International Review of Business, Trade, and Economics
ISSN: 3069-230X

PRIME OPEN ACCESS

Volume 2, Issue 1

Research Article

**Date of Submission:** 20 June, 2025
**Date of Acceptance:** 26 January, 2026
**Date of Publication:** 05 February, 2026

# Benefits of Adopting Voluntary Insurance as a New Product in Bank-Led Digital Banking Services in Economy Country-wise

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**Citation:** Rahman, A. M. (2026). Benefits of Adopting Voluntary Insurance as a New Product in Bank-Led Digital Banking Services in Economy Country-wise. *Int Rev Bus Trade Econ, 2*(1), 01-10.

## Abstract
Today's Tech-driven world has facilitated digital-banking services in multi-faucets including MFS and bank-led digital banking services in economy country-wise. However, bank-led digital-banking services are characterized by evolving many factors that are often unpredictable. It faces serious pitfalls, being it riskiness when it comes to choices using bank-led digital banking services. As a result, the growth trends of number of digital transactions in bank-led digital services is not growing fast-enough in economy country-wise. Adopting Voluntary Insurance as an innovation or new product in today's bank-led digital banking services can enhance growth-trends of digital-transactions in economy.

These changes and adjustments can create huge opportunities to address societal problems and improve human life by fostering aggregate social welfare with distributional impacts of this innovation. On this aspect, banking services in economy country-wise such as Bangladesh is no different. Customer here faces perceived risk such as psychological risk, social / privacy risk, hidden charges and account hacked risk etc. Adaptation of the VI in bank-led digital banking services can affect two groups of bank customers. They are: i) winners who benefit from accessing the VI innovation and ii) losers who supposedly worsen their relative position when the growth trends of digital-banking services will be in full swing, i.e., the cashless society in economy country-wise such as Bangladesh. Thus, it can be impetus for policy-design to meet the challenges of today's digital-banking in economy country-wise for faster growth-trends of digital-transactions. Regarding price or cost, a fixed price for insurance can have both positive and a minor negative implication depending on the market structure, which will overall reduce transaction cost and increase access to it. Welfare analysis ratifies that it increases consumer surplus, bank's profit, economic growth, employment opportunities and social welfare by improving quality of life.

**Keywords:** Bank-Led Digital-Banking Services, Perceived-Risk, Voluntary Insurance (VI) as an Innovation, Win-Win Prospect for Customer & Service Providers

## Introduction
Today human society lives in a world of business-mentality with technology-driven lifestyles. Here services are carried out in a multifaceted, competitive and rational manner where time values & reliability of relevant services are counted more than ever before These are the common features of today's human society no matter where they reside.

Thus, decision factors mainly expediency and cost-effectiveness, have led individuals or businesses to welcome usage of ICT in many ways. As a result, in technology-driven world-economy country-wise, service sector like banking services have been modernized.

Similarly, customers compete for comparative time-saving options and bank(s) strive to marginalize its operating costs without deteriorating the quality of services [1,2].

Accordingly, besides having mobile financial services (MFS) in economy country-wise, banks themselves have been promoting digital banking services in many ways. It is well recognized that some MFS providers are subsidiary of

different banks, and they operate under the authority of Central Bank in economy country-wise such as Bangladesh. For example, in Bangladesh, bKash is an MFS provider, which is a subsidiary of BRAC Bank and operates under the authority of Bangladesh Bank. Although the MFS services started with one MFS provider in Bangladesh in 2011, now there are 13 organizations and it has been growing since the beginning. But MFS services are no grievance free [3]. Also, the services here charge fees in most cases unless the company's promotional offer(s) is in place.

Besides the advancement of the MFS, banks in financial sector of economy country-wise such as Bangladesh, provide digital services in many ways. Digital banking-services are delivered through the internet.

