IRJEMS International Research Journal of Economics and Management Studies
Published by Eternal Scientific Publications
ISSN: 2583 – 5238 / Volume 4 Issue 1 January 2025 / Pg. No: 110-124
Paper Id: IRJEMS-V4I1P112, Doi: 10.56472/25835238/IRJEMS-V4I1P112

Research Article

Technological Developments Allow the Merger with Other Industries in the Services Sector. A Study of Tourism/Banking/Insurance Industries' Integration and Product Performance Management

[1]Prof. Dr. GVR Shastri
[1]Alumni of Indian Institute of Technology, New Delhi.

Received Date: 19 December 2024 Revised Date: 30 December 2024 Accepted Date: 02 January 2025 Published Date: 13 January 2025

Abstract: *Services sectors like Tourism, Banking and Insurance have been showing enhanced performance, generating additional revenues and employment at the same time. Recent applications in web/mobile technology have helped these sectors to provide faster service and optimum utilization of time and resources. It is through the applications of web and mobile technology that these industries can be easily merged into one whole unit to provide a new business dimension for the customers. Using empirical studies of how technology factors affect the macro variables Tourism, Banking and Insurance and if at all the integration of the three said industries is possible, this paper has been attempted.*

Keywords: *Service sector, Service sector Integration, Technology Factors, Web technology, Mobile applications, Advanced Integration, Banking Industry, Tourism Industry, Insurance Industry, Information and Communication Technology, Mobile Banking, Mobile Apps, Product Performance Management, etc.*

I. INTRODUCTION

India is one country with a vast population and follows a mixed economic pattern (capitalistic, socialistic economic advantages drawn from both the economies find their midway and are called mixed) manufacturing sector, agricultural sector and services sector (Raiyani & Joshi, 2011). There was more revolution visibly evident between the 1980s and the 90s in the sector of manufacturing, but the revolution in agriculture, as well as the services sector, was quite dependent on communication and technology (Puschel, Mazzon & Hernandez, 2010). Even though the technology is available, due to a lack of communication infrastructure, the technologies that can further enhance the growth of the agricultural sector have not reached their expected mark because of reachability. The point here is the lack of communication that is spread across the nation is visible (Pritcyhard, 1982).

The systematic technological developments at a fast pace allowed for new dynamics of information and technology and the technological equipments in terms of the communication network. The development took place across the spectrum of the services sector and, as displayed, is a strong and powerful integration through communication equipment called mobile (Constantinides & Fountain, 2008).

A) Technological Foundation Stage of Development in Tourism, Banking and Insurance Industries

Only after financial reforms were implemented in the early 1990s did the banking industry start to undergo change. The goal of implementing these structural changes was to strengthen and fortify the banking sector. They sped up economic expansion and worked to remove the banking industry from the governing regime (Bhasin, 2007). The far-reaching measures changed the working and machinery of the economy and strengthened the regulatory norms to bring greater accountability and discipline in the sector. According to Martin, Miranda, and Prasanna Venkatesan (2014), the Reserve Bank of India worked hard to gradually but steadily implement international standards in a number of prudent standards such as risk management, corporate governance, auditory compliance, transparency in the books of accounts, and disclosures. The reorganization facilitated the RBI's transition from managing commercial banks on a micro level to concentrating mostly on macro objectives. Deregulation and liberalization allowed banks to have the ability to rival multinational banks and tackle global difficulties (Dadabhoy, 2013).

With the introduction of technology in the banking industry, teller operations and branch operations started to get automated. The reforms made IT more widely used and made it easier for bankers to perform routine tasks, including making payments, issuing cash receipts, transferring money, maintaining transaction records, and many other paper-clearing activities

(Martinez & Martinez, 2008). It was chosen to maintain manual management over key processes like foreign exchange, loans, financial underwriting, investment banking, and treasury because automation was yet in its infancy. Since each bank kept data on its own server and reconciliations were only completed at the end of the day, technology was still sluggish, and it typically took more than a day for any transaction to appear in the account (Mane & Niranjan, 2014). Additionally, banks kept a parallel manual ledger to guarantee the backup of the primary backend operations. It takes a long time for larger banks with multiple locations to compile data for their zones or regions. Banks began using a full automation solution after realizing the benefits of technology (Khanna & Kaushal, 2013).

While automation was gaining ground in India, the Central Banks of foreign countries were helping lay down the rules and regulations to ensure they were in line with globally accepted benchmarks.

In order to improve the client experience and workflow efficiency, computerization made it simple to get customer and account details at the teller terminal. On the other hand, it facilitated the quicker consolidation of General Ledger data and MIS accessible to the local offices (Mamaghani, 2009). The 1980s and 1990s were dominated by automation thanks to ATMs and electronic fund transfers. These developments improved banking productivity and proficiency. Based on cost and acceptance, computerization advanced at a different rate in each nation and was mostly driven by the demands of the financial industry (Ratti, 2012).

II. LITERATURE REVIEW

A) Advanced Integration through Mobile Applications for All Three Sectors of Tourism, Banking and Insurance

Though the main operations of banking were the foundation of banking modernization, there was a requirement to expand software solutions to other areas. It meant the automation of specialized services such as budgeting, fixed assets management, liability management, data warehousing, and business analytics, each of which has played a vital role in changing banking into a modern, technology-driven business (Leung & Law, 2005).

With the aid of new innovations, employees could now route the usual service requests through phone banking or the internet and concentrate on getting new business. This, paired with the automated teller machines, brought in another stage in which banking customers became self-reliant and did not need to visit the branch for every small request. As channel banking came into existence and increased in popularity, security became a new challenge. Multiple sham transactions by ruthless elements gaining control of customers' Internet banking accounts forced the banks to devote more resources to enhancing the security of their customers' financial data and strengthening their grip on anti-money laundering through strong risk management solutions. The compliance requirements gained significance at the national and international levels, and banks' decisions and dealings were scrutinized at multiple levels (Shin, 2009).

The increasing demand for insurance services can be accredited to the rising complexities due to a larger customer base. The increasing competition in the sector has made enterprises in this industry invest heavily in IT and depend on its modern innovations. Some of the core areas in which investment is being made include process automation, database management, analysis, and customer service management (Leo, 2010).

"With the ever-increasing growth in client base and daily business transactions, insurers are increasingly shifting their concentration towards the acceptance of ICT-oriented tools, facilities, and platforms. Till now, this acceptance in the insurance sector has occurred in a stage-wise manner, wherein it has shown a steady and remarkable growth rate over time," said Kalyan Banga, who works as a Product Manager with Netscribes (Rheingold, 1993).

It is a widely known fact that the current ICT landscape in the insurance sector also involves major competition among ICT vendors. There have been several reports that have specified that the quality of the results has also to be maintained (Lengyel, 1994). The rate of implementation of mobile apps in the insurance segment is not at par with the technical advancements. This gives rise to numerous opportunities for firms to develop apps that serve their customers through mobile platforms (Amara, Landry & Traora, 2008).

