

VOLUNTARY INSURANCE FOR RAPID GROWTH TRENDS OF TRANSACTIONS IN E-BANKING SERVICE-MARKET: SEEKING POLICYMAKERS' ATTENTION IN GREEK ECONOMY

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Abstract

Digital banking is an important product in today's economy country-wise where Greek economy is no different. However, like in any other country, customers, and probable customers feel it to be risky including psychological risk. Thus, adding Voluntary Insurance as a new product in digital-banking services can ensure rapid growth-trends of number of transactions in economy of Greece. This new and increasing value is what will keep banks or business firms growing, which can ensure absolute risk-free digital banking in economy country-wise such as Greek economy. Historical trends of economic growth ratify that addition or inclusion of a new legal product will improve society beyond just immediate gratification of consumers. In the business world, new products and services are the lifeblood of any firm where Greek economy particularly financial sector in Greece is no different. So, the inclusion of the VI product in policy-design for effective digital-banking services in economy of Greece can ensure speedy growth trends of digital-transactions. Once the VI as a product is in place, it will spread from bankers to customers and its growth trend (S-curve) will capture the growth of revenue or productivity against time. This growth will be slow as the new product sets itself up but at some point, digital banking users will begin to demand it. So, the product growth trends will increase rapidly. It will ensure a higher number of digital transactions than those today in the digital-banking service market. Over time, it will ensure Greek to be cashless society soon. The goal of this study is to bring these VI policy recommendations to policymakers and bank-management's attention in Greek economy.

Key word(s): Digital banking; Greek economy, Perceived-risk factors; Akim's model, Cashless society.

JEL Classification: D11, D12, G11 and G12

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1. Introduction

In the 21st *Century* business world, services are conducted in multifaceted, competitive, and rational manner. In this business-mentality and tech-driven world, there are many factors that are often unpredictable. Despite these limitations, digital banking services are important products in today's financial sector country-wise where Financial Sector in Greece is no different.

However, today's bank-led digital-banking faces serious pitfalls, being its risk, including psychological-risk (Rahman, *et. al.*, 2024). Customers compete for time-saving options. Bank(s) compete to marginalize its operating costs and then enhance revenues. In most cases, customers do not read or scan the terms & conditions of banking services. Customers do not save contract copies in most cases and even do not exactly remember the number of transactions or transaction amount in a customer's account. These weaknesses cause abuse in multi-faucets. In digital-banking service-market, a customer faces perceived-risk-factors such as hidden charges, *extra* fees, account hacked. Besides this, the psychological risk factor significantly undermines probable customers' decisions using digital-banking services. Over all these *dilemmas* have resulted slow growth-trends of digital-transactions in digital-banking service-market in economy country-wise where Greece is exception.

Addressing the issues, *Voluntary Insurance* (VI) as a new product in digital-banking service-market is proposed by Akim Rahman (Rahman, 2018) in multifaceted literatures where the proposal is known as Akim's Model. It can serve as a guidance to policymakers in economy country-wise for designing effective policies for ensuring absolute risk-free digital-banking services, which can ensure cashless human society soon. However, no country has the VI policy yet in place. So, no bank has yet introduced the VI as a new product in the digital-banking services market.

Thus, the goal of the current effort is to bring the proposed policy-proposal to policymakers and bank-managements' attentions country-wise such as Greek. So that underpinning Akim's model, relevant policies can be introduced in Greek financial sector. So, the VI as a new product can be introduced in digital-banking service-market, which can ensure rapid growth-trend of digital-banking use in financial sector of economy of Greece. On the same token, it can open doors for entrepreneurs that have new insurance companies in operation, which can facilitate further economic growth-trend in Greek.

2. Literature Review

It is well recognized in literature that perceived risk factors negatively affect digital-banking services (Lee, 2009; Rahman, 2018, 2022). Tackling these *dilemmas* in financial sector globally, the application of Akim's model (Rahman, 2018; 2022) can be a win-win-win to parties involved where government efforts for policy-design can ensure a cashless society soon in economy of Greece. Besides ensuring risk-free

bank-led digital-banking services, this new product can contribute to the economy in multi-faucets. Also, it can facilitate establishing the Hellenic or the Greek nation to be the first nation in the globe when it comes enjoying risk-free digital-banking services.