The most common features of digital banking services are as follows

| Digital banking features are |
|---|
| •Cash withdrawal & deposit<br>•Fund transfers<br>•Bill payment<br>•Loan application & loan receive<br>•Bank statement<br>•Mobile financial services<br>•Receive text messages on transactions |
| **Table 1:** Today's digital-banking's features<br>Source: Author's creation |

However, the MFSs are not dispute free and risk free in economy country-wise such as Bangladesh where the study was completed by joint efforts of the Bangladesh Bank and University of Dhaka [4]. This group study clearly identified several major challenges about the MFSs in Bangladesh. Here majority of customers complained about the high-rise in-service fees charged by MFSs operators. Many customers have bad experiences like blackmailing and hijacking money for using MFSs by criminals [4,5].

| The probable risks are as follows, which may vary in economy country-wise. |
|---|
| •Security risks from different angles<br>•Breach of privacy<br>•Disparity in services offered by banks<br>•Cybercrime existence<br>•Systemic risks in completion transactions<br>•Abusive activities in digital banking services<br>•Customer(s) in general do not remember their bank balance all the time. So, sending text message(s) may not be helpful except getting info about transactions.<br>•Lack of digital literacy & consumer knowledge of some unbanked population<br>•Governance issue – includes lack of transparency, weak mgt practice & corruptions<br>•Psychological risk factors - they discourage probable customers from signing up |
| **Table 2:** Major Risk-factors. |

Besides these incidents and controversies, the MFS industry in Bangladesh faces challenges such as agent network management, security concerns, customer education, and the need for greater interoperability.

On the same token, bank-led digital-banking services are not risk-free either [6,5,7]. Particularly bank-led digital banking faces serious pitfalls being riskiness in multi-faucets. They are as noted in Table 2.

Besides this, if a customer does not follow the security guidelines provided by the bank, such as creating secure passwords, not sharing passwords, or failing to log out of the customer's digital banking account and such others, they could become a victim of online fraud [1,2].

All these together might have led to slower growth trends of bank-led digital-banking in economy country-wise. Transferring cash takes a lot of trust in the system where many people do not seem to truly trust the digital money transfers no matter what country we talk about [1,2,8].

Overall, this dilemma is characterized by evolving many factors that are often unpredictable. It faces serious pitfalls, being it riskiness. Customers compete for time-saving options. Banks compete to marginalize their operating costs then enhance generating revenues. Most cases, customers do not scan or read terms & conditions of services, and they do not save or have contract-copy when they approach meeting the challenges officially. These weaknesses cause abuse. Customers face perceived risks such as hiding charges, extra fees, account hacking etc. and, in some cases, it takes a lot of effort to resolve it [1,2].

No matter what country's digital-banking system we talk about, transferring cash or digital-banking takes a lot of trust in the system. Based on current digital system setup country-wise such as Bangladesh, a customer receive text message relates to the transaction and account balance information. However, from time to time it gets failed to reach the customer because of electricity or mechanical failure. Secondly, customers do not exactly remember the customer's bank balance. Thirdly, filing a complaint to respective authorities on the issue is not easy to get it done. Accordingly, many people in countries such as Bangladesh do not seem to truly trust bank-led digital money transfers. Thus, trust is pivotal [1,2,9].

Addressing today's digital-banking dilemma, particularly the bank-led digital dilemma, the current author proposed Voluntary Insurance (VI) in literature as a product or innovation in bank-led digital-banking services [6]. Under the proposal, bank will introduce "Voluntary Insurance (VI)" as an innovation in digital-banking-services [6]. Where customers will decide buying or not buying it. Literature clearly supports that innovations include the introduction of an innovation or service, obviously, a legal product or service stands as a pillar of support for the overall financial system [10]. Overall, it would serve as social benefits in multi-faucets, if the VI were in place or adopted in bank-led digital services.

However, no economy country-wise has yet introduced the VI policy, which could have been a win-win to parties involved in today's digital-banking service-market.

Thus, to share policy guidance with policymakers in economy country-wise, this study advances by setting up the technique of pricing the proposed VI innovation and then carrying out social welfare analysis of the presence of the innovation in digital-banking services in economy country-wise. So that the VI policy can be adopted in economy country-wise for the greater interest of the nation's society.

## Literature Review

It is well recognized that innovation or new products, obviously a legal one, fosters social welfare. Technological and organizational changes create or facilitate new opportunities addressing societal changes and to improve human life [11,6]. In today's Tech-driven world economy, the service sectors such as banking sector have been modernized cost-effectively. Similarly, customers are competing for comparative time-saving options and marginalizing costs no matter what economy country-wise we talk about. Besides traditional banking, mobile financial services (MFS) such as bKash, Western Union etc. serve new ways financial services, however these services are not complaints or grievance free in operation [12,13].

In today's world, many factors are often unpredictable. Strict laws & its fullest application can marginalize the magnitudes of "perceived risk". On this matter, developed countries are doing better and ahead of developing countries. But it does not guarantee absolute risk-free digital-banking, particularly bank-led digital banking even in developed countries. On risk issue, developing countries are vulnerable, which might have led a slower growth trend of bank-led digital transactions in countries such as Bangladesh.

