A study of electronic payment system

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Abstract. The essential objective of this study examines the rising consciousness pertaining to varying notions that are associated with regards to electronic payment systems, related to the benefits, challenges and security concerns. By utilizing software as a service platform, the vendors of the payment processing system work on this template which will channel the payment traffic from the single payment towards the multiple payment schemes for the clienteles. Consumers frequently disclose data that is confidential that belongs to them for example, names, particulars about their cards and numerous other information during their online transactions to perform a payment. A method that assists in the transference of money electronically defines the online payment system. This payment manner generally entails the array of a network of computers, the internet and various other repositories for digitized value methods. By acquiring whatsoever means of payment via the internet entails that the user of the system has received payment made online, and has a mutual knowledge of certain private data with the vendor or the entity that provides the service. This study initiates a comprehensive holistic review encompassing the whole components of payments made online or electronically, that focuses on an investigation over the various researches done pertaining to payment methods that are executed electronically. The current most up-to-date researches were examined to garner an insightful comprehension of payment methods that are electronically employed.

1. Introduction
The swapping of products and services which is bilateral was initiated prior to recorded chronicles; however as the interchanges of products among individuals became more complicated, value of products and services are equated in a conceptual manner, which was initiated through the barter system, and went across a continuum from authorized money, to payment orders, to the various cards inclusive of debit or credit cards, and the prevalent method of payment done electronically or through an electronic payment gateway [1]. The conventional technique of payment encounters particulars problems such as falsified signatures, counterfeit money, and cheques that could not be honoured. Nevertheless, an e-payment system that is meticulously organized may resolve these security concerns and offer an added benefit such as flexibility in utilization [2, 3].

This mode of payment has been well received and recommended as the result of their capabilities of expediting interchanges of currency, security assurance, and swiftness of accessibility to means of securing wealth [4–6]. The reduced volume of transactions in terms of financial values had inversely increased the cost of supporting the system by the scale of the economy, thus payment methods by means of cash had become costlier. Additionally, the operational value of running a cash payment mode...
of mechanisms via the internet is much cheaper in comparison to the most minimum cash transaction when done manually [7]. The general public has become accustomed to online mode.

On the other hand, certain problems had cropped up during the on-going transactions that involve cash that was channelled through the internet of which the conventional techniques of payment are not able to resolve. Due to this, specialists in the field of finance have initiated an investigation of variant techniques of electronic payment that focus on the concerns pertaining to payment methods in the digital and electronic forms [3]. Every individual proceeding goes through procedures via the payment passageways that acts as the point of entry into various financial entities. Precise information with regards to the payment that was undertaken between distinctive entities and establishments dealing with financial matters is verified via the respective gateways of payment [8]. This current study explicates the heightened consciousness pertaining to electronic payment systems (EPS). The arrangement of this study is the following: the numerous denotations and facets pertaining to EPS are covered in Section 2, meanwhile, the EPS benefits and prevalence are discussed in Section 3 and 4. In addition, the challenges pertaining to payment mechanisms are covered in Section 5, and imminent EPS security concerns are discussed in Section 6. Ensuring that, Section 7 covers the review of related works pertaining to EPS, and finally, Section 8 forms the conclusion of this study.

2. Electronic payment system

Prevalently, the traditional payment methods that utilize cash are progressively being demoted [9] and this role has been taken over by the payment method that utilizes digital means, as the development of goods transactions increases amongst the various trades via the internet. Several methods of electronic payments for transactions to pay for services via the internet are seen in [10, 11]. Among the forms of Inter-Organizational Information System (IOS) is an Electronic Payment System that is devoted to enabling proceedings that are linked with money among the clients and varying establishments to be carried out. A necessity could arise for complicated communications exchanges amongst technologies, the environ, and associates in ensuring the EPS efficiency.

The particular EPS/IOS aspects enable it to be distinctive from the conventional information methods that are formed on the basis of internal mechanisms in terms of technology and organization, [12–14]. It emphasizes the requirement for a collaboration between the various methodologies towards enabling an effective technique [15].

