means there was a wide range of answers, indicating disagreement. Here, the author got low standard deviation indicate less disagreement among the answers.

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Here, the author got 3.5 of mean for all the statements, which indicates a positive attitude perceived as the usefulness of the POS machine. A low standard deviation means there was a lot of agreement about the answers. High SD means there was a wide range of answers, indicating disagreement. Here, the author got low standard deviation, indicating less disagreement among the answers.

Mobile POS systems are convenient and flexible, but they also come with some security risks that you need to be aware of and address. In this article, we'll explore some of the common threats and challenges that mobile POS users face and how we can protect our data, devices, and customers from them.

One of the main security risks of using a mobile POS system is the possibility of a data breach, where hackers access and steal sensitive information from our device, network, or cloud storage.

This could include customer details, payment card numbers, inventory records, or business reports.

In this research, the composite reliability is less than 0.7 (satisfactory level), which indicates less reliability.

Hypothesis test

From the result of **Table 12**, the hypotheses are acknowledged contingent on the p-value < 0.05. The results of the test are explained below:

H1: Accepted. The outcome of the test result reveals that the 4Ps Marketing Mix has a constructive impact on the attitudes regarding POS machine, because the t-value = 7.36 and p-value = 0.011.

H2: Accepted. The outcome of the test result reveals that the TAM has a remarkable consequence on attitude regarding POS machine, it's t-value = 2.63 and the p-value = 0.000. The path coefficient value is positive 3.89. Consequently, as it may be finalized in case the TAM escalate by 1, it will magnify the attitude of customers regarding POS device by 3.89.

TABLE 1 | Perceived ease of use.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
Purchase through POS is less time consuming	42	45	11	13	09	3.82	5.26
I found it easy to purchase through POS	46	43	08	12	11	3.84	5.36
It was simple to purchase product using POS	38	45	12	13	12	3.7	5.09
The speed of POS system is sufficient	37	42	12	15	14	3.61	4.91
Purchase through POS are simple and convenient to use	38	44	10	16	12	3.67	5.06

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

TABLE 2 | Perceived usefulness.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
I found it useful to access the POS purchase.	36	39	13	16	16	3.53	4.75
The service provided by the POS helped me complete purchasing activities smoothly.	42	44	11	13	10	3.79	5.21
POS provided access to cashless purchasing.	46	45	07	14	08	3.89	5.47
The POS is useful in solving the problems of performing cash transaction.	43	41	14	12	10	3.79	5.11
The POS purchasing system is useful to perform transactions in a short time.	45	42	06	15	12	3.78	5.29

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

TABLE 3 | Attitude toward POS machine.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
It is a good idea to use POS purchasing system.	40	44	07	15	14	3.68	5.16
POS purchase system is very interesting to use.	43	41	11	14	11	3.76	5.11
I enjoyed purchasing with the POS system.	38	42	11	13	16	3.61	4.96
I think it will be a prudent decision to use POS system for daily transaction.	41	44	10	12	13	3.73	5.17
I want to do more POS transactions rather than cash transactions.	42	45	12	10	11	3.81	5.25

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

TABLE 4 | Intention to purchase through POS machine.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
I intend to use POS purchasing system in my daily transactions.	38	35	12	16	19	3.48	4.70
I intend to engage with POS system as frequently as possible.	34	39	15	14	18	3.48	4.69
I intend to use POS system again in future for daily shopping.	39	41	11	15	14	3.63	4.95
I would like the POS purchase to be part of the daily purchasing I do.	38	40	14	15	13	3.63	4.86
I would encourage my family and friends to use POS system to support daily shopping activities.	39	43	13	14	11	3.71	5.03

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

H3: Accepted. The outcome of the test result expresses that a favorable attitude regarding POS device enhances the intention to shopping through POS device, where t-value = 0.093, p-value = 0.011, and the path coefficient value is positive 4.11. Hence, as it may be finalized in case the attitude regarding POS device expands by 1, it will magnify the intention to shop through POS device by 4.11.