Dealing with the determinant the "perceived risk", the current author proposed in literature Voluntary-Insurance, which is known as Akim's model where the proposal has also been treated as a policy-proposal in digital-banking system. Akim's Model [6]. Has been well recognized in literature in many formats including a book published by Lambert Academic Publishing, European Union etc. [6,14-16].

In today's world, it is well recognized that digital transformation is not just a buzzword. It is the profound transformation of business processes and competencies for fully leveraging the changes & opportunities of digital technologies and their impact across society in a strategic and prioritized way. However, the growth-trends of digital transactions, particularly in the bank-led digital service-market have been almost steady in economy country-wise.

Accordingly, this study advances further making the VI proposal as an innovation appealing to policymakers & bank management for relevant policy design so that digital-transactions growth-trends can be faster in economy country-wise.

## Objectives

The primary objective of this study is to carry out social welfare analysis on adopting Voluntary Insurance (VI) as an innovation in bank-led digital banking services. The specific objectives are as follows

To examine whether adaptation VI in bank-led digital banking services can foster social benefits.
To examine whether VI as can facilitate higher growth trends of digital transactions.
To examine whether adaptation of VI can ensure a net increased number of VI users in bank-led digital banking services in economy country-wise.

## Methodology

In aiming to establish the basis of VI as an innovation in economy country-wise, this study uses the Theory of Consumer Choice & Behaviors [17]. For guidance in policy design – adoption of VI policy including assessing amount of cost or prices for insurance, this study carries out Welfare Analysis of the application of VI model.

## Assessment of the Benefits Adopting VI as New Product in Bank-led Digital-Banking Services

It is well recognized that having an innovation in a business can foster social welfare [18]. Where banking business sector is no different. Here technological & organizational interest for change and then advancement can create new opportunities addressing societal changes improving human life. This is the fundamental motivation, which has been spurring the development of innovation research and policymaking over the last 50 years or so [18]. It is also recognized in literature that these recent technologies contribute to address societal challenges and foster welfare in human society[19,11,20].

Underpinning motivational efforts of having or adopting an innovation in activities / services or in lifestyle [18]. two states of world can be compared where one is with VI in bank-led digital banking services. And the other one is without VI as an innovation in Bank-led digital banking services.

To fix ideas, let me assume that the probability of adopting an innovation, i.e., VI in bank-led e-banking services at time (t) depends on the magnitude of policymakers' or bank-management efforts at 0 (zero) time plus other characteristics or features that have been helping conducting e-banking services [14-16].

Accordingly, Pr {I-VIt} = $f$(policy makers' efforts introducing VI as a new product) + € … (1)
where I-VI represents inclusion of VI as an innovation at time t [17].

And Pr {NI-VIt} = $f$(policy makers' efforts to introduce VI as an innovation) + € …. (2) where NI-VIt represents no inclusion of the VI in bank-led digital banking services at time t. (Reference Rahman, 2019).

Here a state of this world is defined as a matrix X that denotes the bundle of resources and capabilities allocated to everyone in that given situation. Accordingly, this framework seeks to compare social welfare that is associated with state of the world XN-VI (social alternative with no inclusion of VI) and XI-VIt (social alternative where VI has been adopted as an innovation in bank-led digital banking services.

Innovation: Adding VI as new product and a broader notion of well-being in bank-led digital banking services

It can facilitate a broader notion of e-banking users well-being, which goes beyond the traditional economics concept of utility maximization through preference satisfaction (Adler & Fleurbaey, 2016; Rahman, 2020). Accordingly, the utility function can be written as

$Ui\ (\mathbf{X}i) = Ui\ (Xi1; Xi2, \ldots Xid)$ …. (3)

In dynamic terms, the intertemporal utility function can be written as
$Ui\ (\mathbf{X}it) = \int Ui\ (\mathbf{X}it)\ e^{-\rho t}dt$ ….. (4)

where ρ is the rate of time preference, accounting for the fact that well-being today is preferred to well-being tomorrow. This dynamic formulation is important for this framework. This is because innovation is an inherently dynamic activity where some of its effects will manifest in a brief period, whereas others will only become visible in a longer-term perspective. It is thus important to make an explicit distinction between short-run and long-run effects because these may have different relevance in terms of social effects and related options for innovative policymaker(s).