This improvement is driven by procedures required to modernize business functions, operations, data management, information technology, and marketing, which remain the main pockets where insurers may invest as they look forward to creating mobile applications (Adel Abdel-Baki, 2014). Other than providing a customer interface for smooth functioning, these apps can increase the productivity and potential of business-critical processes, ensuring great benefits and the probability of drawing new customers and building relationships that last a lifetime. It will also enhance an insurer's ability to study, research, understand customer needs, and promote its brand (Bautzer, 2005).

B) Techniques and Applications of Integration

a. Data-level integration

In this technique, the backend information and important functions are incorporated. This can either be push or draw-based. When push-based integration is used, the function approaches SQL as an interchange application's database tables. This is through database connections or backend systems, and data is pushed into an exchange application's database. The force-based reconciliation uses triggers and surveying.

The triggers get movements of data and create the perceiving information for interface tables. It is then easy for the connectors to study the application's interface tables and recoup the pertinent data. This draw-based joining is used when an application obliges segregated notice of movements inside an exchange application's data. When the program that requires to be synchronized does not provide APIs or client interfaces, you will employ data-level collaboration. You should also have an excellent grasp of the business procedures that may affect the application's information model. It is ideally the main alternative with most custom applications that need APIs.

b. Client Interface-Level Incorporation

This binds incorporation rationale to client interface code and can be either scripting or substitute-based. At the point when utilizing a scripting-based model is applied, the reconciliation code is installed into the client interface segment occasions, common with customer/server applications, for example, Power Builder or Vantive.

Centralized computers don't have a tendency to have well-disposed information stores and don't give open APIs. On the other hand, the client interface level combination is, by and large, useful if everything else fails. On the other side, if you add scripting logic to provide interaction with customer/server applications, they become incredibly difficult to maintain as the coordination level increases and more modifications occur. Client interface progressions can always break combination triggers and logic. This tight linkage maintains a constant relationship among the maintenance of the client interface.

c. Application-Level Integration

This is seen as the best road ahead for application reconciliation, as it makes use of the integrated application's joining mechanisms and APIs. It is invisible to the integrated program and secures the application's data. The application interface permits you to invoke business rationale to protect information.

d. System Level Joining

This is not a frequently used specialization of the application-level integration system. Here, we combine the basic operations of numerous applications into a single application that fronts the coordinated applications. It is, by and large, utilized when each coordinated application has a comparative set of API or utilitarian strategies. The coordinated applications must help a Remote Procedure Call (RPC). The principal detriment to this methodology is, again, the tight application coupling in front segments.

C) Mobile Applications

More of our association online happens on cell phones. In excess of five billion mobile consumers – around 77% of the world's populace – are online (Source: The International Telecommunication Union). This new sort of direct access for shoppers is promoting businesses to target Smartphone users into buying products and/or services or administration to various services directly from their telephone. Around 40% of smartphone users actively use mobile apps to gain information or do online shopping.

a. Mobile Applications in the Tourism Industry

Mobile apps have become an indispensable medium for connecting with consumers in the tourism business. These applications are a collection of solutions for the travel and tourism business and have value in helping clients safeguard their transactions linked to flight bookings, lodging reservations, and other chores (Stram, Vendel & Bredican, 2014). Their assorted portfolio incorporates custom answers for tourism associations, destination marketing boards, lodgings, travel and tour operators, and travel publishers. With made specifically apps to help businesses satisfy their customers' requests, they can now focus on improving their travel experience while also growing their business and assisting consumers in achieving their travel-related goals (Kwon, Bae, & Blum, 2013). Versatile Applications function as pocket guides, using GPS to provide real-time location-related details, information data, and other flawlessly organized features such as hotels, restaurants, landmarks, and so on. Much like in other organizations, the utilization of these adaptable apps has seen rapid growth in the tourism sector (Internetworldstats.com, 2014).

Mobile apps are the latest way to offer direct content and travel-related services. With such rapid technological improvements, websites that provide static information are projected to lose relevance for travelers who seek additional value in the shape of:

- Opinions/reviews by the users.
- Concentrated localized information, accessible from anywhere around the globe

The travel sector is clearly influenced by the latest trends in new age technology (Inversini & Cantoni 2009). Companies operating in this space must keep up with these emerging trends in order to lead and position themselves advantageously in the field. Currently, it is critical that tourism organizations discover new ways to approach their customers. The business is becoming more concentrated; clients are increasingly aware and better educated about the various features of the offer that is available (Munjal, 2013).

b. Mobile Applications in the Banking Industry

Mobile financial services is a channel that enables customers to interact directly with their bank via a mobile device. In a way, it is part of electronic banking and enhances online banking with its unique characteristics (Larsson et al., 2009).

We are witnessing huge developments in the banking sector due to the inclusion of IT, which has made it quick, flexible, user-friendly, and more reliable. Since automation began its spread in India, to this day, there have been multiple technology-enhanced products and services that have come into action. From digitalized bank branches to automated teller machines (ATMs) in every corner of a town or a city, banking is now open 24/7 to everyone.

Mobile banking is the newest trend and a new way for banks to stay in contact with their clients. These days, banks can offer banking services all at once. Payments, requests for banking services, immediate two-way data exchange, and unrestricted access to financial data and services are all available to consumers at any time and from any location (Jacob, 2007). Every employee in the company is aware of how widespread mobile banking service usage is and how urgent it is to realize its full potential. Customers also want readily available, quick, convenient, and compatible services on demand because anything on mobile devices happens instantly. They are more likely to suggest mobile banking after they are happy with the increased control it provides over their financial transactions and its use to their peers (Kumbhakar & Sarkar, 2003).

c. Mobile Applications in the Insurance Industry

Smartphones are used in large numbers in both developed and emerging economies. They offer novel ways for businesses to connect directly with their consumers.

While over 50% of the populace in many parts of the world uses smartphones frequently, the insurance business has been moderately getting up to speed with this pattern. It has not yet begun to utilize the versatility that new-age technology can offer to it as a business system. Because of the way the insurance business is run, smartphone apps are, at present, more persistent in general insurance than life insurance.

This presents numerous opportunities for life insurance firms to build up new mobile platforms and serve their clients. Advancement in mobile apps for life insurance is largely marked by the need to streamline this industry. Operations, transactions, data, and advertising are the main areas insurers can start to invest in as they make their apps. Mobile applications in the life insurance industry can substantially improve their profit and methodology abilities, bringing about critical profits and potential to draw the younger generation and enhance their association with existing clients. It will additionally enhance a guarantor's capability to examine and comprehend client needs and advertise the brand's plan (Khalifa & Liu, 2003).