H4: Accepted. The outcome of the test result reveals that the attitude regarding POS device arbitrated the

TABLE 5 | Product of POS device.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
POS machine fulfill the needs of customers.	33	35	14	16	22	2.67	4.69
POS machine accomplished the desire of customers.	36	41	11	17	15	3.55	4.85
POS has many utilities such as speediness, transaction, paper voucher, statement, etc.	37	39	12	16	16	3.54	4.79
POS also influences other factors such as product placement and invoicing: selling, buying, renting, and repairing.	35	41	14	17	13	3.57	4.80
POS can alter the packaging, after-sales service, warranties, etc.	37	38	16	14	15	3.57	4.74

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

TABLE 6 | Price of POS device.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
The price of a POS purchase directly affects the sales volume of a business.	36	38	13	17	16	3.51	4.72
POS purchase price determined by the demand cost, pricing trends, etc.	39	41	12	16	12	3.66	4.95
POS price relies on product's assessed value rather than its actual value.	32	36	17	14	21	3.37	4.56
POS pricing affects the basic price, discounts, etc.	34	37	15	19	15	3.47	4.62
POS purchase price has discounting technique.	31	28	16	19	26	3.16	4.41

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

TABLE 7 | Place of POS device.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
Places of POS of BD are mainly in market.	46	44	09	14	7	3.9	5.41
The POS of BD is available for the right customer at a right place.	38	36	14	19	13	3.56	4.72
POS of BD includes decisions about the placement of wholesale and retail outlets.	35	39	13	15	18	3.48	4.73
The distribution channels of POS worked as outsourcing or company transport fleets.	37	41	14	16	12	3.63	4.87
POS of BD has shelf space in which small details of products and committed to the product by various departmental stores.	34	37	14	16	19	3.43	4.63

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

influence of 4Ps Marketing Mix on intention to shop through POS device, considering the t-value = 0.92, p-value = 0.035, and path coefficient positive 0.99987.

H5: Accepted. The outcome of the test result reveals that attitude regarding POS device arbitrated the impact of TAM on intention to shop through POS device, where t-value= 0.1128, p-value = 0.012, and the path coefficient value is positive *0.99986749*. Hence, as it may be finalized that if the TAM enlarge by 1, it will enhance the intention to transact through POS machine mediated by attitude regarding POS device by *0.99986749*.

H6: Rejected. The outcome of the test result expresses that attitude toward POS device arbitrated the impact

TABLE 8 | Promotion of POS device.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
POS of BD entail conclusion associated to advertising, sales force, direct marketing, public relations, budgets, etc.	37	39	16	17	11	3.62	4.79
The main goal of BD POS is to extend recognition regarding the products and services provided by a specific organization.	36	40	15	17	12	3.59	4.79
POS worked in convincing customers to pick a specific item over others in the market.	32	35	17	16	20	3.36	4.51
By POS, selling an item is performed via liaising a sponsored, non-personal message about the item.	38	35	16	19	12	3.57	4.69
POS of BD is placed in the right target market and is promoting to enter the new market.	37	42	11	16	14	3.6	4.92

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

TABLE 9 | Social engineering of POS.

Statement scale (5–1)	Strongly agree	Agreed	No response	Disagree	Strongly disagree	Mean	Standard deviation
One of the main security risks of using a mobile POS system is the possibility of a data breach,	23	19	12	32	34	2.71	4.66
Hackers access and steal sensitive information from POS device, network, or cloud storage.	18	21	11	37	33	2.62	4.79
A third security risk of using a mobile POS system is the infection of our device by malware, such as viruses, worms can corrupt our data, disrupt our operations, or extort money from us.	25	21	14	34	26	2.88	4.51
Security risk of using a mobile POS system is the interference of our Wi-Fi connection by hackers, who can intercept, alter, or block our data transmissions.	21	24	16	33	26	2.84	4.47
Security risk of using a mobile POS system is the violation of compliance regulations or standards, such as PCI DSS, GDPR, or HIPAA.	27	24	14	31	24	2.99	4.44

Source: Prepared, collected, and calculated by the author.
(Strongly agree = 5, Agree = 4, No response = 3, Disagree = 2, Strongly disagree = 1).
N = 120.

of social engineering on intention to shop through POS device, where the t-value = 1.0902, p-value = 0.835, and the path coefficient is negative *−0.144526072*.