Throughout the years, the world has witnessed a worldwide rise in cashless proceedings yearly via mobile transactions and electronic payment systems. However, the year 2012 has seen a 0.9% drop in the annual growth rate from 8.9% in the previous year 2011 it has dropped to 7.7% in the year 2012 [15]. Nevertheless, the year 2014 saw a rise in payment transacted electronically worldwide to a value of 8.9% worldwide, achieving 387.3 billion transactions, which signifies the utmost marked an important rise from the inaugural publication of the World Payments Report. The increment was essentially caused by the accelerated progress in the freshly emergent markets that are related to finance. A predicted projection of 10.1% progress globally was expected in the year 2015 and it was anticipated then that worldwide paperless exchange volume will increase to 426,300,000,000 [17].

Electronic payment systems (EPS) are considered as useful and user-friendly and is also secure by unique users and assorted users, who perceived the means as an entry point towards progress in technology in terms of the economy worldwide [18]. EPSs have evolved into significant promoters of electronic commerce which are relied on by businesses done electronically. They have diminished the number of fraudulent attempts and activities within the payment system worldwide [11, 19].

2.1. History of Electronic Payment Systems (EPS).

Electronic mode of payment originates back to the year 1918 on the occasion of Federal Reserve Bank of the United States of America initiated channeling of money through the telegraphic method. Nonetheless, prior to 1972, the adoption of these mechanisms was not widespread in the USA pending the consolidation of the Automated Clearing House (ACH) in that year. Henceforth, the widespread use
of the system in the US escalated which enabled its commercial banks and central treasury to present it as an optional means of payment in addition to the traditional payments using cheques [11].

Credit card emergence can be traced back to the year 1914 with the issuance of a card to clients by shopping centers, oil companies, commercial accommodation places and the Western Union as a mode of paying for products and services rendered. Four decades after that, the world witnessed the extensive utilization of credit cards which has turned into a recognized model of an alternative form of payment.

Prior to the 1990s, credit cards were an alternative form of payment based on paper. However, after that, they evolved into systems that are executed electronically. The utilization of credit card has escalated tremendously in terms of its pace in the industry and has been the precursor of the debit card system. Each of the two is prevalently utilized as a mode to pay for services and products [10, 20].

2.2. Definitions of EPS
The intricate Electronic Payment Systems are defined by the multitudinous modes of payment that is executed electronically. It is multi-functional attributes have been inaccurately described in literature at times. Pertaining to capacities. Electronic payment can function as electronic banking, electronic cash, banking via internet, online banking and many others. Taking all of these into consideration, there are current researches in providing an extensive definer of electronic payment [5]. The description of Electronic Payment Systems can be found in [9] and is explained as responsible undertakings in the financial scope which enable the client and the trader to converge and utilize equal platform through methods electronically. Moreover, [15] electronic mode of payment is perceived to be interconnecting relationships among the general public and organizations driven by establishments that offers financial dealings.

As stated by [21], a payment that is done electronically entails whatsoever shape of a system that enables the interchange of money via the internet. Likewise, [22] expounded that a system that enables payment to be made electronically related to services offered on the web.

A supplementary description regarding e-payment is that it involves whatsoever kind of payments or interchanges transacted through electrical means [23]. Additionally, according to researcher [24] perceived e-payment as a bilateral system that allows the interchange of money via online transaction between two individuals. Furthermore, [25] presented e-payment as the interchanges involving money executed electronically. An additional description pertaining e-payment entails whatsoever kind of payment involving an interchange of data done electronically for example credit and debit card data as an alternative mode of payment such as cash money or cheque [26].

According to [27], electronic payment is request made for fiscal interchange by a client to another individual as payment. As per [28], e-payment entails the acts of paying payments via transmissions made electronically, through a clearinghouse done automatically, or through card mechanisms that are commercially implemented. It was further described by [29] as whatsoever kind of fiscal interchange through whatsoever means electronically. In addition, according to [30] defines e-payment as credit or debit bank accounts receiving transactions executed via signals transmitted electronically.