Life insurance companies are progressively utilizing portability as an important part of their business methodology to get ahead of their competition. Their clients are progressively turning to Smartphones to access and offer data, transactions, and systems without time and geographical area limitations (Ho et al., n.d.).

Insurance companies can't disregard the profits that might be created by utilizing mobile applications within brand-building exercises through long-range informal communication destinations, online images, and outbound interchanges. These exercises are now helping other commercial enterprises as well (Spagnoletti, 2013).

D) Tourism, Banking, and Insurance Industries- Technological Changes

Financial services organizations are searching for alternate channels to meet consumer demands while improving customer convenience, cutting costs, and maintaining profitability. Automated teller machines (ATMs) and phone banking are already widely used in the finance sector in many nations, and they are becoming more sophisticated every day (White, 1998).

Rattanawong & Suwanno (2014) in the course of researching phone banking, a framework for examining the intention to embrace mobile banking technology was integrated and developed, and it was tested in a Brazilian setting. About 666 respondents from Brazil's most economically thriving cities participated in the study. The sample has 333 users of mobile banking and 333 non-users of mobile banking. The suggestions from the findings are that the proposed integration of the framework enables an in-depth understanding of those variables that will influence adopting mobile banking.

Kimiloqlin, Nasir & Nasir (2010), in studying the discovery of behavioural segments in the markets of mobile phones, have deciphered that consumers give more importance to a product's physical, functional and conveyance-based attributes. The study would apply to cluster analysis as the tool for behavioural segmentation in a goods market of high technology and has successfully identified 4 distinct consumer groups having alternative styles of decision-making.

In the 1970s, with the developed computer reservation systems (CRS) and in the 1980's, the development of global distribution systems (GDS), followed by the internet in the 1990's- there was not only the generation of a paradigm shift that was new but also a change in the operational practices in these industries (Buhalis 2003; Buhalis & Law, 2008; Eriksson & Nilson, 2007; O'Connor, 1999). ICT doesn't just allow the customer to search for and buy customized tourism and hospitality products but also provides benefits to the suppliers with the development, management as well as tourism products without geographical shortcomings and time deadlines and supports the globalization of those industries, which are providing effective tools (Buhalis & Law, 2008).

As the rapid commercialization and development of ICTs are finding advantages in the tourism and hospitality industry, Hotels, along with other tourism sector organizations, have started to adopt these technologies (Sahadev & Islam, 2005). The adoption of ICTs is expected to increase service quality, reduce costs and enhance the efficiency in operations (Law, Leung & Buhalis, 2009).

E) Mobile Technology with Customer Integration and Operational Efficiency

As Kumar and Zahn (2003) said, the actual business drivers of mobile technology happen to be operational efficiency and customer integration, which potentially increase efficiency and retailer effectiveness.

Storm, Vendel and Bredican (2011) explain how mobile marketing could add value for retailers and consumers. The piece talks about the means through which mobile marketing does value creation for its customers as well as retailers, helping in research to a more precise degree and developing the managerial tools and concepts along with providing the academics as well as the managers with better comprehension of mobile marketing along with the value outcomes that it gives to retailers.

Amongst the most critical drivers of successful phone commerce, mobile payment is one. Mobile payment actually talks about goods payments, bills and services with the use of a mobile device with the help of mobile as well as other technologies of communication (Stefan, 2000).

Yang et al. (2012) say that payment through mobile is one of the important and emerging applications that mobile commerce provides today. The adoption and use of mobile payment services are important for both investors and service providers so that they can profit from these kinds of innovations. Yen & Gwinner (2003) mention that the role that face-to-face communication and interaction had between buyers and suppliers is increasingly being replaced with SSTs or self-service technologies, which enables the buyers to produce and use these services all by themselves, not requiring direct communication with the employees of the company.

Table 1: Extended Technology

S. No.	Author/ Year	Key Issues
1.	Nakamuura *et al.*, (2006)	Just like oil is for Saudi Arabia and electronics and engineering are for Taiwan, the IT and BPO sectors have the potential to become significant economic engines for India.
	Singh (2005)	As economies and technologies change, so too may the nature of the market and the inherent qualities of services.
2.	Laudon & Laudon (2006)	The increased awareness of globalization and the availability of technology-enabled consumers to access information, process transactions easily across countries, and remove cultural and language boundaries.
3.	Strom, Vendel & Bredican (2014)	The article attempts to describe by what means mobile marketing is capable of increasing the value for its retailers and consumers. Shopping on mobile devices and how consumers use these devices while shopping is both extensions of consumer behaviour in shopping on the platforms that are interconnected in Personal Computers (PCs) along with potentially new kinds of behaviours based on the mobile devices that are uniquely integrated with various advanced features in ICT.
4.	Geum *et al.*	As one single product is no longer sufficient to cope with the market environment becoming

	(2011)	dynamic, firms are making efforts to offer products and services in an integrated form. However, even after understanding the utility that integration of product-service holds, there is limited approach being conducted to the planning of integrated offering of strategic management.
5.	Schumann, Wunderlich & Wangenheim (2012)	The role that ICT holds for growth in the economy has been repeatedly emphasized. Breakthroughs in technology have given way to newer service forms, like remote service or self-service. The effort here is to present a study that outlines the ways through which new services that are technology-based would fit into the service typologies that are existing and gives a broader understanding of the present frameworks so that their unique characteristics are captured.
6.	Klein & Jakopin (2013)	The advent of LTE and 3G networks, which have bundled packages containing unlimited SMS facility, free minutes, flat rates on the internet, etc., prevail amongst telecommunications companies. Free minutes, including access to the internet, play a vital role in evaluating the telecommunication offered by the mobiles by the consumers. This paper attempts to create optimal bundles of the services in mobile communication based upon the willingness towards payment of the data retrieved from the conjoint analysis.
7.	Feijoo *et al.*, (2012)	The prime examples of mobile applications are mobile games that demonstrate more variety and ranges of platforms for different industries of entertainment and media. The paper attempts to introduce how the basic features of the mobile market in gaming interact with its industrial ecosystem and the main activities and actors. The main focus of this paper is to understand how mobile applications evolve and how users interact with their advanced mobile applications and their dominant platforms to further explore how mobile games, with the strategies of the players along with the techno-economic developments that are pending and their deep relationships that are personal.
8.	Singh (2008)	There is a brief description of the changes that take place with ICT applications to provide advantages to society in various areas along with everyday life. The attempt is to explain, in short, the initiatives taken in various regions within India, such that ICTs' advantage can be taken.
9.	Shen *et al*. (2013)	The aim of this study was to examine the effects that information and system characteristics have in developing the perception of the user to Ubiquitous Decision Support Systems (UDSS).
10.	Drew (2006)	This paper aims to describe how scenario planning methodsning should be applied to identify disruptive innovation in the early stages so that potential paths of development can be mapped out, building applicable organizational capabilities.

