Adoption Factors on Online Money Transfer Services in a Developing Country: A View on Extended Unified Theory of Acceptance and Use of Technology

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ABSTRACT

This study addresses the identification and empirical examination of the main predictors that influence consumers' intention and adoption of online Money Transfer Services (MTS) in the Philippines to understand what drives Filipino consumers in the adoption of online MTS and consequently aid concerned entities to improve product/service delivery and respond to common financial transaction issues. Moreover, both Quantitative and Qualitative methods were applied with the Unified Theory of Acceptance and Use of Technology (UTAUT) model integrating the external variables: Facilitating Conditions, Habit, Hedonic Motivation, Price Value, and Perceived Risk. The survey results from the 205 survey participants were analyzed and found that 83% of them prefer to adopt the traditional MTS with mean value of 4.15 over online MTS with only 4.0. Also, adopting the Structural Equation Modelling (SEM), results revealed that Performance Expectancy, Hedonic Motivation, and Perceived Value significantly affect users' Behavioral Intention towards online MTS adoption with p-values of 0.293, 0.278, and 0.222, respectively. Facilitating Conditions and Behavioral Intention significantly affect users' adoption of online MTS. Results also indicate that constructs Effort Expectancy, Social Influence, Perceived Risk, and Habit do not affect consumers' behavior and intention to use MTS. The findings of this study suggest that to improve consumer adoption of online MTS, data privacy and security, and information dissemination for consumer awareness may be strengthened. Finally, this study is another confirmatory artefact on the UTAUT model's applicability on investigating consumers' intention and adoption of MTS.

Key words: extended UTAUT, Online Money Transfer, Structured Equation Model, Technology Adoption.

1. INTRODUCTION

The development of a digital economy is driven by the rapid progress and diffusion of Information and Communications Technology (ICT) into various service innovations [1]. This indicates that ICT continues to transform people and society and empower different industries in the production of goods and services. It is to note that ICT-enabled services significantly impact the delivery of transactions in several fields such as remittances, education, research, business, banking, etc. [2], [3], [4]. Furthermore, technological breakthroughs and innovative mechanisms embedded into processes have dramatically contributed to the nature of the business environment providing better quality service and increasing productivity [5]. Hence, the traditional concept of economic growth and competitiveness has been transformed through existence and continually growing the digital economy [6]. With technology intervention in the delivery of products and services, the possibility of the improved consumer experience is inevitable [7]. Consumers expect and demand more from its service providers with faster services and higher quality, implying that to attract and keep customers, efficient and effective delivery of service or product is a must [6].

In the Philippines, its growing population and expanding economy including the wide usage of internet and mobile devices, offer enormous opportunities towards digital payments, and money or fund transfers [8]. Fund transfer also known money transfer is the act of transferring money from one place to another [9]. It can be done electronically and physically (over-the-counter) [10]; and comes in various forms such as, (1) money order, making payments using a paper document such as money gram, or a postal check, (2) electronic funds transfer, transferring money from one bank account to another, and (3) wire transfer which refers to an electronic transfer of funds from one bank to another via a network [11].

These modes of money transfer are offered by money transfer companies described as financial institutions providing financial services that accept funds in one location to a beneficiary in another such as in domestic and

international remittances and/or instant fund transfer [12]. Money transfer companies were established to aid consumers in fund transfers, either traditional or online method. Traditional money Transfer service is assisted with money transfer agents and money orders such as in Western Union, Palawan Express Pera Padala, and MoneyGram. Whereas, online money transfer caters instant money transfer such as in WorldRemit, Transwise, and Xoom Paypal [8]. Online money transfer can also be done through mobile platforms also known as m-transfer or mobile money which potentially reduces cost, and these services also can be used to pay bills [13]. The funds can also be transferred by sending the consumer mobile phone number and then visit an outlet or agents to withdraw the funds [14]; [12].

Accordingly, from April to September 2018, there were an estimated 2.3 million Filipino who worked abroad with 96.2% of them with existing work contracts [15]. During the same period, an estimated total remittance of 235.9 billion pesos was sent to the Philippines with cash sent home of 169.4 billion pesos, and money brought home of 55.2 billion pesos and 11.2 billion pesos from remittances in kind. These cash remittances from OFWs were sent through banks (52.8%), money transfer services (45%), local office and agency (2%) and another mode of remittances at 0.1% [8].