However, the findings of our Web navigation suggest that no financial sector country-wise has yet introduced Voluntary Insurance to protect its digital-banking services where the financial sector in Greece is no exception. In today's world, governments in all countries want to see effective use of technology facilitation in multi-faucets within self-nation and beyond for greater interest of its society. Since year 2010, major banks in economy of Greece were openly appearing to be ready to embrace digital as a potential solution for keeping and shoring up both revenues and relevance (Kuntz 2016, Nguyen, 2020). However, there are some obstacles, uncertainties, and limitations on security issues of digital banking that may affect certain business models (Floros, 2020).

For example, customers' bank accounts in many countries are insured by the nation's Central Bank. On this aspect, the national banks and foreign non-EU banks take part in the Greek Deposit Insurance System. Under the GDIS, the depositor can return up to €100,000 in total all bank accounts in case of default. If the client has accounts of €100,000 in several banks, then the money is protected (Financemagnet.com, 2023). However, the provision of the Deposit Insurance System in economy country-wise does not spell out that the digital-transactions are insured (Tan *et al.* 2013, Future Digital Finance 2020).

On this issue, banking provisions, particularly GDIS of Greek economy is no different. The provision of the deposit insurance system in Greek economy covers bank account, and bank deposit (Camara, 2006; Tan *et al.* 2013). National banks and foreign non-EU banks take part in the GDIS. When a customer deposit money into the customer's bank account, for example in a savings account, it is called deposit. The banking business model says that lending depositor's money to other customers, keeping only a part of it available for people wanting to withdraw money (Financemagnet.com, 2023). The banking business model says that a bank makes sure that a substantial part of these deposits is safe even if a bank fails, banks pay into an insurance fund known as the GDIS (Financemagnet.com, 2023). This is important to preserve trust in the banking services. However, it does not cover digital transactions, which face perceived risks such as psychological, social / privacy risk, customer dispute and time value and technological interruption.

This raises question: how can policymakers of Greek economy be motivated or inspired designing public policies so that banking sector becomes obligated adopting VI policy in digital banking service-market for ensuing risk-free digital transaction?

This study takes on the tasks to draw policymakers' attention in Greek economy so that issues in digital-banking service-market can be addressed for the greater interest of the Greek society in multi-faucets.

3. Why is Greek economy in this study?

The Central Bank – *Bank of Greece* has been committed to accelerate digitalization of financial sector of Greek economy by expanding number of participants in digital-banking service-market (Financemagnates.com). Greeks use the internet for internet banking, which reached to a record high of 49.78% in December of 2022 and a record low of 6.00% was in December of 2010 (Deloitte.com, 2022, Stournaras, 2019). In Greece, rural population was recorded at 19.96 % in 2021 where people have less interest accessing to internet (Deloitte.com, 2022). So, the rural population has limited access to the e-banking service market.

Besides this, the Greek economy faced several problems after the 2008 fiscal crisis (Stournaras, 2019). As reported, the Greek crisis has taken a heavy toll on output, incomes, and wealth, which together has resulted a high public debt ratio, a high NPL ratio, and high long-term unemployment (Stournaras, 2019). All these together, this *dilemma* has undermined the progression of digital-banking services in Greek economy (Floros, 2020; Deloitte.com, 2022).

However, with government's ongoing inspiration and efforts, digital-banking services have been keeping reinventing itself in Greek economy. Having familiarity with digital technologies, the banking industry has undergone significant transformation over time (Financemagnates.com, 2023). With digital banking progression, customers can now access banking services from anywhere at any time, which makes the industry to be more efficient and convenient than before.

With the increase of digital technologies in Greek economy, digital banking is now on track to become the industry standard. As reported, mobile banking, AI and chatbots, open banking, and cryptocurrency etc. are few of digital banking trends that are reshaping digital-banking service-market in the economy of Greece (Financemagnates.com, 2023). As reported, personalized banking, augmented reality, voice banking, and cybersecurity etc. are set to shape banking industry in the coming years (Financemagnates.com, 2023; Statista, 2025).

For few years now, mobile banking has grown in popularity in Greek economy and beyond with customers' preferences to conduct banking transactions on smartphones. Today, mobile banking has become a popular choice for many customers due to its convenience and ease of use. Statista and Neo banking predict that the number of mobile banking users will increase rapidly and will reach to 1.75 billion by 2024 in economy of Greece (Statista and Neo banking, 2022). Obviously, in this journey, policymakers' motivations and efforts on policy-design & policy adaptation ensuring risk-free digital banking services can serve as a precondition fulfilling the goals. Accordingly, the proposed proposal, *i.e.*, the application Akim's Model can be instrumental motivating the policymakers for designing & adopting effective policies in today's economy of Greece.