F) Technological Changes Impact the Tourism Product

The introduction of smartphones and internet-based applications significantly changed people's lives. The introduction of such technology has revolutionized the travel and tourist sector and aided in the development of solutions pertaining to tourism. There is rarely a need to consult paper maps and engage in drawn-out discussions in the technologically advanced modern day to learn about the transportation system for a foreign tour (Cheng, Chen & Tai Tsou, 2012). With the help of Smartphones and mobile apps an individual is able to translate the world live on the mobile screen, trace foreign locations, get knowledge about transit route and fare, make last minute hotel bookings, dinner reservations, and similar activities that make life easier.

The development of technology and its uses, especially in distribution, boost the tour and travel sector. A growing number of customers have access to internet technology and are mostly using the World Wide Web (www). Travelers are free to select their own places and make judgments about their tours based on their own capabilities (Constantinides & Fountain, 2008). They may customize their own packages and journeys thanks to the abundance of information available online, pricing comparisons, and the availability of the finest prices and offers. By placing bids on goods and services on websites like Priceline, tourists can also influence prices. Travelers may now investigate, book, and review the products and services offered while traveling thanks to the development of mobile technology (Daniels Clemes, Shu & Gan, 2014).

More opportunities for online information gathering and booking are presented by the growing number of mobile phone users with associated smart applications in emerging nations like India. Nonetheless, it is projected that in the upcoming years, mobile technology will result in significant advancements in the travel industry.

G) Anticipated Prospects in the Mobile Market Related To Tour and Travel

Online Travel is Gradually Becoming more Mobile-oriented - Major online travel companies have indicated that travelers are using mobile services to book their tours as a result of the growing use of smartphones as travel tools. Due to their ability to request and collect location-related data from service users, travel applications receive a portion of the revenue generated by adverts.

Business Related to Tourism is Huge – One of the largest industries in the current competitive global market is that of tourism. Tourism provides approximately $6 trillion as a contribution towards direct and indirect economic development. The consumers engaged with travel related apps can be counted in millions.

Travel Brands and Advertisers Find Mobile Travellers as Attractive Audiences for Business –Major companies and advertisers find mobile travelers to be appealing customers based on their demographics, habits, and interests. These tourists not only talk about their experiences but also promote travel companies through word-of-mouth referrals, which act as marketing.

Mobile Apps are Best When it Comes to Last Minute Hotel Bookings-- during emergency situation such as last minute bookings, the mobile apps are best for making last minute bookings in a tourist destination. Hotel Tonight gets the most advantage of last minute and impulsive travel bookings that are mostly mobile mediated. As per reports of Expedia, 70 percent of hotels reservations are made over mobile within 24 hrs of the planned stay. The use of mobile has provided hotels new business opportunities by controlling un-occupancy even during the lean seasons.

The use of mobile and its apps is not only cost effective but also time saving due to the following reasons

i. Online reservations can be made anywhere, at any time, with the aid of mobile apps.
ii. Checking emails, replying to and forwarding emails, and deleting or archiving emails are all beneficial.
iii. In the event that the online booking system has an iPhone app or a mobile-friendly design, it is helpful to use these apps to monitor the clients' occupancy.
iv. Integrating desktop, laptop, and mobile devices facilitates users' access to their calendars.
v. Taking pictures and posting them to social media platforms like Facebook, Twitter, Flickr, and others is made easier using a mobile phone.
vi. Making films and posting them to YouTube, blogs, and other websites like the ones mentioned above is also beneficial.
vii. Online banking, including the payment of bills and hotel charges, is also supported by mobile apps.
viii. Using apps that provide live chat with hotel and/or travel agency customer service representatives.

H) Scenario of Mobile Banking- Induction Along With Phase Wise Implementing Of Different Activities

The requirement for a PC with a single internet connection was its biggest drawback. While this was not a major issue for the US and Europe, it was a major obstacle for the majority of Asia's developing nations, including China and India (Verdegem & Verhoest, 2009). This fundamental drawback of internet banking has been resolved by mobile banking, which allows users to use only one mobile device. Mobile banking's ability to facilitate "Anywhere Banking" is the primary factor that makes it superior to Internet banking.

As has been enumerated in the section where Banking Industry Developments and Stages, mobile had very limited use in the manual stage, as they were used merely for communication. In the following phases of the foundation, mobile devices were utilized to get notifications (SMS/messages) from banks regarding various transactions that the client had completed. However, their use was extremely restricted (Vinas, 2001).

The introduction of mobile banking, which mostly used SMS, was the next step. The introduction of smartphones brought about a kind of banking revolution. In all industrialized nations, smartphones are currently one of the most extensively used distribution methods (Wei, 2011). As the count of users of mobile phones increases at a rapid pace in India, banks are trying to explore the use of ubiquitous devices as one of the alternative channels to deliver full-fledged banking services like

a. Account Balance Enquiry
b. Account Statement Enquiry
c. Cheque Status Enquiry
d. Requests for ChequeBooks
e. Transfer of funds between the Accounts
f. Debit/Credit Alerts
g. Minimum Balance Alerts
h. Utility Bill Payments & Alerts
i. Request of Recent Transaction History
j. Information Requests such as Exchange Rates/Interest Rates

k. Profile Creating/Updates

Mobile banking is being deployed with the use of mobile applications that are developed on these four channels.

i. IVR (Interactive Voice Response)
ii. SMS (Short Messaging Service)
iii. WAP (Wireless Application Protocol)
iv. Standalone Mobile Application Clients

I) Effect of Technological Developments on Insurance Industry

The insurance industry is being greatly influenced by new and emerging technologies. Over the last 10 years or so, technology has managed to change how most businesses look, managing data with much more efficiency, improving communications and changing customer service expectations. The insurance sector is not an exception. Brokers, agents and insurance companies use the technology so their accounts portfolio is better managed, to analyze their policy prices and settle their claims more efficiently and faster (Bors, Saurina & Torres, 2003). Those technologies that happen to be game-changing in the insurance industry are:

1. Social Media Technology
2. Web Technology
3. Mobile Technology
4. Telematics
5. Product Configurations
6. Modern core business solutions
7. Underwriting workstations
8. Location and analytics intelligence
9. Predictive tools for modelling
10. Solutions for detecting advanced fraud

Insurance businesses presently look forward to newer and varied concepts in technology, which gives quite a lot of advantages to software companies. Most insurance agencies are using technology so that they can expand their operations in business as well as append in their efficiency and are showing marked growth in business (Chaffey, 2002).

J) Scenario with Mobile Insurance Products and its Integration with Other Items

There are multiple opportunities offered by mobile for the insurance industry. It enables customer interaction and provides service to new and existing customers, giving them one additional channel, designing new product offerings, and enabling more efficient internal operations (Dyche, 2001).