Furthermore, according to [31], it is whatsoever kind of payment that does not involve physical money excluding paper cheques. Further to this, [32] defines e-payment as whatsoever interchanges done electronically that is perceived as a kind of payment for products and services executed through e-payment means, which provides consumers with long distant accessibility with their accounts through systems did electronically. Typically, EPS is described as whatsoever kind transference between consumers and providers through online channels assisted by a financial instrument done digitally [33].

2.3. Types of E-payment systems
There are numerous kinds of EPS created in the financial mechanisms worldwide, for example, cheques in electronic form, fund transfers are done electronically, electronic cash, debit and credit cards [11,34]. There are two kinds of online payments; i) ones that utilise Internet Banking Payment Gateway (IBPG), and ii) the ones that utilise external payment mode of the platform. Firstly, the payment mode is straight and precise due to the fact that the consumer is informed of payment made online through an e-business
channel connected to a banking platform. The second form of online payment entails the transmission of money from the consumer’s account to the provider’s account via a payment system that is based outside. In the first instance, the internet is connected to the IBPG which is linked to a banking process system; its design is explicitly for administering and authorising the payments. The bank is connected to the buyer with the seller through this process. The online payment that utilises the IBPG type of online payment technique which is dependent upon gateways to transmit payments[35].

Four EPSs collectives that were categorised by [36] are; electronic cash, a tiny amount of payments, online credit card payment, and cheques in electronic forms. It was emphasised in greater detail by the study that individual system possesses particular advantages and disadvantages. The researchers expounded that each of the collectives can be evaluated from the facets of technology economy, social and legalities. In actuality, there are only two particular types of payment systems [3,37]:

2.3.1. Electronic-based transaction. There are four methods of payment systems that utilise the internet as a basis:

a) Cyber cash.
This online type of service involves the credit card data of the customer to undergo through a process, be claimed for costs incurred, and put into the dealer’s account by electronic techniques. Cyber cash operates as a gateway for payment to be channelled. It is dependent on digital signatures to guarantee the procedures for paying in terms of security concerns [37]. Even though e-money covers a more comprehensive area that entails the whole fund transactions that utilise the internet, cyber cash, on the other hand, focuses on the entire money interchange systems undertaken via the Internet. There is a marked difference between e-money and cyber cash although it might be hard to identify because money in the form of cash can be acquired from e-money and will merge into it [38].

b) Secure electronic transaction (SET).
This type of e-money transmitting system is an ensured secure payment system that could be undertaken online for money exchanges transacted via the internet. Developed by Master Card and VISA, it is a technology platform that is open for the utilisation of businesses [39]. SET guarantees the secure transmission of money that is based on a card via the Internet. It utilises certificates that are in digital form to validate the authorization status of a provider or a cardholder [37].

c) First virtual holdings.
It is among the earliest form of platforms that facilitate payment transacted via the internet, which is dependent on the external validation techniques to channel payments made online. This mode of payment system is independent of encryption, utilised solely for information selling via the Internet, as opposed to the interchange of products and services. It only compiles data pertaining to payments made by the user by the use of a telephone system that is automated, and it is independent of cryptographic methods and digital signatures. Essentially, it is specifically dependent on the meticulous tracking of sales and purchases transacted to decrease fraudulent occurrences [40]. Being an open system, its core feature entails certain information is restricted to be online as they are sensitive data pertaining to the customer’s financial data. Thus it utilises the first virtual PIN issued by the initial virtual entity for with the objective of exchanges transactions minus the utilisation of credit card numbers. As the respective PIN numbers act as identification, it enables their transmission via the Internet with no charges incurred on the client’s account as a receipt of a validation email from the customer is needed to authorize whatsoever payment form [37].