4. Objectives of the study

This study continues with two specific objectives. They are

- a) To apply Akim's model – Voluntary Insurance for ensuring growth of total risk-free digital-banking services in Greek economy.
- b) To examine how it can be instrumental to Greek economy, in general.

5. Methodology

In aim to establish the basis of the model – Voluntary Insurance (VI) in Greek economy, this study uses the Theory of Consumer Choice & Behaviors (Rahman, 2019). So, that it can be attractive or motivational to policymakers for relevant policy-design in Greek economy.

6. *Voluntary Insurance* in the e-banking service market: What is it? How can it work?

Addressing issues that undermine digital-banking progression in economy of Greece, *Voluntary Insurance* (VI) as a new product (Rahman, 2018) of digital-banking is proposed. The financial sector in Greek economy can introduce it as a product in operation where a bank or third-party can collect premium ensuring secured services in digital-banking service-market.

The way it would work is that here the customer's participation will be voluntary. Insurance will be attached to a customer's account if the customer wants it for digital services. Since the program will be designed as a way of transferring the risk away from its premium-payers, it will ensure premium-payers with a sense of certainty. Here premium-receivers will take *extra* measures for ensuring risk-free digital-banking services. For example, ATM Card or Credit Cards 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 thumb or forefinger scan. Here finger scan in addition to password can be connected to the ATM system, which will make digital banking enhanced secure. Overcoming the risk of heist or hacker's access to bank accounts, under the proposal, similar own set up identifications can be used. In global banking cases such as remittances, the program can ensure risk-free digital banking services. Since customers' psychological risk-factor undermines digital-banking progression in Greek economy, the application of the VI product can overcome this *dilemma* eventually in the life-path of VI product.

6. Theoretical Justification of Policy Option – VI Product: The Akim's Model

It is clear now perceived-risk factor plays an influential role in setting the stage for the proposal,

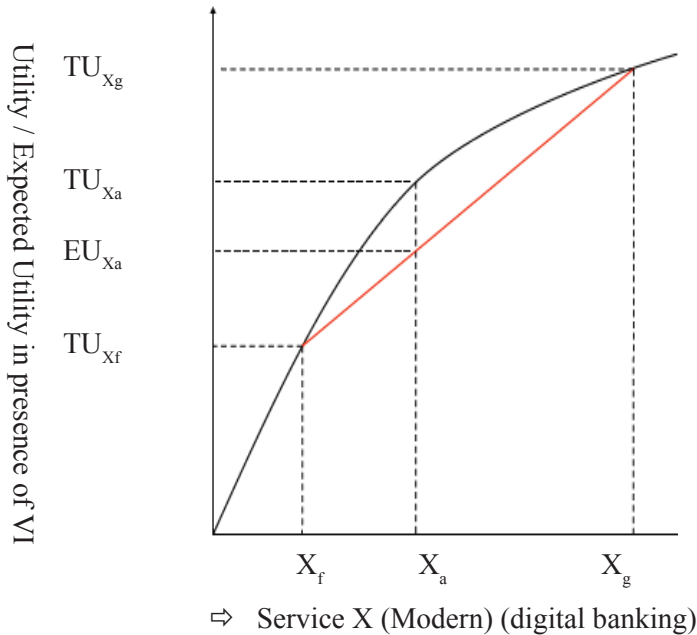


Figure 1: Risk Aversion *Scenario* in Greek economy

the VI Option in digital-banking service-market. It is palatable to assume that E-banking-customers are risk-averse, i.e., here the customers prefer certainty to uncertainty when it comes to using e-banking services. Figure 1 illustrates the risk preferences of a risk-averse banking-customer.

In a world of uncertainty, a customer's actual utility that the customer receives from digital services will never fall on the $TU(X)$ but rather on the chord (the bold line). X_g stands for a service outcome in which a customer may use a certain level of service X while X_f stands for a negative outcome in which customers may use less of service X. If there is a level of uncertainty that a customer may not use X_g units of service X, the utility that this customer receives will lie somewhere on the chord (the bold line). The chord stands for the expected utility (EU) of using service X, which lies in the concavity of the curve because it is the average probability that the customer will use service X or not. As a result, an individual will never receive $TU(X_a)$ but rather $EU(X_a)$.

7. Bringing to policymakers' attentions: How can it be instrumental to Greek economy?

The goal of this study is to bring the proposal of VI as a new product to policy-practitioners' and bank managements' attentions so that it can be introduced in digital-banking operation in the economy of Greece. This raises questions: how can this new product be instrumental to the banking sector and to Greek society in general? Why is it important? Why now?