As a consequence, as it may be finalized in case the attitude regarding POS device enhances by 1, it will decrease the intention to transact through POS device arbitrated by social engineering regarding the POS device by 0.144526072.

H7: There is no remarkable association between perceived ease of use and attitude of customers regarding the POS machine.

The author used simple linear regression analysis:
A positive t-calculated value suggests evidence against the null hypothesis. Here the calculated t-value is larger than the critical value, so the null hypothesis is rejected.

Outcomes of Table 13 express that there is a remarkable association exists between perceived ease of use and attitude of customers regarding POS machine. So the null hypothesis is rejected.

H8: There is no remarkable association between perceived usefulness and attitude of customers regarding POS machine system.

Here, the author used simple linear regression analysis.
A positive t-calculated value suggests evidence against the null hypothesis, but whether to reject it depends on the critical value and the context of the test. Here the calculated Table 14 t-value is larger than the critical value, so the null hypothesis is rejected.

TABLE 10 | Measurement of model evaluation result.

Sl. no	Latent variables	Item	Mean/ average	Standard deviation	Average (mean)	Cronbach	Composite reliability	Average variance extracted
1	Perceived ease of use	PEU1	3.82	5.26				
		PEU2	3.84	5.36				
		PEU3	3.7	5.09	3.73	0.75	0.26	0.548
		PEU4	3.61	4.91				
		PEU5	3.67	5.06				
2	Perceived usefulness	PU1	3.53	4.75				
		PU2	3.79	5.21				
		PU3	3.89	5.47	3.76	0.67	0.34	0.685
		PU4	3.79	5.11				
		PU5	3.78	5.29				
3	Attitude toward POS machine	ATT1	3.68	5.16				
		ATT2	3.76	5.11				
		ATT3	3.61	4.96	3.72	0.87	0.14	0.889
		ATT4	3.73	5.17				
		ATT5	3.81	5.25				
4	Intention to purchase through POS machine	PI1	3.48	4.70				
		PI2	3.48	4.69				
		PI3	3.63	4.95	3.59	0.77	0.23	0.574
		PI4	3.63	4.86				
		PI5	3.71	5.03				
5	Product	Pr 1	2.67	4.69				
		Pr 2	3.55	4.85				
		Pr 3	3.54	4.79	3.38	0.78	0.23	0.566
		Pr 4	3.57	4.80				
		Pr 5	3.57	4.74				
6	Price	Pri 1	3.51	4.72				
		Pri 2	3.66	4.95				
		Pri3	3.37	4.56	3.434	0.51	0.49	0.674
		Pri 4	3.47	5.62				
		Pri 5	3.16	4.41				
7	Place	PL 1	3.9	5.41				
		PL 2	3.56	4.72				
		PL 3	3.48	4.73	3.6	0.47	0.54	0.888
		PL 4	3.63	4.87				
		PL5	3.43	4.63				
8	Promotion	Pro 1	3.62	4.79				
		Pro 2	3.59	4.79				
		Pro 3	3.36	4.51	3.55	0.69	0.31	
		Pro4	3.57	4.69				
		Pro5	3.6	4.92				
9	Social engineering of POS	SE 1	2.71	4.66				
		SE 2	2.62	4.79				
		SE 3	2.88	4.51	2.81	0.58	0.43	0.786
		SE 4	2.84	4.47				
		SE 5	2.99	4.44				

Source: Prepared, collected, and calculated by the author.

TABLE 11 | Explanatory computation.