Then we can specify individual well-being that is associated with different time horizons: Ui (XiS) is short-run well-being (if the integral in equation 3 is defined between 0 and S); and Ui (XiL) is long-run well-being (if the integral in equation 3) is defined between 0 and L) where S = short-time and L = longtime.

## Using Social Welfare Function (SWF)

With this setup, the bank-management or policymakers in case of ensuring higher growth-trend of digital-transactions in economy country-wise such as Bangladesh should acknowledge that an inclusion of VI will lead to a shift from state of the world NI-VI to I-VI, is welfare associated to I-VI greater than welfare associated to NI-VI.

Accordingly, this study uses social welfare functions (SWF), an analytical tool that has long been used in welfare economics to theorize the foundations of public choices. Here SWF is also known as simple utilitarian, which defines social welfare as the simple sum of individuals' well-being (utility) [19,21]. Using this technique, the graphical presentation can be carried out as shown in figure 1.

**Figure 1: Shows the Static Effects of the VI Product on Two Groups of Bank Customers. They Are**

Winners who benefit from accessing the VI product and

Losers who supposedly worsen their relative position when the growth trends of digital-banking services will be in full swing, i.e., the cashless society in economy country-wise such as Bangladesh.

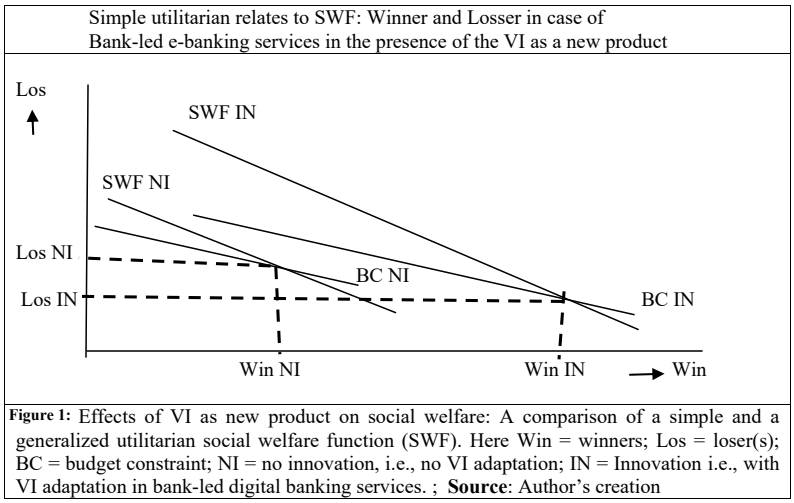



**Figure 1:** Effects of VI as new product on social welfare: A comparison of a simple and a generalized utilitarian social welfare function (SWF). Here Win = winners; Los = loser(s); BC = budget constraint; NI = no innovation, i.e., no VI adaptation; IN = Innovation i.e., with VI adaptation in bank-led digital banking services. ; **Source**: Author's creation

Since innovation is a dynamic phenomenon that unfolds over time, some of its effects may be visible in the short-run, whereas others take many years to manifest, and they will only be visible in the long-run. Here it is reasonable to suggest that the effects of this innovation on social welfare may change over time. It may decrease the impact of the VI over time (strong in the short term, vanishing eventually), whereas other technological changes may have increasing effects over time.

So, it is palatable raising question: what is voluntary insurance (VI) and how should it work in bank-led digital banking services in economy country-wise such as Bangladesh.

## Voluntary Insurance (VI): What is it? How should it work?

### What is Voluntary Insurance?

In today's digital-banking service-market, addressing the risk-factor issues, especially perceived risk-factors that undermine the growth of digital-banking in world-economy country-wise, Voluntary Insurance (VI) as a product or an innovation was proposed by Akim Rahman in literature [6]. It has been well recognized in literature in many formats. However, no economy has yet adopted the VI policy, despite the reality that banks are facing a slow growth trend of transactions in the economy country-wise such as Bangladesh.

### How should it work?

The financial sector can introduce it in digital-banking operation where the bank or third party can collect premium ensuring secured services. The way it would work is the customer's participation will be voluntary. Insurance will be attached to the customer's bank account, if and only if, the customer wants it for digital services. Since the program will be designed in a way of transferring the risk away from its premium-payers, it will ensure premium-payers with a sense of certainty. Under the proposal, the bank sector will introduce it as a product of bank services. Transferring risk away from customers will benefit both PCBs and bank-customers. This model can facilitate the parties involved increasing usage of on-the-go banking services while customers can maintain optimal utility of usages.