Since the year 2010, the world has witnessed an enormous development in the utilisation of cards as a method of payment. This is attested by the drop in transactions that utilise cheques in the last thirteen years. Amongst the systems that are based on the utilisation of cards, debit cards form the greatest number of users of approximately 45.7% of the cashless money transactions
worldwide, demonstrating debit cards as the most aggressive accounting to 12.8% of the payment choice in the year 2014. The implies the quality of security and ease-of-use of the system that uses cards, which is superior over other modes of payment choice [17]. Payments can be transacted electronically through platforms that use mobile appliances; numerous smartphones that are Android-based offers payment to be made by using online platform.

Electronic Payment Systems can also be transacted through the use of Desktop computers. Other mobile phones can be used by customers, which runs on numerous platforms to implement financial proceedings. Customers are able to convey PIN numbers or use WAP to execute payment transactions electronically via the mobile internet. In the execution of an electronic payment made by a customer, proceedings using the debit or credit card, authentication can be done by a vendor through the attachment of a gadget linked to the mobile phones. In the United States of America, a composite of Power Swipe, that is linked to a Nextel telephone, of 3.1 ounces in weight, which consists of a reader that can read magnetic stripe, is inserted into a connector that is used for reloading the battery of a mobile phone, and for printing purposes it utilises an infrared port [41].

\[ \text{d) Net bill} \]

The net bill payment system independent of internet usage to enable online proceedings that are secured. It is a mode of payment at the micro-level, with servers that retain customers’ and sellers’ accounts, which enable customers to pay for the goods via the system. Seeking for information, for example, a database query, text from a page, or a software program can be executed in whatsoever external architecture, through the interchanges of bits with the clients. Clients are charged for the number of things they use, and clients are also offered unlimited access if required [42]. Financial tools software will examine the goods receipts. Thus, it enables the transmission of information between the financial tools software and the server belonging to the dealers [37].

\[ \text{2.3.2. Internet-Based Payment System. There are four essential techniques in payment systems that utilise the internet} \]

\[ \text{a) Debit card} \]

It is the dominantly used electronic payment form of the platform; it utilizes banking through the internet and the Automatic Teller Machine (ATM) card [43]. Users of the debit card are enabled to make immediate payment for products bought via the bank. Money is secured in banks and will be withdrawn only when the users of the Debit Card makes any purchases through its use. There are two kinds of Debit Cards; online and offline [37].

\[ \text{b) Smart card} \]

A card that is made of plastic and embedded with a microchip, with information such as the amount of money, information of an individual and can be pre-loaded, with the ability to execute immediate payments is called a smart card or known as a chip card [44]. The user is provided with a validated PIN by the service provider. In order to assure the protection of data within these cards, the encoded information is stored within them and possess great processing speed. Examples of this kind of card are the VISA and Mondex cash cards [45].

\[ \text{c) Credit card} \]

The credit card is circulated to customers by financial institutions to execute payments via online means [44]. It is the prevalently utilized e-payment system. However, it is not suitably used for making payments with petty value [43].

\[ \text{d) E-cash} \]

It was initiated and presented as an option to credit cards for making payments to buy anything via the internet [43]. It is a form of EPS that enables users to execute transactions through a gadget via online means, with the funds in a repository. E-cash is money in a digital format, utilizing a pre-installed software on the customer’s computer that enables transactions to be
made [44]. It is a much-favored choice among customers as it enables transactions that are small in amount and it possesses a minor cost [43, 46].

3. Security of Electronic Payment system

Security in terms of data and information is of the utmost importance in the entire information systems [46]. Figure 1 illustrates aspects of security of data assurance that encompass the methods, practices, and technology involved.

- Unintentional modifications or transformations (integrity).
- Unauthorised accessibility (confidentiality).
- Demand-based ease of accessibility for authorised customers (availability).

![Figure 1. Depiction of Information Security (CIA)](image)

The stated aspects related to security are required to be functional in an electronic payment system, whereby an EPS that is not secure will build a feeling of distrust in customers, which will defeat the purpose of assuring their confidence to receive the system.