With the number of people using Smartphones increasing every day, the insurance industry is trying to find means of extending services to customers using these mobile applications. A rich software suite added to managed hosting and strategic consulting services enables insurance companies to develop and implement the right mobile strategy for the firm (Goldfinger, 2004).

Technology solutions in mobile applications help insurance companies to:

- Extend their business services on mobile devices
- Attract those customers who are in need of more options for self-service
- Increase policyholder and agent satisfaction
- Modernize the tools of customer service

Main factors that presently help in bringing success through the use of advanced applications in Mobile Insurance:

- The ability to debit automatically, at periodic intervals, a most likely active balance account (not a mobile money wallet but an airtime wallet rather)
- By partnering with insurers as well as third-party partners having micro-insurance specified expertise
- Employing the model ‘freemium’ means customers receive free insurance in exchange for being loyal to MNO, along with providing the option to upgrade to a paid policy that is more robust and has additional coverage or features.

Mobile applications play an important role in the integration of insurance with different other services like banking, tourism, automobile sector, retail sector etc. If a user is trying to book one package online at a given time, he/she is immediately awarded the option of baggage, travel insurance, etc. This is a kind of value addition to the mode of user purchasing, and the same scenario is applicable to other sectors (Green, 2004). Buying a mobile provides the facility of getting

the insurance along with it right while purchasing. Hence, the user does not need to go to an insurance agency to insure his/her mobile. This depicts the power of the service sector in integration using the advancements in the latest technology (Gummesson, 2002).

K) Mobile Insurance- Opportunity of Changing the Main Business Dynamics and Adopting Technology as One Main Strategy

Insurance firms today are completely ready to become mobile channels using mobile applications to change the key dynamics of business. There is a need for insurance firms to consider seven main areas where mobile technology should be adopted as their key strategy, which would differentiate the losers from the winners within the mobile space (Haynes, 2008).

- Define a distinct objective right away for the mobile channel that enables assessing results by planning activities.
- Define a strategic platform for sustainable application adaptable to the rapidly evolving mobile technologies.
- Integrating mobile functionalities to the operational as well as backend processes so that operational efficiencies can be brought about (Hill & Warfield, 2014)
- Invest in the promotion of the application, using different mediums so that visibility, usage and awareness are increased.
- Adapt organizational governance and structure model of local, central, or central and local mobility units to channel needs and manage scalability effectively.
- Adapt to the latest mobile trends so that new services can be provided.

The plan is to integrate Tourism, Banking and Insurance with Technology factors using the mobile application platform.

Fig1: Star Model of Integration

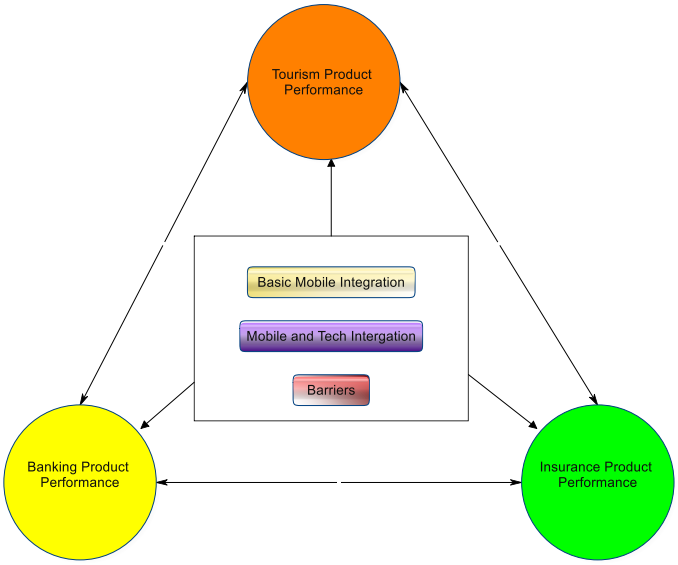
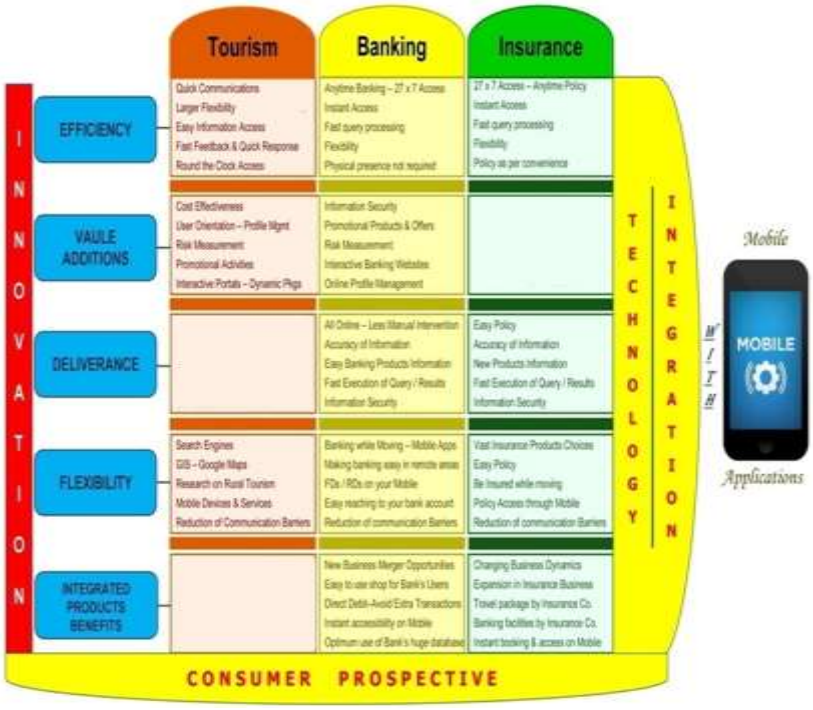


Fig 2: Performance Terms of Product Integration



L) Applications of Mobile Tourism- A Mode of Changing this Industry's Dimensions and Enable the Main Value Additions from the Banking and Insurance Industry

a. Integrated Mobile Application- It's Future and Forecast

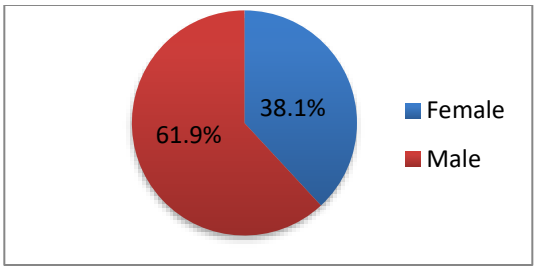
A conceptual shift is being experienced in the technology related to mobile telecommunications. This is because the fourth generation (4G) mobile communications network is being rolled out, and mobile handsets and related portable devices are becoming increasingly advanced. As a result of such technological advancement, there has been growing interest among stakeholders/actors in recognizing the attractiveness of mobile data services and designing strategic business models in the future.