	4P Marketing Mix				Technology acceptance model		Attitude regarding POS system	Intention to transact through POS	Social engineering of POS system
	Product	Price	Place	Promotion	Perceived Usefulness	Perceived ease of use			
Mean	3.38	3.434	3.6	3.548	3.756	3.728	3.718	3.586	2.808
Std deviation	4.774	4.652	4.872	4.74	5.166	5.136	5.13	4.846	4.574
Skewness	0.26	0.28	0.37	0.35	0.44	0.43	0.42	0.34	-0.13
Kurtosis	2982.4	3285.09	2715.19	3035.94	2136.40	2188.87	2199.88	2775.27	3591.09

Source: Developed by author (2023).

TABLE 12 | Consequences of hypothesis testing (straight & unintended outcomes).

	Hypothesis	Path coefficient	t-value	p-value	Outcome
H1	4Ps Marketing Mix have a favorable impact on the attitude of customers approaching POS system.	6.32	7.36	0.011	Supported
H2	TAM has a constructive impact on attitude of customers regarding POS machine.	3.89	2.63	0.000	Supported
H3	Customer's favorable attitude regarding POS machine enhance the intention to shopping by POS machine.	4.11	0.093	0.011	Supported
H4	Customer's attitude regarding POS device. arbitrated the influence of 4Ps Marketing Mix on intention to shopping through POS device.	0.99987	0.092	0.035	Supported
H5	Customer's attitude regarding POS device arbitrated the impact of TAM on the intention to shopping through POS.	0.99986749	0.1128	0.012	Supported
H6	Customer's attitude regarding POS machine arbitrated the influence of social engineering on intention to shopping by POS machine.	−0.144526072	1.0902	0.835	Not supported

Source: Developed by author.

TABLE 13 | Relation perceived ease of use Vs attitude.

Model	Unstandardized coefficient		Standardized coefficient	t	Significance
	B	Std. error	Beta		
Constant	6.51	0.59		2.7130	0.000
Perceived ease of use	6.4965	0.60	0.99824	2.7375	0.000

Source: Prepared, collected and calculated by author.

TABLE 14 | Correlation between perceived ease of use and attitude.

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.998239957	0.996483013	0.996328759	44.19

Source: Prepared, collected, and calculated by the author.
[a] Predictors: (constant), perceived ease of use.
[b] Dependent variable: attitude.

Outcomes of **Table 15** disclose that there is a remarkable association exists between perceived usefulness and attitude of customers regarding the use of POS machine. So the null hypothesis is rejected.

H9: There is no remarkable association between customers' attitude as regard using the POS system and their intention to use it.

So, chi-square cal < chi-square table.

So, in the null hypothesis, there exists no significant relationship between residence and intention to use POS machine, and is not rejected, as it is true or accepted.

Here the author used simple linear regression analysis.

Here the calculated **Table 15** t-value is larger than the critical value, so the null hypothesis is rejected.

TABLE 15 | Correlation between attitude & usefulness.

Model	Unstandardized coefficient		Standardized coefficient	t	Significance
	B	Std. error	Beta		
Constant	7.98	3.57		2.6379	0.000
Perceived usefulness	6.40	2.86	0.9953	2.7375	0.000

Source: Prepared, collected, and calculated by the author.

TABLE 16 | Correlation between perceived usefulness and attitude.

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.9953	0.990715519	0.990308304	44.18758166

Source: Prepared, collected, and calculated by the author.
[a] Predictors: (constant), perceived usefulness.
[b] Dependent variable: attitude.

TABLE 17 | Correlation between attitude & intention to use.

Model	Unstandardized coefficient		Standardized coefficient	t	Significance
	B	Std. error	Beta		
Constant	17.56	2.495		2.7375	0.000
Intention to use	18.14	2.42	0.999959428	3.1964	0.000

Source: Prepared, collected, and calculated by the author.

TABLE 18 | Correlation between intention and attitude.

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.999959428	0.999918858	0.999915299	2.495

Source: Prepared, collected, and calculated by the author.
[a] Predictors: (constant), intention to use.
[b] Dependent variable: attitude.

TABLE 19 | Correlation between attitude & social engineering.

Model	Unstandardized coefficient		Standardized coefficient	t	Significance
	B	Std. error	Beta		
Constant	17.56	2.495		2.7375	0.000
Social engineering	14.21	15.10	−0.144526072	5.2497	0.000

Source: Prepared, collected, and calculated by the author.