According to [47], there exist various security concerns within the environment electronic banking and electronic payment systems as they are dependent on the essential Information Communications and Technology platforms that are susceptible to various weaknesses in economics and businesses

3.1. Security Demands in EPSs

Specific necessities that must be adhered to by all electronic payment system are:

a) Integrity and Authorization.

System integrity is defined as its preciseness, credibility, and wholeness that are grounded on the quality of businesses and aspirations. This means that a customer will only be charged upon the client’s affirmed consent. Moreover, without the client’s approval of any payment, it is obligatory that sellers are denied acceptance of any payment [48].

b) Confidentiality

It is established as the protection of confidential data from unapproved disclosure. Several establishments have made confidentiality an integral element of their proceedings. Within this scenario, confidentiality implicates the covert nature of the information pertaining to whatsoever type of proceedings. Generally, the concerns of customers are towards the protection of their proceedings [49]. If a situation arises for the necessity for obscurity and secrecy, only a specific group of people will receive particular information.

c) Availability and Reliability.

It ensures that the information frameworks and data are there when required; it needs a constant and efficient framework transmission time. The entire system with all its elements should be in a state of constant readiness for the transmission or receiving of payments as and when required [49].
3.2. Enhancing EPS Security.
According to [55,50-53], the strategy that is generally utilized for Electronic Payment System security assurance is based on covert electronic systems for example encryption, watermarking, digital signatures and steganography as described in Figure 2. When applied, the technologies have enabled stealing and falsification. Henceforth, a concise description of the stated security techniques that makes electronic payments more secure is as follows:

![Figure 2. Categorization of Information Security](image)

3.2.1. Information security - The utilization of the internet has transformed electronic payment, however, open mode of transmission has presented certain problems such as ensuring secured data. Figure 2 illustrates various methods of area security systems in resolving the challenges. A method of scrambling data that makes it uninteresting to an authorized intrusion is known as cryptography or data encryption. However, at times, encrypting electronic payment data can be complicated. Hence, an undetected method of transmission that hides the presence of covert data is essential.

Due to this, a technique that hides data is needed. In concealing data, there are two parts; steganography and watermarking [54] The two methods assures the concealment of covert data and are associated with each other but have differing aims. The principal objectives of concealing the presence of covert information and safeguarding the covert data are known as steganography. In contrast, watermarking focuses on safeguarding the integrity of the covert information by concealing or not concealing the presence of the covert data from intruders. The main objective of watermarking is to safeguard the intellectual property of the content.

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4. Related Works
In [55] has recommended the BLAH algorithm to identify credit card falsifications. It is a hybridization of BLAST and SSAHA structures. The structures are competent algorithms for the sequencing array towards the identification of fraudulent credit cards. Additionally, the BLAHFDS system identifies dubious falsification proceedings through the utilization of a profile analyzer and deviation analyzer. The fraudulent identification analyzers utilize BLAH as an instrument to align sequence. The said model was recommended so that synthetic proceedings can be generated in order analysis can be executed on the BLAHFDS achievements. It demonstrated a satisfactory achievement of a fraudulent identification system exhibiting great precision and swift speed of processing. However, it is unable to identify duplicated credit card or replicated proceedings. Fraudulent activities in other industries for example in the telecommunications sector can be thwarted through the utilization of BLASTSSAHA hybridization method.

According to [56] has forwarded a Fraud Detection System (FDS) that merges the outcome attained from a client’s current and previous conduct. In the FDS, there are 4 constituents which are Rule-based filter, Transaction history database, Dempster–Shafer adder, and Bayesian learner. The degree of doubtfulness in individuals performed through the utilization of Rule-based Filter looking at its differences from the spending norm. The Dempster–Shafer adder merges the entire doubtful proceedings
acquired through the Rule-based filter to determine a primary belief. In order to resolve certain issues a typical tool that uses statistics was utilized, which is the Hidden Markov Model (HMM).