The use of travel apps is increasing steadily, wherein developers are considering designing better mobile solutions for all types of smart phones, not just Android or Apple. This will help meet service user needs by having any mobile app. For example, the online travel portal 'Make my trip' helps travellers gain access to travel-related information using both computers and mobile phones, despite the nature of the operating system they possess. Nowadays, it can be seen that basic mobile services are available to most travellers in the form of mobile booking, checking travel schedules, checking-in status, and verifying flight status. As per the Amadeus' worldwide study: '*The always-connected holidaymaker- How mobile will change the future of air travel'* indicated that tourists were increasingly demanding mobile service accessibility. The study further indicated that 16 percent admitted using smart phones for booking trips, and 3.4 percent of global tourists used their mobiles for flight check-in status. In the context of Asia, 7.5 percent of tourists prefer to use mobile phones to check flight check-in status.

It is believed that mobile take-off will be a crucial aspect of the value chain in travel. Since tourists are becoming increasingly recognizable with the various mobile options, there may be a prospect to put forward sophisticated mobile solutions for meeting consumer requirements, like mobile payments, location-related services, and push notifications so that real-time information can be delivered along with updates for flight changes. Airlines and related players in the travel sector, need to recognize investment in mobile technology to comply with tourist demands.

b. Descriptive Statistics and Model Validation

The following results were obtained based on an empirical study conducted by a survey of 1300 respondents from all over India and obtaining a sample size of 1024. From the following pie chart, it is observed that out of 1024 respondents, 61.9% are Male, and 38.1 % are Female.



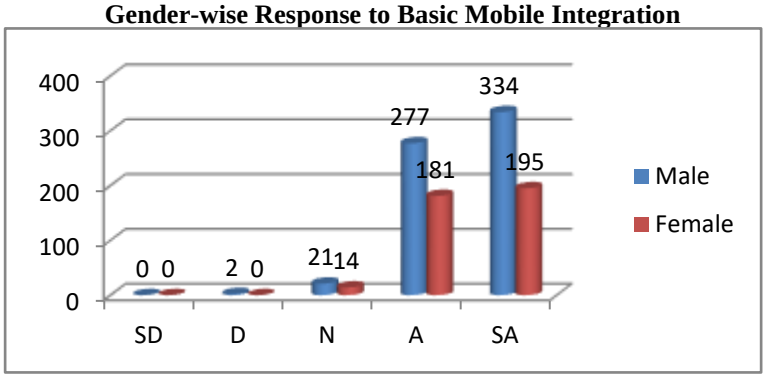
Gender	Frequency	Percent
Female	390	38.1
Male	634	61.9
Total	1024	100

M) Basic Mobile Integration

a. Gender-wise Response to Basic Mobile Integration

From the following table, we can observe that there are no women who disagree with the basic mobile integration, while 2 men disagree with it, 14 women are neutral to the integration, 21 men have a neutral opinion, 181 women agree to basic integration of mobile and 277 men have the same opinion, there are 195 women who strongly agree to the basic integration in mobile and 334 men agree strongly.

Gender-wise Response to Basic Mobile Integration



Gender-wise Response to Basic Mobile Integration

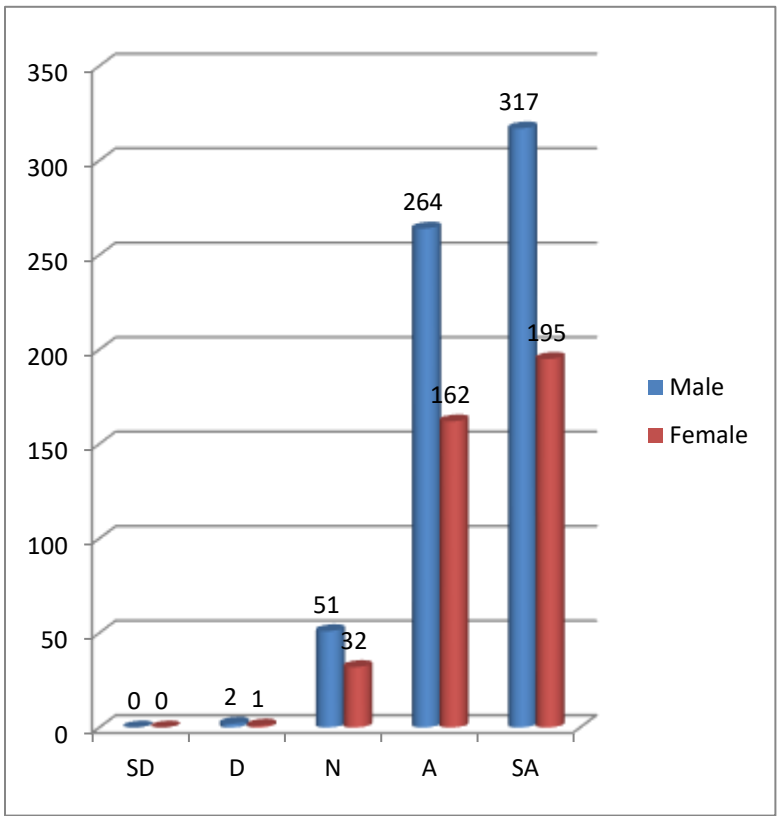
SD	0
D	2
N	35
A	458
SA	529

N) Mobile and Tech Integration

a. Gender-wise Response to Mobile and Tech Integration

From the following Chart, we can observe that there is one woman and two men who disagree with the Mobile and Technology integration; 32 women were neutral to the integration, 51 men provided a neutral opinion, 162 women agreed to mobile and technology integration, and 264 male have the same opinion, 195 women were there strongly agreeing to the technological integration, and also 317 men had agreed strongly.