The outcomes disclosed in **Table 18** express that there is a remarkable association exists between attitude and the intention to use POS system. So the null hypothesis is rejected.

H10: There is no remarkable association exists between social engineering and attitude of customers regarding POS machine.

Here the author used simple linear regression analysis.

Here the calculated **Table 16** t-value is larger than the critical value, so the null hypothesis is rejected

The outcomes described in **Table 19** reveal that there exists a remarkable negative association between social engineering and the attitude of customer regarding POS machine.

Goodness-of-fit test

H11: There is no remarkable association exists between gender and attitude of customers toward POS machine.

Here the author used chi-square test.

The calculated chi-square value is = 0.668871994.

TABLE 20 | Correlation between social engineering and attitude.

Model	R	R square	Adjusted R square	Std. error of the estimate
1	−0.144526072	0.020887785	0.17417951	2.016877936

Source: Prepared, collected, and calculated by the author.
[a]Predictors: (constant), social engineering.
[b]Dependent variable: attitude.

TABLE 21 | Demographic attributes of the respondents.

Variables	Number of students
Gender	
1. Male	67
2. Female	53
Residence	
1. Rural	48
2. Urban	72
Profession	
1. Service holder	38
2. Businessman	42
3. Student	21
4. Housewife	19
Education level	
1. Undergraduate	53
2. Graduate	39
3. Postgraduate	28
Age	
1. Young (21–35)	43
2. Middle age (36–40)	51
3. Old age (41–55)	26

Source: Prepared, collected, and calculated by the author.

TABLE 22 | Gender vs attitude.

Gender	Customer attitude toward POS machine		Total
	Positive	Negative	
Male	42	25	67
Female	37	16	53
Total	79	41	120

Source: Prepared, collected, and calculated by the author.

At 0.05 level of significance and 1 degrees of freedom the table value of chi-square value is = 3.841.

So, chi-square cal < chi-square table.

So, in the null hypothesis, there exists no remarkable association between gender and attitude of customers toward POS machine, and is not rejected, as it is true or accepted.

H12: There exists no significant relationship between residence and intention to use POS machine:

Here the author used chi-square test.

TABLE 23 | Location vs intention.

Residence	Intention toward POS machine			Total
	General intention	Bad intention	Prospective intention	
Rural	17	15	16	48
Urban	28	18	26	72
Total	45	33	42	120

Source: Prepared, collected, and calculated by the author.

TABLE 24 | Education level vs attitude.

Education level	Attitude of customers toward POS machine			Total
	Positive	Neutral	Negative	
Undergraduate	26	15	12	53
Graduate	17	10	12	39
Postgraduate	14	05	9	28
Total	57	30	33	120

Source: Prepared, collected, and calculated by the author.

The calculated chi-square value is = 0.565175563.

At 0.05 level of significance and 2 degrees of freedom the table value of chi-square value is = 5.991.

H13: There exists no significant relationship between education level and attitude of customers toward POS machine.

Here, the author used chi-square test.

The calculated chi-square value is = 1.81860467.

At 0.05 level of significance and 4 degrees of freedom, the table value of chi-square value is = 9.488.

So, chi-square cal < chi-square table.

So, in the null hypothesis, there exists no significant relationship between education level and attitude of customers toward POS machine, and is not rejected as it is true or accepted.

H14: There exists no significant relationship between profession and mindset to use POS machine.

Here, the author used chi-square test.

The calculated chi-square value is = 6.026880448.

At 0.05 level of significance and 12 degrees of freedom, the table value of chi-square value is = 21.026.

TABLE 25 | Profession vs mindset.

Profession	Mindset of customers toward POS machine					Total
	Growth mindset	Challenge mindset	Confident mindset	Fear mindset	Adaptive mindset	
Service	14	05	10	03	6	38
Business	16	06	13	04	3	42
Student	07	05	03	03	3	21
Housewife	06	04	03	03	3	19
Total	43	20	29	13	15	120

Source: Prepared, collected, and calculated by the author.