Here premium receivers will take extra measures for ensuring risk-free digital-banking services such as digital transactions such as paying bills, shopping etc. whenever a customer needs to do it. Besides this, for example, ATM Card or Credit Cards, Bank Cards etc. can be protected by setting two identifications such as password and a finger-scan. Suppose a customer wants to use an ATM card to access the customer's account, the customer will have to use two identifications namely own setup password and previously chosen finger-scan say his thump or forefinger scan. Here finger scan in addition to password can be connected to the ATM system, which will make digital banking to be enhanced secure. Overcoming the risk of heist or hacker's access to bank accounts, under the proposed VI policy, similar own set up identifications can be used. In global banking cases such as remittances, the program can ensure risk-free on-the-go or digital banking services.

## Setting Price / Cost for the VI Product Ensuring Risk-Free Bank-Led Digital Banking Services in Economy Country-wise Such as Bangladesh

In today's digital banking services, customers compete for time saving options and service providers (banks) compete for securing higher revenues in economy no matter which country we talk about. It is well recognized that bank-led digital-services in Bangladesh first started in early 2000s [9]. Since then, it has been growing slowly but steadily where in 2010, banks began taking up a wide range of initiatives as part of their efforts to encourage customers to adopt the digital window. Despite these efforts in diverse ways from bank (s) in Bangladesh, risk-factors particularly psychological risk factors have been discouraging the probable customers signing up for bank-led digital banking-services. As hinted by the Bangladesh Institute of Bank Management (BIBM), a supportive policy and regulatory environment are the crucial prerequisites for the digitization journey of the financial sector [13,9].

With this progression, the bank-led digital banking services i.e., the online banking platforms typically charge fees for numerous services like transaction fees, account maintenance, and statement requests etc. Obviously, the amount of fees or charges varies from bank to bank in financial sector of Bangladesh. The breakdown of bank-led digital service fees or costs can be summarized [22] as follows

**Breakdown of Current Bank-Fees in Financial Sector of Bangladesh**

**Transaction Fees**

Domestic transfers - fees for transferring funds between accounts within the same bank or to other banks vary by bank but generally range from Tk. 10 to Tk. 100 per transaction, depending on the amount and type of transaction.

**Fees for Debit Cards / Credit Cards**

Issuing cash withdrawal cards such as debit card, credit card etc. where bank charges as annual fees. Also, bank charges transaction fees if the ATM is not within their own network.

**Account Maintenance Fees**

Minimum balance: Some banks may charge a fee if the account balance falls below a certain minimum.

**Statement Fees**

Account statements: Some banks may charge a fee for providing account statements beyond the standard free statements.

**Certificate / Report Fees**

Balance Confirmation Certificates: Some banks charge fees for issuing balance confirmation certificates, especially for additional requests beyond the standard yearly or half-yearly provision.

**Solvency Certificates - Fees may be Charged for issuing Solvency Certificates**

**Setting up price / Cost for the Proposed VI Product in Digital Banking Services**

It is well recognized that to establish the price of a new product, a bank will need understanding its competitive landscape, then setting prices strategically based on factors like cost, value, and market demand [17,22]. Here the bank's pricing strategy will likely involve various pricing methods, potentially including cost-plus pricing, value-based pricing, or competitive pricing, according to a general understanding of business principles [17].

However, in today's appearance of nanotechnologies and artificial intelligence, the financial institutions particularly banks must prepare themselves for a revolutionary shift in financial technologies where banks may produce added charges for digital services [13,9,7].

Accordingly, the price for the proposed insurance, though it appears to be simple & straightforward, can ensure absolute risk-free digital services, i.e., the price of the VI can be set up based on regulatory procedure where the price can be considered as a fixed price.

This is because a fixed price for insurance can have both positive and negative welfare implications depending on the market structure and individual circumstances. A fixed price can lead to efficiency gains by simplifying the insurance market, but it can also create issues like adverse selection and potentially increase costs for insurance providers [17].

**Potential Benefits of Having a Fixed Price for Insurance Under VI Policy**

### Market Simplification
It can simplify the market of the VI making it easier to decide whether the digital banking user will purchase insurance or not, particularly for those with limited financial literacy.

### Reducing Customer's Time on Choices whether Insurance or no Insurance
Fixed prices can reduce the time & effort needed for individuals to shop around for insurance. Potentially it can facilitate the market to be efficient.