Gender-wise Response to Mobile and Tech Integration

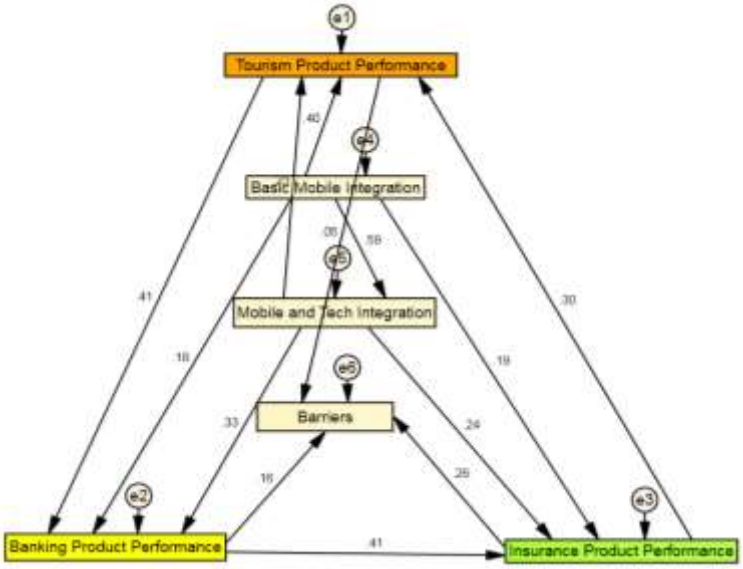


Gender-wise Response to Mobile and Tech Integration

SD	0
D	3
N	83
A	426
SA	512

The following figure shows the integration of mobile and technology with Tourism, Banking and Insurance. The figure finds each of the macro variables being interdependent on one another. This is followed by the Structural Equation Modelling of Tourism, Banking and Insurance, which is found standing validated with the Macro variable Technology Factors. Hence, the model is validated. As can be observed from the found statistics, and according to the idea perceived earlier in the star model, it was thought that integrating Tourism, Banking and Insurance could be possible using the technology factors through mobile applications. The following figure and its corresponding table find the suggested minimum discrepancy function at 2.43, which satisfies the required parameters for integration to happen and bring successful results.

Fig 3: SEM for Product Performance Macro Variables to Technology Factors



Index	Desired Statistics	Values for Macro Model
CMI/DF	Recommended value =<3	2.433
GFI	>0.90	0.998
RMSEA	<0.08	0.037
CFI	>0.90	0.999
NFI	>0.90	0.999
P value	Should not be significant (>0.05)	0.088

III. CONCLUSION

The paper has tried to cite the instances of applications of advanced technology in the fields of Tourism, Banking and Insurance that are already happening. The research reveals that integrating the mentioned service sectors has both qualitative and quantitative implications, showing a positive correlation. The scenario where each macro variable, like Tourism or the other two industries, exists as a single identity seems more obsolete in the present context. There is a complete emergence of technological integration, giving rise to innovative business dynamics, which gives rise to further integrations of different other services. Having found through both secondary and primary data analytic results, it can be seen that technology is acting as a great weapon for speeding up the work process in all these sectors and automatically calling in for the merger of one service industry with another. A very prudent example is the IRCTC, the official website for railway ticket booking in India. If the IRCTC can provide a better banking integration along with travel insurance for its passengers, it would call in a lot many more customers banking into its website and looking for options to make bookings using this website due to the integration. Hence, it can be said that the technology factors, if used to integrate Tourism, Banking and Insurance into one common platform, will provide a wide dynamism in the business parameters, resulting in enhanced work features for the industries altogether.

IV. REFERENCES

[1] Raiyani, J. R. & Joshi, N. K. (2011) "Service Sector in India: Performance, Problems and Prospects", *Advances in Management*, 4(5), pp. 11-13.
[2] Puschel, J. Mazzon Afonso, J. & Hernandez, J. (2010), "Mobile banking proposition of an integrated adoption intention framework," *International Journal of Book Bank Marketing*, 28(5), pp. 389 – 405.
[3] Pritcyhard, M. (1982). "The spatial implications of technological innovations in the office sectors", *Liverpool papers in human geography work*.pap. 4.
[4] Constantinides, E. & Fountain, S. (2008). Web 2.0: Conceptual foundations and marketing issues. *Journal Of Direct, Data And Digital Marketing Practice*, 9(3), 231-244.
[5] Bhasin, N. (2007). Banking *and financial markets in India, 1947 to 2007*. New Delhi: New Century Publications
[6] Martin, A., Miranda Lakshmi, T., & Prasanna Venkatesan, V. (2014). An information delivery model for banking business. *International Journal Of Information Management*, *34*(2), 139-150. doi:10.1016/j.ijinfomgt.2013.12.003
[7] Dadabhoy, B. (2013). *Barons of banking*. Noida: Random House India.
[8] Martinez Caro, L., & Martinez Garcia, J. (2008). Developing a multidimensional and hierarchical service quality model for the travel agency industry. *Tourism Management*, *29*(4), 706-720. doi:10.1016/j.tourman.2007.07.014
[9] Mane, P., & Niranjan, T. (2014). Sustainable Value Creation through E-waste Management: The Role of Marketing-Retailers-Operations Interface. *Global Business Review*, *15*(4 Suppl), 13S-23S. doi:10.1177/0972150914550522
[10] Khanna, M., & Kaushal, S. (2013). Growth of Banking Sector in India: A Collective Study of History and its Operations. *Asian Journal Of Advance Basic Sciences*, 2(1), 36-65.

[11] Mamaghani, F. (2009) "Impact of E-commerce on Travel and Tourism: A Historical Analysis," *International Journal of Management*, 26(3), pp. 365-375.

[12] Ratti, D. (2012). Indian Financial System & Indian Banking Sector: A Descriptive Research Study. *International Journal Of Management And Social Sciences Research*, 1(1), 1-8.

[13] Leung, R. & Law, R. (2005), "An analysis of information technology publications in leading hospitality journals," *FIU Hospitality Review*, (23)2, pp.55-65.

[14] Shin, D. (2009). An empirical investigation of a modified technology acceptance model of IPTV. *Behaviour & Information Technology*, *28*(4), 361-372. doi:10.1080/01449290701814232

[15] Leo, H. (2010). *Trends in Service Innovation enhanced by mobile services in the field of tourism in rural and mountain areas. Paper presented at the how can service innovations support Sustainable Tourism in Rural regions*.

[16] Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier.* New York: Addison-Wesley.

[17] Lengyel, I. (1994). The Hungarian Banking System in Transition. *Geo Journal*, *32*(4), 381-391.

[18] Amara, N., Landry, R., & Traora, N. (2008). Managing the protection of innovations in knowledge-intensive business services. *Research Policy*, *37*(9), 1530-1547. doi:10.1016/j.respol.2008.07.001

[19] Adel Abdel-Baki, M. (2014). The advocacy-growth nexus: the case of the Egyptian banking sector. *Intl Jnl Public Sec Management*, *27*(4), 281-295. doi:10.1108/ijpsm-07-2011-0089

[20] Bautzer, L. (2005). Bringing together knowledge about the product life cycle to improve inter-firm collaboration capabilities. *International Journal Of Automotive Technology And Management*, *5*(2), 184. doi:10.1504/ijatm.2005.007182

[21] Stram, R., Vendel, M., & Bredican, J. (2014). Mobile marketing: A literature review on its value for consumers and retailers. *Journal Of Retailing And Consumer Services*, *21*(6), 1001-1012. doi:10.1016/j.jretconser.2013.12.003

[22] Kwon, J., Bae, J., & Blum, S. (2013). Mobile applications in the hospitality industry. *Journal Of Hospitality And Tourism Technology*, 4(1), 81-92. doi:10.1108/17579881311302365