TABLE 26 | Age vs intention.

Age group	Intention of customers toward POS machine			Total
	Continuous intention	Purposive intention	Perlocutionary intention	
Young	19	13	11	43
Middle	24	17	10	51
Old	07	11	8	26
Total	50	41	29	120

Source: Prepared, collected, and calculated by the author.

So, chi-square cal < chi-square table.

So, in the null hypothesis, there exists no significant relationship between profession and mindset to use POS machine, and is not rejected as it is true.

H15: There exists no remarkable relationship between age and type of intention to use POS machine.

Here, the author used the chi-square test.

The calculated chi-square value is = 3.431843809.

At 0.05 level of significance and 4 degrees of freedom, the table value of chi-square value is = 9.488.

So, chi-square cal < chi-square table.

So, in the null hypothesis, there exists no remarkable relationship between age and type of intention to use the POS device,and is not rejected as it is true.

Validity test

Content validity

For content validity test purposes the author gives a questionnaire to customers,

We know, content validity rate = (Ne – N/2)/(N/2), where Ne = number of experts voting essential.

N = total number of recruited experts.

Now, content validity rate = 0.05.

The content validity formula yields values that range from +1 to −1; in this research, the positive values of CVR indicate that at least half the respondents rated the POS machine as essential for purchasing.

TABLE 27 | Content validity test.

Perceptions	Answers
POS machine is not necessary for shopping & purchasing.	21
POS machine is useful but not essential for shopping & purchasing.	36
POS machine is essential for shopping & purchasing.	63
Total	120

Source: Prepared, collected, and calculated by the author.

TABLE 28 | Smartness vs transaction rate.

Customer's smartness	Number	Transaction rate	Number
Over smartness	12	Daily	07
Average smartness	33	Weekly	14
No smartness	16	Quarterly	23
Proactive smartness	32	Monthly	32
Tech smartness	27	Yearly	44
Total	120	Total	120

Source: Prepared, collected, and calculated by the author.

Convergent validity

To measure convergent validity, the author used two related scales such as transaction rate through POS machine and customers' smartness toward handling the POS machine.

TABLE 29 | Intelligence vs willingness.

Customer's intelligence	Number	Customers' willingness	Number
Average intelligence	36	Active willingness	17
Upper extreme intelligence	12	Moderate willingness	29
No intelligence	27	No willingness	27
Low intelligence	23	Obligating willingness	24
Spatial intelligence	22	Cheerful willingness	23
Total	120	Total	120

Source: Prepared, collected, and calculated by the author.

Here, the author used the Pearson r test, calculated r = 0.026977893 = 0.442437456 = 0.44.

Convergent validity is generally considered adequate if >75% of hypotheses are correct, or if a correlation with an instrument measuring the same construct is >0.50. So, here, the hypothesis is less adequate.

Discriminant validity

For testing discriminant validity, the author asks respondents to fill in a second questionnaire measuring customers' intelligence level in order to test the discriminant validity of his questionnaire. Here, the author tries to construct a relationship between the customers' intelligence level and the customers' willingness to use the POS machine.

Here, the author used the Pearson r test, calculated r = −0.835042397 = −0.84.

The author's r value is negative. It also seems to match his/her expectation about the relationship of the constructs, which is good.

Discussion & analysis

The research found that the maximum of the customers admit that the perceived ease of the POS device is very high (Table 1).

The research also showed that most of the customers admit that the perceived usefulness of POS machine is very effective (Table 2).

The research also found that most of the customers showed a positive attitude toward POS machines in markets (Table 3).

In this research, the author found that the maximum of the customers has positive intention toward POS device (Table 4).

In this research the author identified the product of POS device (Table 5). The main product of POS device is capacity to fulfill the needs of customers, speediness, transaction, paper voucher, statement, sales service, warranties, and the like.

The price of the POS device is also clearly explained in Table 6. This research disclosed that the price of a POS purchase directly affects the sales volume of a business, demand cost, pricing trends, discounting techniques, and the like.