### Increasing Access to Insurance
Fixed prices can make the insurance more accessible to individuals who might be priced out of the market due to high premiums or complex pricing structures.

### Potential Drawback of Having a Fixed Price for Insurance Under VI Policy

### Probability of Moral Hazard
Fixed prices can incentivize individuals to take on more risks because they are protected by insurance, potentially leading to higher overall costs for the bank or insurance service-provider.

### Social Welfare Impact of Having VI in Bank-Led Digital Banking Services
Any product, obviously a legal one, innovation naturally has a positive welfare effect by increasing social surplus. That is this facilitation in a market system eases a net increase in consumer and producer well-being, i.e., the consumer and producer surpluses.

Since the VI as a new product can ensure total risk-free digital-banking transactions, having a customer's access to it can ensure achieving an increased consumer surplus, i.e., customer's benefit from higher digital-banking transactions. On the other hand, it facilitates increasing bank profits by cutting down its operating cost of banking services. With this positive impact, the specific welfare effects can vary depending on number of digital transactions a customer complete and the service market structure. Surely offering a bonus or discount to customers for having a higher number of digital transactions can attract more customers there.

More detailed on the welfare effects of having the VI as a product in the banking service-market

### Static Framework
### Increased Consumer Surplus
Having bank customers' access to VI products such as new features, improved quality with security assurance, lower customer cost by receiving bonuses on offer , which may be offered by the bank for having a higher number of transactions etc., which can lead to an increased consumer surplus. Surely, the presence of the VI product will attract current digital customers and most probable customers who are enthusiastic but psychological risk-factors were undermining their desires to enjoy the digital-banking facilitations. This is because this VI product will ensure greater utility for the customers, or they can get the same utility for lower prices or cost of the VI product after receiving bonuses.

### Increased Bank Profits
The adaptation of the VI product can lead to increased profits for the banks who will adopt the VI e-banking services meeting a customer's needs. This can be due to having higher growth-trend of digital transactions, which will reduce bank's operating cost without detreating its service quality.

### Dynamic Framework in the Long-Term
### Economic Growth
The adaptation of the VI product will drive economic growth by boosting productivity, creating new markets, and fostering competition in the digital-banking service market. This new service in digital-banking services will lead to higher outcome, and it will encourage banks and other relevant firms' organization to become more efficient, further contributing to growth. The reason is that, by having VI in place, more companies and organizations will feel secure doing all digital transactions through bank(s).

### Increased Employment
The VI adaptation as a new product can lead to the creation of new jobs, particularly in innovative-related industries. It can also lead to the creation of new industries for providing insurance services, technical support for securing services etc.

### Technological Advancements
The VI product can fuel technological progress, leading to better products & services in the digital banking service market, which in turn improves the overall standard of living. It can ensure cash-less human society sooner than delaying.

**Social Welfare**
This VI new product can lead to increased overall social welfare by improving the quality of life, offering more choices, and contributing to a more efficient economy. Furthermore, by having more access to digital services, individuals will be able to save more time, which can be invested in completing other tasks on duty.

### Potential Negative Effects (less common)

**Displacement of Existing Products**
This VI product will surely not lead to displacement of existing products in banking services, but it may potentially cause temporary job losses of banking-service providers for enhancing bank's profits without deteriorating banking-service quality.

**No Increased Complexity**
This VI product might not be complex requiring more specialized skills. Rather than creating a barrier to entry for consumers, it will faster inspire customers by having bonus provisions based on number of digital transactions.

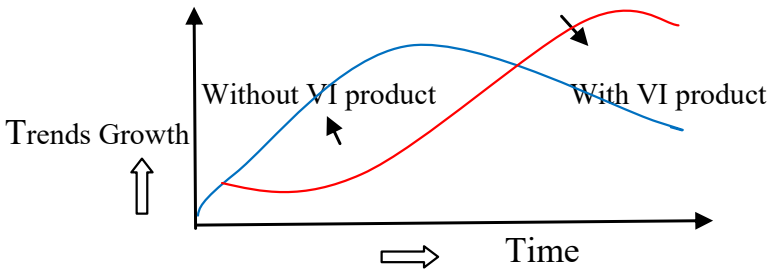
**Uneven Distribution of Benefits**
The benefits of the VI product might not be evenly distributed. In summary, the overall welfare effect of having VI in place is generally positive, contributing to increased social surplus, economic growth, and improved living standards. However, it is important to consider ensuring that the benefits of the VI product are shared broadly.