Ashphak et al emulated the operational order engaged in the credit card transaction procedure through the utilization of HMM. In [57], the correlations between the transition probability and the hidden state and examinations were deliberated. It was recommended by Sasirekha et al for Intrusion Detection Systems (IDS) which combines abnormality, abuse, and models that assist in the making of decisions to be utilized in order to obtain a reduced rate of incorrect positive alerts and greater identification precision. By using the abnormality identification module, an incorporated IDS that was based on the HMM approach, identification of assaults in the credit card system is enabled. Additionally, a card user’s attitude is taken into account as attributes and dubious proceedings are identified from the spending profile of the user.

Suspicious unauthorized proceedings are transmitted to an abuse identification system. Through different research done in [58], expounded that faith in the online electronic commerce environ is crucial because it ascertains the client’s readiness to utilize a system that uses online proceedings. In order to manage or avert fraudulent hazards, and for making transactions which use online mode of transaction, digital certificates, and digitized signature are typically utilised [58].

Additionally, from another research in [59], the researcher explicates about electronic commerce for products and services that utilizes online proceedings. However, it was noted that the very policies that were put in place to safeguard and guarantee security and dependability offered by service providers are actually the hindrances to shopping being executed online.

Consequently, a client’s feedback with regards to online shopping are issues pertaining to the sharing of confidential and private data, unsought communications from the shopping system done online, and the monitoring of their shopping behavior [60]. In addition to concerns regarding the security of the system, customers are worried about unlawful bridging gadgets which has their own protection through technological means, are able to obtain customer’s private, monetary or confidential data that is linked to the transactions.

They are also anxious data shared with sellers who deal with orders and purchases through the internet, in addition to being swindled by sellers who do not deliver the ordered products which have been settled in full, are amongst the probable dangers and risks perceived pertaining to purchases done through the internet. Enhanced security design for purchases done via the internet enables users; misconduct to be reduced to a minimal level with the execution of proceedings implemented through the internet [61].

User’s banking information data and information about the card must not be disclosed whilst and ensuing the transactions made via the internet, as it will make it susceptible to unlawful usage and abuse. If on any occasion the data is disclosed, it can be abused by an intruder for vested interests. Thus the system that deals with payments executed through the internet could be enhanced through the introduction of strong rules and regulations, integrating legislative, strict conditions for the protection of data, inclusive of the issuance of attestation from reliable third parties [61].

Moreover, in different research in [62], the researcher improved on the protective layers to the shopping system executed via the internet in order to stimulate customers’ online purchases or electronic commerce involvements, in addition, to generate consciousness amongst the Libyan financial sectors. Customers will be undaunted and free from worries when they utilize a channel via the internet in the event that their monetary and private data are appropriately safeguarded and shielded [62]. Additionally, it is essential that online portals incorporate aspects that promote a reliable connection between consumers and online portal sites so as to boost product purchases and draw consumers. It is imperative for the portals to guarantee that each proceeding must be grounded on accords that imperative to be satisfied [63]. The safeguarding of consumers’ information and security will result in consciousness and confidence in the Libyan financial sectors.

Eben explained the influence of data protection for e-businesses that focuses on the probable damages and hazards to security that might incur as a result of these weaknesses. There are six scopes in e-business security that entails trust, not corrupted, authorized usage, monitoring, availableness, and non-rejecting. The research advised an extensive and holistic security policy that will guarantee the protection of a
business should be designed [64]. Cheng, Hamid, and Cheng [65] recommended five discerned security hazards as tangible, performance, time, psychological, and monetary loss.

Tangible hazards encompass loss of money or card, meanwhile, performance hazards constitute hazards of added costs incurred upon usage. Psychological hazards entail the hazards which will influence the perception of the customer’s image during the transactions of such payments; time loss hazards are dangers that might arise from a procedure that takes a long time to complete in comparison to another method of payment. Monetary hazards entail endeavors that will evoke a monetary loss that cannot be reimbursed when executed. Srinivasan [66] is convinced that the favorable outcome of e-businesses is dependent on certain aspects. According to him, it is important for electronic businesses to endeavor in creating confidence traversing a time span. He stated that certain aspects that promote in acquiring consumers’ confidence constitute goods or services provisions, Website attractiveness, branding, trustworthy stamps, and service value. Believe and confidence could be ascertained in various ways, such as the content of data, goods, proceedings, technology, and establishment.