In terms of consumers' adoption on technology-based products and services such as online money transfer services, several studies have been conducted examining the factors that influences users' adoption and intention to use. The investigation of factors influencing smart phone use [16], adoption of online shopping [17], mobile learning adoption [18], internet banking [19], adoption and use of computer-mediated communication tools [20], and mobile banking adoption [21] are among the studies previously conducted which yielded significant results. Consequently, various models were applied to investigate the predictors of user adoption on technology-based services, to name a few, the Technology Acceptance Model (TAM) [22], the Diffusion of Innovation (DOI) [23], and Technology Environment Organization Framework (TOE) [24], [25], and the Unified Theory on Acceptance and Use of Technology (UTAUT) [26]. Thorough discussions of the mentioned models are presented in the succeeding section of this paper.

The current study employed the technology adoption model UTAUT or the Unified Theory of Acceptance and Use of Technology (UTAUT) model which adopted from the works of [27]; [19]; [28], as a baseline model to predict intention and adoption of money transfer services by Filipinos consumers. UTAUT is a technology acceptance model which aims to explain user intention to use an Information System and subsequent usage behavior with four fundamental constructs: performance expectancy, effort expectancy, social influence, facilitating conditions [28]. External variables were also integrated (making it the extended UTAUT model), namely, Facilitating Conditions, Habit, Hedonic Motivation, Price Value, and Perceived Risk.

Currently, a few study has been conducted relative to Money Transfer Service (MTS) adoption in the Philippines,

however, those were not published impeding the dissemination of information that answers the common questions why do Filipinos prefer to use or refrain from using online money transfer services. Money transfer service is increasingly being adopted by consumers in the Philippines to send money to their families according to [15] and [8], however, only survey results were presented, no further reasons and/or factors that influences Filipino consumers to adopt MTSs. Also, it was cited by both authors that fund transfer through banks is commonly used and encouraging consumers to shift their behavior from a face-to-face transaction in transferring money to using online money transfer services implies a behavioural shift and an in-depth understanding on what drives consumers to avail fund transfer services from either banks or MTS. With that, this study focuses on identifying and empirically examining the main predictors that could influence the consumers' intention and adoption of online money transfer services in the country. The researcher believes that by conducting an empirical study among Filipino consumers and the awareness and understanding on the predictors of online money transfer consumer adoption would help concerned entities improve their services and aid in solving financial transaction issues such as data privacy and security, financial technology inclusion among Filipino consumers (lack of awareness), etc. This study presents essential findings on consumers' intention and adoption of online money transfer services. Further discussions on the study's findings and its interpretations on the significant results on the predictors of user intention and adoption are discussed in the succeeding sections.

2. MONEY TRANSFER SERVICES

The work [29] discussed how money – its value, its mode of utilization, how it is transferred and accessed, is affected by the deployment of different digital technologies. It has undergone a series of changes as consumers' needs and preferences change. This resulted in a government-citizen agreement in terms of financial management, financial means of exchange, and financial technology such as money transfer or remittance services.

Money transfer service can be made through either traditional or online channels [30]. Traditional money transfer is aided with money transfer agents, money orders, and bank checks (paper-based), such as Money Gram, Western Union, and Banks. Online money transfer involves online fund transfer, such as Xoom PayPal, WorldRemit, XE, and TransferWise [13]. The work of [8], reports how Filipinos deal with their money in terms of mobilizing it. "Cash is King," based on the survey result, only 0.3% of personal payments were made through an electronic platform. This is also evident in the way OFW remittances were transacted, as they opt to send money home via traditional money transfer services. It indicated 52.8% in OFW remittances were made through banks, and 45% only were transacted through money transfer services.

Traditional remittance service is a flexible remittance channel that offers service and fund accessibility and provides instant money transfer. However, traditional remittance services have higher remittance fees, higher compared to online money transfers, and are not accessible at all times (physical locations have an open and close schedule). In a bank-to-bank transfer, fund transfer is slow and may take 3-5 business days [31]. Moreover, traditional money transfer services are prone to fraud with which only control numbers are required for cash claims. Online money transfer, on the other hand, offers fast and convenient transactions, cheaper services compared to traditional and offers fund transfer tracking and have higher security. Money transfer websites embed security features in their online transactions. For a customer to use online money transfer, one has to secure a PayPal or bank account, and importantly one has to be vigilant to avoid online scammers and make sure to observe mobile banking security practices [32].