[23] Internetworldstats.com,. (2014). World Internet Users Statistics and 2014 World Population Stats. Retrieved 13 November 2014, from http://www.internetworldstats.com/stats.htm

[24] Inversini, & Cantoni, (2009) Cultural Destination Usability: The Case of Visit Bath. In W. Hopken, U. Gretzel and R.Law (Eds.), *Information and Communication Technologies in Tourism 2009 – Proceedings of the International Conferences in Amsterdam*, Netherland, Wien: Springer, pp.319-331

[25] Munjal, P. (2013). Measuring the economic impact of the tourism industry in India using the Tourism Satellite Account and input-output analysis. *Tourism Economics*, 19(6), 1345-1359. doi:10.5367/te.2013.0239

[26] Larsson, S., Myllyperkia, P., Ekdahl, F., & Crnkovic, I. (2009). Software product integration: A case study-based synthesis of reference models. *Information And Software Technology*, *51*(6), 1066-1080. doi:10.1016/j.infsof.2009.01.001

[27] Kumbhakar, S., & Sarkar, S. (2003). Deregulation, Ownership, and Productivity Growth in the Banking Industry: Evidence from India. *Journal Of Money, Credit, And Banking*, 35(3), 403-424. doi:10.1353/mcb.2003.0020

[28] Khalifa, M. & Liu, V. (2003). Determinants of Satisfaction at Different Adoption Stages of Internet-Based Services. *Journal of the Association for Information Systems*, 4(5), pp.206- 232.

[29] Ho, J.K.L. Wong, L.S.Y. Sarwar, M. & Lau, W.S. (n.d.) "An engineering research and development framework for the challenges faced by the hotel industry: Hong Kong case study."*Journal of Hospitality & Tourism Research*, 243(2000), pp. 350-372.

[30] Spagnoletti, P. (2013). *Organizational change and information systems*. Berlin: Springer.

[31] White, W. R. (1998), "*The Coming Transformation Of Continent At European Bank*," Working paper No.54, Bank for International Settlements, Basel, pp-1-37.

[32] Rattanawong, W., & Suwanno, N. (2014). Antecedents and Consequences of Service Innovation: An Empirical Study of Touring Business in the Southern Part of Thailand. *Jebi*, *1*(1), 36. doi:10.5296/jebi.v1i1.5603

[33] Kimiloqlin, H. Nasir, A. & Nasir S. (2010), "Discovering Behavioural Segments In The Mobile Phone Market ," *Journal of consumer marketing* , (27)5, pp.401-413.

[34] Buhalis, D. (2003). *E-Tourism: Information Technology for Strategic Tourism Management.* Cambridge: Pearson

[35] Buhalis, D. & Law, R. (2008), "Progress in Information Technology and Tourism Management: 20 Years On and 10 Years After the Interact – The State Of Tourism Research," *Tourism Management*, (29)4, pp. 609 – 23.

[36] Eriksson, K., & Nilsson, D. (2007). Determinants of the continued use of self-service technology: The case of Internet banking. *Technovation*, *27*(4), 159-167. doi:10.1016/j.technovation.2006.11.001

[37] O'Connor, P. (1999) *Electronic Information Distribution in Tourism Hospitality*. Oxford: CABI.

[38] Sahadev, S. & Islam, N. (2005), "Why hotels adopt ICTs : a study on the ICT adaptation propensity of hotels in Thailand," *International Journal Of Contemporary Hospitality Management*, (17)5, pp.391-401.

[39] Law, R., leung, R. & Buhalis, D. (2009), "Information technology applicants in hospitality and tourism : a review of publications from 2005 – 2007," *Journal Of Travel And Tourism Marketing*, (26)5/6, pp. 599-623.

[40] Kumar, S. & Zahn, C. (2003), "Mobile communications: evolution and impact on business operations", *Technovation*, (23), pp.515-520.

[41] Stram, R., Vendel, M., & Bredican, J. (2014). Mobile marketing: A literature review on its value for consumers and retailers. *Journal Of Retailing And Consumer Services*, *21*(6), 1001-1012. doi:10.1016/j.jretconser.2013.12.003

[42] Stefan, V. (2000) "*internet banking*" E-finance Romania, available at www.efinance.ro/rev/112000/sf/o.html.

[43] Yang, S., Lu, Y., Gupta, S., Cao, Y., & Zhang, R. (2012). Mobile payment services adoption across time: An empirical study of the effects of behavioral beliefs, social influences, and personal traits. *Computers In Human Behavior*, *28*(1), 129-142. doi:10.1016/j.chb.2011.08.019

[44] Yen, H. J. R. & Gwinner, K. P. (2003). "Internet retail customer loyalty: the mediating role relational benefits", *International Journal of Service Industry Management*, 14(5), pp.483-500.

[45] Cheng, C., Chen, J., & Tai Tsou, H. (2012). Market creating service innovation: verification and its associations with new service development and customer involvement. *Journal Of Services Marketing*, *26*(6), 444-457. doi:10.1108/08876041211257927

[46] Daniel Clemes, M., Shu, X., & Gan, C. (2014). Mobile communications: a comprehensive hierarchical modelling approach. *Asia Pac Jnl Of Mrkting & Log*, *26*(1), 114-146. doi:10.1108/apjml-04-2013-0040

[47] Verdegem, P., & Verhoest, P. (2009). Profiling the non-user: Rethinking policy initiatives stimulating ICT acceptance. *Telecommunications Policy*, *33*(10-11), 642-652. doi:10.1016/j.telpol.2009.08.009

[48] Vinas, T. (2001). Industry Weeks/IW. 1252(5), pp.4-33.

[49] Wei, G. (2011). Gray relational analysis method for intuitionistic fuzzy multiple attribute decision making. *Expert Systems With Applications*, *38*(9), 11671-11677. doi:10.1016/j.eswa.2011.03.048

[50] Bors, C., Saurina, C., & Torres, R. (2003). Technological convergence: a strategic perspective. *Technovation, 23*(1), 1-13. doi:10.1016/s0166-4972(01)00094-3
[51] Chaffey, D. (2002). *E-Business and E-Commerce management*. London: Prentice Hal, Pearson Education Limited.
[52] Dyche, J. (2001). *The CRM Handbook: A Business Guide to Customer Relationship Management*. London, UK: Addison-Wesley Educational Publisher Inc.
[53] Goldfinger, E. (2004). Don't teach me. *London Review of Books*, 26(7).
[54] Green, A. (2004). *Prioritization of sources of intangible assets for use in enterprise balance scorecard valuation models of information technology (IT) firms,*. DSc dissertation. George Washington University, Washington, DC.
[55] Gummesson, E. (2002). Practical value of adequate management marketing theory. *European Journal of Marketing*, 36(3), pp.325- 349.
[56] Haynes, B. (2008). The impact of office layout on productivity. *Journal of Facilities Management*, 6(3), pp.189-201.