In this research, the author clearly identified the appropriate place of the POS device (Table 7). The research found that the main places where POS devices are used in Bangladesh are supermarkets, retail outlets, transport fleet, banks, and departmental stores.

The promotional function of POS device is clearly described in Table 8. The research found that the main promotional factors of POS device are sales force, direct marketing, public relations, budgets, and the like.

The risk of POS device such as social engineering is mentioned in Table 9. The research explained that the main security risks of using a POS system are data breach, block data transmissions, disrupt operations, or extort money from us.

The measurement of various model evaluations is explained in Table 10, which shows that the composite reliability is less than 0.7 (satisfactory level), which is generally considered low and indicates poor internal consistency. This is because the items are not measuring the same construct.

4Ps Marketing Mix and attitude regarding POS device

As mentioned in the article, it is realized that there is a favorable impact of the 4Ps Marketing Mix on attitude regarding the POS device. It is indicated that the execution of the 4Ps Marketing Mix influences the customer's attitude regarding the POS device. This research pointed to the purchaser/shopper of BD supermarket, and the outcome of this research found that there exists a favorable relationship between commodity utility and goods/stock variety on purchaser gratification (Table 11)

4Ps Marketing Mix possesses a constructive impact on attitude regarding the POS device and varieties of goods payment performed in the retail store and market through the POS device in Bangladesh.

TAM and attitude of purchasers/customers regarding POS device

The research proves that TAM has a notable enthusiastic impact on attitude regarding POS device in Bangladesh (Table 11). This indicates that at any time TAM level is high, the level of attitude will also high. The author proved that perceived ease of use conclusively influences the attitude.

The author explains that perceived usefulness is a significant factor of acceptance in technology in terms of POS devices.

The research reveals that attitudes of purchasers regarding POS devices are greatly influenced by both of the TAM components (perceived ease of use and perceived usefulness) (Table 12).

POS devices is a technology apparatus, as a consequence there is no uncertainty that components of TAM have a notable impact on purchasers' attitude regarding POS devices.

Inventors of POS devices should continue to improve the user-friendliness of mobile platform patterns and provide consumers in Bangladesh with clear and straightforward instructions.

Attitude regarding POS machine and intention to transact through POS device

Based on the analysis (Tables 17 and 18), it is established that there is a strong correlation between attitude and intention to transact through the POS device. This indicates that at any time the purchaser's attitude regarding the POS device is at a peak level, then the level of intention to shop through POS device is also at a peak level.

The purchasers need to have a beneficial sensibility toward POS machine in order to identify the intention to shop through POS machine in Bangladeshi supermarket.

The arbitrating impact of attitude regarding POS machine between 4Ps Marketing Mix and intention to transact through POS device

The data analysis of the research discovered that attitude regarding POS device arbitrated the impact of 4Ps Marketing Mix on intention to shop through the POS device (Table 11). This indicates that 4Ps Marketing Mix has a positive impact on intention to shop by POS device, arbitrated by attitude. This happens as it may be attributable to classifying the impact of 4Ps Marketing Mix on attitude regarding the POS device. The research found that this happening might be caused by every components of 4Ps Marketing Mix has a constructive outcome on attitude regarding POS device and different sorts of items dispose of in this paper is food, cloths, electronics goods, toys, and home appliance where the purchaser's appeal/fascination in the attitude gadget for suitable commodities.

The arbitrating impact of attitude regarding POS device between TAM and intention to transact through POS device

In this research, attitude regarding POS device is realized to arbitrate the impact of TAM on intention to shop through POS device in Bangladesh (Tables 17 and 18). This research proves that attitude is involved in a significant part in the acceptance of technology. This article expresses that the elevated influence of TAM will expand the outcome on the intention to transact arbitrated by attitudes through the POS device.

Attitude regarding POS machine arbitrated the impact of social engineering on intention to transact through POS

The data analysis of the research established that attitude regarding POS device do not positively arbitrate the impact of social engineering on intention to transact through POS devices (Tables 19 and 20). This indicates that social engineering has a negative impact on the intention to shop through a POS device arbitrated by attitude (Table 21).