3. CONCEPTUAL FRAMEWORK AND HYPOTHESES

Adopting the UTAUT framework, the proposed research model is shown in Figure 1. Some of the experience from [19], [27], [28] were used to gain further insights on the factors affecting the Filipino consumers' intention and adoption on online money transfer services in the Philippines on an exploratory perspective.
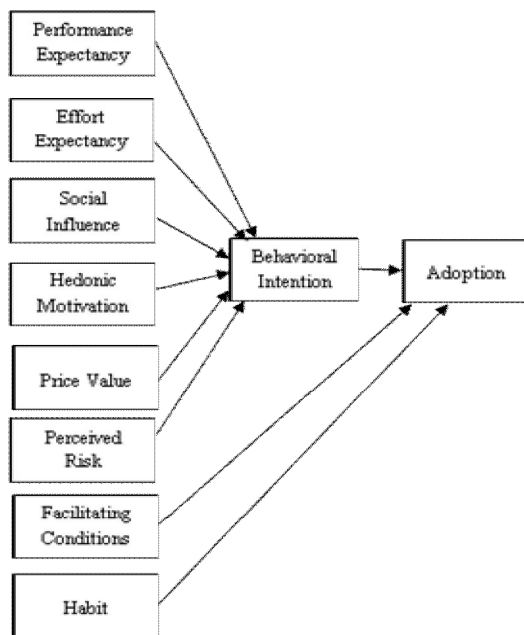

Figure 1: Conceptual Framework of the Study

3.1 Hypotheses of the UTAUT Context

A. *Performance Expectancy (PE)*

Performance expectancy focuses on user's perception of using the product or service to accomplish improvements in job performance [28]. The works of [6], [33] reported that consumers' intentions to use are primarily affected by performance expectancy; hence, the following hypothesis was formulated:

H1. The performance expectancy significantly affects the user's behavioral intention.

B. *Effort Expectancy (EE)*

Effort expectancy refers to the consumers' perceived easiness related to the use of products or services [28]. The work of [34] examines the structural relationships of the factors that affect user's behavioral intention of mobile learning service and results showed that EE has positively influenced behavioral intention (BI). Furthermore, reports from [35] state that EE significantly affects adoption and intention on mobile banking. Accordingly, the following hypothesis was developed:

H2. The effort expectancy significantly affects the user's behavioral intention.

C. *Social Influence (SI)*

Social influence is defined as the consumer's perception of others' belief of how important for him or her to use the product or service [28]. Early reports had confirmed that Social Influence affected intentions to use a product or service [34], [36]–[38]. Correspondingly in the work [39], the adoption of mobile banking service in Rural Karnataka was empirically explored. The study findings report that social influence had significantly affected the user's intention. Moreover, the work [40] affirmed that social influence has a significant effect on behavioral intention. Consequently, the formulated hypothesis is given:

H3. The social influence significantly affects users' behavioral intention.

D. *Hedonic Motivation (HM)*

HM refers to the fun or pleasure attained while using the product or service [36]. Several early studies reported that when user enjoys the use of the product or service, this affects user's intention to use [36], [41]. In the work of [42], user's behavior in using online services is examined. With 224 valid responses, the research model was tested using the Partial Least Square (PLS) path modeling approach. It has been found that hedonic motivation is a vital factor that positively influences attitude and intention towards the use of products or services. Thus, the study proposes the given hypothesis:

H4. Hedonic motivation or user experience significantly affect the user's behavioral intention.

E. *Price Value (PV)*

PV refers to the "consumer's cognitive trade-off between the perceived benefits of the application and the monetary cost for using it" [28]. In [43], numerous works found that the price value significantly affects the users' intention to use a product. The work of [44] also confirms that behavioral

intention was influenced by price-value. Moreover, the study uses a PLS approach to test the research model. This was also validated in the works of [45], [46], using SEM, the findings show perceived value is indeed a significant predictor of BI. Therefore, the study hypothesizes that:

> H5. Price value or cost significantly affects the user's behavioral intention.