The researcher examined ‘believe and confidence’ from transactional perspectives and emphasized the actions that electronic businesses are obligated to implement in promoting consumer confidence in this paper. It is difficult to evaluate aspects that promote a sense of belief and confidence due to the fact that they evolve through the span of time. Individuals often depend on prior events in order for them to be confident in any business; they are equally dependent on third party feedback and suggestions. It is finalized that electronic businesses are accessible almost everywhere at any time, however particular aspects may hinder the development and preserving trust.

The main challenge of this research is that there are gaps to fill such as on the methods that an establishment may enhance online security whilst proceedings are ongoing. Pereay Monsuwé, et al. recommended a structure in enhancing the authors’ comprehension pertaining to customers’ perception and behavior with regards to online proceedings in the United States of America and the European countries. The structure mobilizes the Technology Acceptance Model (TAM) constructions which form the foundation, extending its exterior aspects, with its application on an online shopping environment.

It is noted that the consumers’ perceptions and behavior toward transactions executed via the internet are influenced but not confined to the benefits and effortlessness in the utilisation of the platform, but are also affected by exterior aspects for example customer behavior, goods features, aspects that are dependent on situations, previous purchasing events, and confidence in proceedings that are executed via the internet [67].

Abdul et al., evaluated the influence of protection and believe, on the customer’s readiness to engage in proceedings executed via the internet amongst the urbanites of Morocco. This research evaluates consumer’s readiness to make purchases via the internet by taking into account aspects in demography, and aspects of believing confidence and security. Through findings from the logistics regression analysis executed, it is discovered that consumers’ readiness to engage in purchasing via the internet, which is dependent on aspects of trust, security, age, consciousness, and fraud. It was also discovered that a majority of the subject cohorts will make purchases via the internet willingly. The outcome of this research is most significant for suppliers that execute businesses through the internet and as well as for the government towards an enhanced comprehension pertaining to online purchases. The result of this research promotes individuals who are responsible for making decisions to create improved online purchasing conveniences with the competitive edge in technology for the consumers who make purchases via the internet and the suppliers [68]. The electronic banking effect on the economy in Bangladesh was researched by Baten and Kamil; in addition, they researched the advantages and range of electronic payments in Bangladesh [69]. In other respects, Salehi and Alipour embarked on research in electronic banking in an emergent economy with the objective of probing to offer proof empirically from Iran [70]. Through the utilization of Statistical Package for Social Sciences (SPSS), James examined the reception towards electronic banking in Nigeria. The result from the research demonstrates that the receptiveness towards electronic banking is essentially dependent upon the age, earnings, level of education, conceived advantages, conceived hazards, and conceived user-friendliness [71].
5. Conclusion
From the evolving current inclinations, it very clear that electronic payment systems in the world trading and commercial sectors have become crucial. Their magnitude spans from proceedings worth one dollar up to millions of dollars’ worth. This research provides an extensive comprehension of EPS and the protection of payment factors. It is recommended that an electronic payment system that is protected for the purpose of executing purchases via the internet through the utilisation of information security systems such as steganography or cryptography, or by hybridization of the methods; in safeguarding a consumer’s information and keep it to the minimal the abuse or fraudulent acts on the retailer’s or seller’s end. In deliberating on prior researches done before this, there exist the potential to acquire priceless comprehension on the advantages and disadvantages of prevalent existing electronic payment systems, and the accessible protection techniques involving EPSs. In addition, the current research of this paper examines the electronic payment systems from various points of view pertaining to security with the objective of providing enhanced consumer knowledge and contentment.

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