Answering the questions posed, it is palatable to say that transferring risk away from customers will directly help both the private commercial banks (PCBs) and the customers. Furthermore, it can attract new customers who were on the brink using digital banking but just felt it was risky. The model can ease the customers with incentives for increasing the usage of digital-banking services while keeping the best utility of it. Since the VI can be instrumental in digital-banking service-market many ways such as: ensured new value for customers, improved society, and continued existence of the company, it will be the lifeblood of business, companies, and societies in economy of Greece as years to come.

What can the VI product of digital-banking service-market do in Greek economy?

Once policy-practitioners and bank-management in Greek economy recognize the importance of the proposed VI product under Akim's model and introduce digital banking-provisions that authorize the VI as a new product, it may spread from bankers to customers in economy of Greece and beyond. This process of life cycle of the VI product can be described using the S-curve. This S-curve will map the growth of revenue or productivity against time. In the early stage of this journey, growth will be slow as the new product sets itself up. At some point, customers will begin to demand VI products in digital banking service market. In this market, having a rebate policy on the number of transactions can be further instrumental. So, the product growth trends will increase rapidly. These new incremental changes to the product will allow growth to continue. Toward the end of its life cycle, the growth will slow down and may even begin to decline where no new investment in that product will yield a normal rate of return. However, it will set up a secured bank-led e-banking through bankers who introduce this new product, which can present a Cashless Greek society soon, which can be the first nation in the globe.

This successive S-curve will come along to replace traditional banking and will continue to drive growth trends upward where VI will have "product life" i.e., i) a start-up phase ii) a rapid increase in revenue and iii) eventual decline. But it will never get off the bottom of the curve and will never produce normal returns. In this development, it will play vital roles presenting a secure bank-led e-banking service, which is needed to attract today's probable customers.

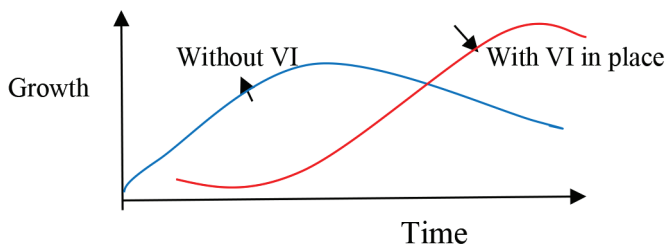


Figure 2: Impacts of VI product in Greek economy

Figure Source: Author's creation

VI in place can ensure risk-free digital banking services, which can guarantee elevated self-service-banking activities in any economy such as Greek economy. This can be beneficial to customers because it can ensure savings in the form of cost and time. Thus, customers will flock to it when they use banking services. With the extra advancement of ICT usage, the banking sector can be further competent, cutting down on its operating costs, meeting customers' needs and keeping up with global changes.

With this *win-win* setting for producer & user of the product in *digital-banking*, the financial sector of Greek economy is no exception. It is well recognized that to sail through tough competition and to sustain revenues, the financial sector in economy country-wise is engaging more than that of other kinds of bank on adoption of IT in its operation. In this reality the financial sector of Greek economy is no exception. However, it has failed reaching out to a major part of probable customers in case of digital banking services in countries including Greece.

8. Direction for future study

The directions for future study (Rahman, 2024) can be summarized as follows:

- a) Whether the amount of insurance premium has any impact on the probability of the VI policy adoption in banking sector in Greek economy?
- b) Conducting an empirical study where data statistics should be on customers and probable customers' opinions on the causes of slow growth-trends of transactions in the economy of Greece.
- c) Conducting a test whether the insurance premium or the cost for the VI has impacts on the possibility of the VI policy adoption in Greek economy.

9. Conclusion

Now adding Voluntary Insurance, a new product in the digital-banking service-market, can be an impetus meeting the 21st Century challenges. This new and increasing value is what will keep banks or firms be growing, which can ease economy booming in Greek. If there is no new value to offer customers, a bank or firm wilts and eventually dies. Historical trends of economic growth in Greek economy, certainly ratify that addition of a new legal product will improve society beyond just immediate gratification of consumers. In the business world, it is well recognized that new products and services are the lifeblood of any firm. It is no difference in the case of digital-banking service-market in Greek economy. Without them, firm(s) or bank(s) may wither on the vine and either die or be absorbed by another firm.

So, the question is: can policy-practitioners of Greek economy play roles for the better-ness of its modern-society when it comes digital banking services in Greek economy?

The answer to the question posed is, YES, where efforts of policymakers and bank-management in the economy of Greece can play significant role for the better-ness of its economy as well as for its society there, which can ensure cashless society sooner than further delays.

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