F. Perceived Risk (PR)

PR is referred to as the extent of risk perceived by users from the use of a new product [47]. In [48], PR dimensions were investigated and have found out that perceived social, and performance risks, including perceived benefit has a direct effect on the user's attitude. Further, the study uses 435 respondents who were non-users of the product or service but prospects and analyzed using SEM. Also, [49] claims that consumer risk perceptions may influence usability, and consumer satisfaction is moderated by perceived risk. The effect of PR on behavioral intention to use the service/product is also reported in [50]. Therefore, the study hypothesizes that:

> H6. Perceived Risk significantly affects the user's behavioral intention.

G. Facilitating Conditions (FC)

FC refers to the measure of consumers' belief an organizational/technical support provided by the product/services providers [28]. Numerous works reported that FC has an influence on the acceptance of service or products [6], [51], [52]. Thus, the study hypothesis:

> H7. Facilitating conditions significantly affect users' adoption.

H. Habit (HT)

This refers to the extent of involuntary behavior from occurring due to learning [28]. With this, the study proposes the hypothesis that:

> H8. Habits significantly affect users' adoption.

Hence, many early studies proved the role of habits to significantly affect users' adoption [28], [41], [53].

I. Behavioral Intention (BI)

BI refers to a measure of the ability of individual intention to perform a specific behavior [54]. Behavioral intention proved to be the most powerful determining factor in technology acceptance and has been continuously investigated [28], [41], [54], [55]. Accordingly, this study formulates the given hypothesis:

> H9. Behavioral intention significantly affects users' adoption.

4. METHODOLOGY

This study follows a descriptive approach to examine the factors affecting the Filipino consumers' intention and adoption on online money transfer services in the Philippines using the extended Unified Theory of Acceptance and Use of Technology (UTAUT) model. The main constructs for UTAUT2, namely, PE, EE, SI, HM, and PV, which were hypothesized as direct predictors of customers' intention and adoption. Other constructs were added to examine if these factors have direct/indirect relationships and whether it significantly affects Filipino consumers' intention and adoption of online money transfer service. The questionnaire was created to answer the hypotheses formed from the proposed research framework. The researcher also applied the convergent design in comparing the results findings from qualitative and quantitative data sources [56]. The data collection activity was done in parallel, an online survey (quantitative) and interview (qualitative - triangulation). The quantitative approach is used when one begins with a theory (hypothesis) and tests its confirmation. The qualitative approach is used to observe and interpret reality with the aim of developing a theory that will explain what was experienced [57]. Triangulation is one of the primary forms typically used by qualitative researchers [58].

A. Survey Questionnaire

Well-established and validated works and researches were reviewed to come up with the study's survey instrument [28], [40], [59], [60]. This was done to measure the factors that affect the Filipino consumers' intention and adoption of online money transfer services in the Philippines. Shown in Table 1 are the constructs reflected in the survey instrument with its respective literature sources.

Table 1: Summary of the Survey Instrument

Factors	Items	Reference
Performance Expectancy (PE)	4	Venkatesh [28]
Effort Expectancy (EE)	4	Venkatesh [28]
Social Influence (SI)	3	Venkatesh [28]
Facilitating Conditions (FC)	4	Venkatesh [28]
Hedonic Motivation (HM)	3	Venkatesh [28]
Price Value (PV)	3	Venkatesh [28]
Habit (HB)	4	Venkatesh [28]
Behavioral Intention (BI)	4	Venkatesh [28]
Perceived Risk (PR)	7	Venkatesh [59]
Adoption (A)	2	S. Oh, X. Y. Lehto, and J. Park [33], D. Belanche, L. V. Casaló, and M. Guinalíu [49]

B. Sample Selection

The study focuses on Filipino consumers on their intention and adoption of online money transfer services in the

Philippines. In this quantitative study, the survey participants are individuals at a legal age having the capacity to use the money transfer services and were chosen randomly.

C. Data Gathering

The data gathering activity was mainly administered online using google forms, and survey links were sent through email and messenger apps. In the pilot survey, there were 44 samples used in the reliability and validity testing of the questionnaire. The actual survey was conducted in July 2019, and a total of 205 respondents were able to fill out the survey.

D. Data Analysis

Each variable was transformed into numeric values, and that was measured based on a scale of 1 is the lowest, and 5 is the highest. The gathered data was analyzed using Structural Equation Modelling (SEM). SEM was specifically used in the assessment of the relationships between constructs and how significant the established relationships were [61].