**In what way, the Proposed VI Product Be Instrumental in Bank-Led Digital-Banking Services in Economy Country-wise?**
Once the importance of the VI product is recognized and the relevant policy is in place, it will spread from bankers to customers in economy. It will enhance the growth trends of digital transactions through bank-led services. Then for example the Bangladesh economy, particularly bank-led digital service -system can be an example to other economy country-wise.

Accordingly, the lifecycle of the VI product can be elaborated using the S-curve. This S-curve will capture the growth trends of productivity and revenue against time. Surely at the beginning, the growth level will be slow as the new VI product sets itself. However, at some point, customers and new added customers will begin to demand the VI-product in bank-led digital banking service-market.

In this market, having a rebate policy in practice based on the number of transactions can be further instrumental in the growth trends of digital transactions in bank-led services. It will attract more customers to use VI-products and attract more probable customers to become customers of digital banking services where their priority will be to use VI products. Accordingly, the growth trends will increase rapidly, which will spread from city area to rural areas in practices. These new incremental changes to the product will allow growth to continue.

Near the end of its lifecycle, the growth will hold up or slow down and may even begin to decline where no new investment in that product will yield a normal rate of return. But it will set up a secure bank-led digital banking services through banks that introduce the VI product in banking services. Eventually, it can present a Cashless Bangladeshi society soon, which can make the Bangladeshi nation to be the first nation in the globe.




In this journey, surely the successive S-curve will come along to replace traditional banking-services. It will further continue driving the growth trends upward where VI will have "product life" in multi-faucets. Specifically, they are i) a starting-up phase ii) a rapid increase in revenue and iii) an eventual decline. However, it will never get off the bottom of the curve and will never produce normal returns. In this journey, it will play vital roles presenting a secure bank-led e-banking service, which is needed to attract today's probable customers in economy country-wise.

Based on analysis, it is now well recognized that the presence of the VI product in bank-led e-banking services can ensure risk-free digital banking services. It can ensure elevated self-service-banking in any economy country-wise. Since it can guarantee savings in the form of lower cost and less time requirement, it will be beneficial to customers in

multi-faucets. Accordingly, customers and probable customers will flock to it when they use banking services. With the advancement of ICT usage in human society, the banking sector can be further competent, cutting down operational costs, meeting customers' needs and then keeping up with global changes.

With these prospects for producers & users of the product in bank-led digital-banking services, the financial sector in economy of the nation will be no exception. In today's world, for sailing through tough competition and to sustaining sound revenues, the financial sector country-wise has been engaging more than that of other kinds of bank on adaptation of IT facilitations in its operation. On this aspect the Financial Sector of Bangladesh is no exception. However, it has failed attracting or reaching out to a major part of probable customers in case of bank-led digital banking services.

## Conclusion

In today's world, humankind lives with business-mentality and technology-driven lifestyles where services are conducted in multifaceted, competitive and rational manners. Banking services are no different. It is carried-out in competitive mode that has resulted in digital-banking particularly bank-led services in world-economy country-wise. However, it is characterized by evolving many factors that are often unpredictable. It faces serious pitfalls being risky when it comes to digital banking, particularly bank-led digital banking services. In this busy world, most customers do not read terms & conditions of services, and they do not even save contract copy(s) in general. These weaknesses cause abuse(s). Customer faces perceived risk such as psychological risk, social / privacy risk, hidden charges and account hacked risk etc. Addressing today's growth trends of bank-led digital banking services, adaptation of the VI as a new product in bank-led digital banking services can affect two groups of bank customers. They are: i) winners who benefit from accessing the VI product and ii) losers who supposedly worsen their relative position when the growth trends of digital-banking services will be in full swing in country that chooses to adopt VI policy. It will ensure the nation to be cashless society, which can be an example to other nations in today's Tech-driven world.

On setting up price of the VI product in the digital-banking service market, a fixed price insurance can be more effective than that of competitive prices in the market. It can simplify the market, reduce costs for customers and increase access to it and the bank can enjoy higher profits by reducing operating costs in many ways. Welfare Analyses are used as guidance for ensuring efficiency cost of competitive pricing of insurance so that VI becomes appealing to parties involved. In the case of bank as insurance-provider, adverse selection in insurance market, welfare cost of inefficient pricing is quantitatively small, and advantageous selection results the opposite [23,24].

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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