Decision about goodness-of-fit test & validity test result

In this research, the author also performs some goodness-of-fit test and validity test. The author finds that gender has no significant relationship with attitude toward POS machine in Bangladesh (Table 22), which indicates that both males and females have same attitude toward POS machine in Bangladesh. The research also shows that residence has no significant relationship with intention toward POS machine in Bangladesh (Table 23). People in both rural and urban Bangladesh have a general and prospective intention rather than a bad intention toward POS machine in Bangladesh. The author also shows that education level has no significant impact toward the POS machine in Bangladesh (Table 24). The research also explains that profession has no significant relationship with mindset toward POS machine in Bangladesh (Table 25). The research also proves that age has no significant impact on intention toward POS machine in Bangladesh (Table 26).

For validity test purposes the author selected content validity, convergent validity, and discriminant validity tests. The content validity test results show that half of the respondents rated the POS machine as essential for

purchasing and shopping (Table 27). The convergent validity test result shows that the transaction rate through POS machine and customer's smartness toward handling the POS machine are positively correlated. The results show moderate correlation between these two factors (Table 28). The discriminant validity test result shows that the customer's intelligence level and willingness to use the POS machine are negatively correlated to each other, which indicates that the customers' intelligence level has not influenced their willingness to use the POS machine in Bangladesh (Table 29).

Conclusions, limitations, implications, & recommendation

The following conclusions can be drawn from this research:

1. There is a constructive beneficial impact of the 4Ps Marketing Mix on attitude regarding POS device.

2. There is a notable favorable impact of the TAM on attitude regarding the POS device in Bangladesh.

3. Attitude regarding the POS device has a constructive impact on intention to shop through the POS device.

4. Attitude regarding the POS device arbitrates the consequence of the 4Ps Marketing Mix on intention to shop through the POS device.

5. Attitude regarding the POS device arbitrates the consequence of TAM on intention to transact through the POS device in the BD supermarket.

6. Attitude regarding POS device arbitrates the impact of social engineering on intention to shop through POS in Bangladesh.

In all-inclusive 4Ps Marketing Mix, a positive impact on transaction/shopping intention through the POS device arbitrated by the customer's attitude in the BD supermarket.

Perceived usefulness and ease of use are two factors of TAM have a remarkable influence on shopping and transaction intentions through the POS device, conciliate with attitude regarding the POS device. As a consequence, purchasers going to have intention to transact through POS device and intention to suggest to intimate and family to buy through POS machine when purchasers have confidence in manipulating the POS machine is convenient for him or her, and operating the POS machine is easy, safe, and secure because it involves cashless transaction and no risk to bearing paper cash.

The research also shows that various demographic factors such as gender, locality, profession, and education levels have no significant impact on attitude and intention toward POS devices in Bangladesh.

Limitations

1. Time limitation to circulate the questionnaires to all participants in various locations of the research.

2. To accumulate the consequence from all interviewees and chronology of data analysis, as a consequence, the researcher only gathers questionnaires from respondents randomly.

Implications & recommendation

This research will play a significant part in carrying out further research about extending the intention to shop and transact through mobile POS machines and vending machines in Bangladesh, especially in Dhaka, Chattogram, and Rajshahi. Again, the research will be used as a guidebook for the retailer who wants to increase revenue through the POS machine.

Purchasing through a POS machine is beneficial for the customers because it is a faster process of payment, cashless transaction, and easy to operate.

Any other countries, especially developing countries such as India, Bhutan, Pakistan, Africa, and Indonesia, would use the outcome of the this research article as a source of information. The TAM is acting as a crucial variable while operating mobile POS machines and vending machines.

To generate a higher standard research it is suggested to perform an equivalent experiment with a substantial quota of overall specimens.

Upcoming research workers should investigate about other types of POS devices. A promising researcher can construct vending or POS device–related research based on other developing countries. Future researchers can use different types of variables or other factors of the 4Ps Marketing Mix such as commodity mixture, promoting price, marketing price, and new modes of payments to examine their impact on mindset regarding POS device or intention to shop through POS device.

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