5. RESULTS AND DISCUSSION

A. Demographic Profile

A total of 205 survey participants who took part in the survey that was contacted through email and social media. (Refer to Table 2 for the demographic profile of the gathered sample). The respondents are comprised of 53% female and 47% male participants with 50% fall under the age range of 22-30 years old, and majority of them are working in different types of sectors: private/businesses sectors employ 29%, 21% are employed as a teachers in public or private academic institutions, and 12% of the sample are unemployed, and 20% are students. Lastly, the majority of them have completed college or at least college level.

Table 2: Characteristics of the Respondents

Category	Count	%
Gender		
Male	96	47%
Female	109	53%
Age		
15-17	2	1%
18-21	60	29%
22-30	103	50%
31 and Above	40	20%
Education Level		
Secondary	4	2%
College Level	84	41%
College Graduate	97	47%
Graduate Studies	18	9%
Post Graduate Studies	2	1%
Occupation		
Teachers	21	10%
None	25	12%
Private Employee	60	29%
Student	41	20%
OFW	4	2%
Government Employee	20	10%
Online Freelancer	9	4%
Engaged in Business	6	3%
Others	19	9%

B. Reliability Analysis

To estimate the reliability of the item scores in each of the variables, the internal consistency (Cronbach's Alpha coefficient) was computed. In Cronbach's Alpha, an excellent rate is given for α > 0.9, and a coefficient 0.7 < α < 0.9 is rated Good. Reflected in Table 3 are the factor loadings, Alpha, CR, and the Average Variance Extracted (AVE), all of which are within the acceptable thresholds.

Table 3: Standardized Item Loading, Ave, CR and Alpha Values

Factors	Loadings		α	CR	AVE
Adoption	A1	0.908	0.725	0.878	0.783
	A2	0.861			
BI	BI1	0.903	0.889	0.925	0.756
	BI2	0.721			
	BI3	0.920			
	BI4	0.918			
EE	EE1	0.880	0.924	0.946	0.814
	EE2	0.931			
	EE3	0.922			
	EE4	0.875			
FC	FC1	0.856	0.888	0.922	0.748
	FC2	0.913			
	FC3	0.870			
	FC4	0.817			
HM	HM1	0.932	0.905	0.935	0.783
	HM2	0.920			
	HM3	0.920			
	HM4	0.756			
HB	HT1	0.887	0.887	0.920	0.743
	HT2	0.780			
	HT3	0.850			
	HT4	0.924			
PE	PE1	0.868	0.928	0.949	0.822
	PE2	0.924			
	PE3	0.919			
	PE4	0.915			
PR	PR1	0.878	0.931	0.945	0.740
	PR2	0.877			
	PR3	0.887			
	PR4	0.875			
	PR6	0.770			
	PR7	0.870			
PV	PV1	0.911	0.930	0.955	0.877
	PV2	0.951			

	PV3	0.947				
	SI1	0.921				
SI	SI2	0.897	0.906	0.940	0.840	
	SI3	0.931				

C. Validity Analysis

The correlations between constructs including the square roots of AVE. are illustrated in Table 4. Notice that the square root of each construct's AVE is more significant than its relationships with other constructs, suggesting sufficient discriminant validity.

Table 4: Discriminant Validity – Fornell-Larcker Criterion

Item	A	BI	EE	FC	HM	Habit	PE	PR	PV	SI
A	**0.885**									
BI	0.635	**0.869**								
EE	0.494	0.567	**0.902**							
FC	0.559	0.572	0.774	**0.865**						
HM	0.543	0.619	0.616	0.639	**0.885**					
HB	0.395	0.617	0.538	0.521	0.654	**0.862**				
PE	0.484	0.589	0.64	0.538	0.512	0.526	**0.907**			
PR	0.113	0.107	0.109	0.168	0.176	0.236	0.054	**0.86**		
PV	0.476	0.533	0.542	0.612	0.529	0.397	0.356	0.112	**0.937**	
SI	0.432	0.554	0.6	0.588	0.604	0.645	0.61	0.07	0.459	**0.917**

D. Hypotheses Testing

SmartPLS, a software for variance-based SEM using the PLS path modeling method, was used to analyze the path coefficients and their significance.

Table 5: Path Coefficients and Their Significance

Hypothesis	Path	Coefficient	T Values	Supported or Not
H1	PE -> BI	0.293***	4.034	Yes
H2	EE -> BI	0.039	0.47	Not
H3	SI -> BI	0.081	1.092	Not
H4	HM -> BI	0.278***	3.593	Yes
H5	PV -> BI	0.222**	2.854	Yes
H6	PR -> BI	0.007	0.107	Not
H7	FC-> Adoption	0.292***	4.477	Yes
H8	Habit-> Adoption	-0.024	0.301	Not
H9	BI-> Adoption	0.449***	5.596	Yes

Note: * $p<0.05$;** $p<0.01$;*** $p<0.001$

Hypotheses H1, H4, H5, H7, and H9 were considered acceptable (See Table 5). Contrary to personal expectations and interpolation, hypotheses H2, H3, H6, and H8 were rejected. This implies that not all the variables in the model have significantly affects consumers behavior and intention. Similar to the result of [17], H2 was rejected which indicates that EE does not significantly affect user's behavioral intention to use money transfer. Comparable to the results in [17], [62], the second hypothesis H2 is also rejected, the result shows that SI is not relative to consumer behavioral intention to use money transfer. Likewise, no empirical evidence to accept hypothesis H6 indicates that PR does not impact the user's behavioral intention. Accordingly, perceived risk losing their significance since the user already experiences the technology and its impact already commented [63]. Contrary to [53], the construct habit has no significant impact and may not be related to users' adoption. The perception of the Filipinos of using the service may not be considered as a habit, and it's about necessity and urgency hence they don't have other means of sending money because the majority of the Filipinos are unbanked [14].

On the other hand, behavioral intention was revealed to be the top significant factor to influence online money transfer adoption among Filipino consumers, and Performance Expectancy (PE) is the highest-rated factor to influence behavioral intention (BI) followed by Hedonic Motivation (HM) and Perceived Value (PV). This indicates that Filipino consumers perceived that online money transfer service improves job performance or work productivity, there is fun or pleasure of using the service, and believed that it online money transfer service is beneficial to them. Hence, PE is significantly related to BI. Related researches such as [64], [65] support this research finding. Likewise, Facilitating Conditions (FC) is a predictor of BI this means that Filipino consumers believe that the intention to use a product or service is intensified when there is system or organizational support upon the use of the product or service.

6. CONCLUSION

In examining the adoption factors on online money transfer services in the Philippines, several significant findings were revealed. (1) The current state of Filipino consumers' intention and adoption of money transfer services revealed an important notion. Descriptive analysis show that 4.15 mean value favored and agreed to the traditional method of money transfer services or 83% of the survey participants prefer to use the traditional services over online MTS with mean value 4.0. The result still shows that Filipino consumers perceived and agrees to adopt money transfer services since adoption mean value falls to the threshold 'Agree. This only mean that with appropriate and effective actions, higher rate of online money transfer consumer adoption is not impossible; (2) Results of the standardized estimates of the Structural model (SEM) show that in terms of consumers' behavioral intention towards online MTS adoption, PE is the most significant factor influencing consumers' behavioral intention. Consumers intends to use online MTS since they perceive it as contributor to their task

completion and increased productivity. This finding is supported by other studies such as [64]; [65]. PE is followed by HM suggesting that this factor is also significant and an influencer of behavioral intention towards online MTS use. The same goes for Price Value implying that consumers intends to adopt online MTS so long as they find its price to be reasonable. For consumer adoption of online MTS, BI is highly significant and a strong predictor of product adoption. It is to note as well that PR does not affect BI since consumers perceive that regardless of the risks, they will still use online MTS because of the lack of option or being unaware or unable to use other means of fund transfer. With these results, money transfer entities and the government may take advantage in formulating strategies to empower both the consumers and the product/service to improve current services including financial inclusion; and (3) Practical, technical, and managerial implications were formulated and may be taken into considerations to aid address the common and critical issues captured in this study. Data privacy and security, information dissemination/consumer awareness for financial inclusion, and transaction fee regulation, are among the issues that needs to be taken cared of so as to improve consumer adoption of online money transfer services. Concerned entities may – private and government sectors, may work hand-in-hand to make this financial ecosystem works, implement marketing strategies to capture majority of the target market, employ strong security measures to ensure data privacy and security.

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