Influence Of Level Of Awareness On Level Of Satisfaction Towards Digital Banking Services In Andaman Islands

Dr. J. Sundararaj¹, R. Shakthi Priya²

^{1*}Professor, Department of Commerce, Annamalai University Annamalai Nagar 608002, Orcid Id:/0000-0001-7109-1761 ²PhD, Research Scholar, Department of Commerce, Annamalai University, Annamalai Nagar 608002

ABSTRACT

The potential of today's payment systems has altered due to technological advancement. Traditional cash-based payment systems have been transformed into more effective and efficient cashless payment systems by modern technologies. Every nation in the world has seen a notable increase in the volume and value of digital payments in recent years. Digital payments are crucial to the economic growth of any nation. When compared to the use of real currency, digital payment systems offer a number of benefits that contribute to national economic growth. An advanced digital payment system within a country has an impact on monetary policy, financial stability, and general economic activity. This study is based on primary data. The aim of this study is to find the influence of various dimensions in the level of awareness on level of satisfaction towards digital banking system in Andaman Islands.

Keywords: digital banking, Andaman Islands, level of awareness, customer preference, level of satisfaction

INTRODUCTION

Digital payments are those that take place online or through digital platforms. This indicates that electronic means are used by both the payer and the payee to exchange money. The Indian government has implemented a number of initiatives to support and encourage digital payments. The government wants to establish a "faceless, paperless, and cashless" digitally enabled economy as part of the "Digital India" initiative. Digital payments are made in a variety of ways and formats. It is important to remember that digital payments can be made both in-person and over the Internet. Here are a few instances of digital payments: purchasing goods through online retailers and paying with a UPI (unified payments interface) card is an example of a digital payment.

The banking industry in both developed and developing countries is becoming more dependent on technology as time goes on. The implementation of technology in banking makes it possible for financial institutions to provide their clients with access to their accounts, to carry out transactions and to obtain data. Customers and banks alike stand to benefit from advancements in banking technology.

According to Pikkarainen et al. (2004), there are two key reasons that underlie the development and penetration of banking technology. Second, in order to pave the way for self-service channels, banks have shrunk their branch networks and decreased the number of service employees. This has made it possible for customers to handle their own banking needs. Customers, too, like the convenience of self-service, which frees them from being constrained by time and place and makes waiting in line at the bank much less stressful. It was found that the supply of banking products and services through the medium of banking is not only the most cost-effective option, but also the one that generates the most wealth. The self-service technologies (SSTs) are among these technologies, and they are the one that has proven to be the most effective and efficient in assisting banks in their transition from traditional brick-and-mortar structures to virtual ones (Khraim et al., 2011). ATMs, internet banking, and mobile banking are all examples of SSTs. SSTs have been defined as technologies that allow direct client engagement with the technology (Meuter et al., 2000). Although the banking sector has seen an increase in their profitability levels as a result of the use of SSTs (Lal and Saluja, 2012), the statistics have confirmed a disparity between the increased growth and the projected growth. The primary reason that was identified for this disparity was the acceptance of the SSTs by the banking customers (Kanal, 2014).

As the world rapidly moving towards an era of digitization, the banking sector in the Andaman Islands stands at the cusp of transformation, offering its inhabitants a gateway to a new realm of financial accessibility and convenience. A silent digital revolution is taking place in the Andaman Islands, a beautiful territory surrounded by greenery and blue oceans. The introduction of digital banking services has the potential to completely transform how people manage their finances and carry out transactions in this picturesque location, where aquamarine bays meet verdant rainforests (Reserve Bank of India, 2011).

Amidst the tranquil beauty of the Andaman Islands lies a bustling economy, where diverse communities thrive amidst the challenges of geographical isolation and limited access to traditional banking infrastructure (Kaul, 2015). Recognizing the potential of digital technologies to bridge these gaps and foster financial inclusion, banks in the Andaman Islands have embarked on a journey to introduce a myriad of digital banking services, from online platforms to mobile applications,

aimed at empowering their customers with the tools to manage their finances anytime, anywhere (Kumar and Muralidharan, 2019).

Through a comprehensive investigation encompassing diverse demographic segments, this study seeks to uncover the nuances of customers' perceptions towards digital banking, shedding light on their level of awareness about available services, their usage patterns, and the factors influencing their adoption decisions. This research aspires to pave the way for informed decision-making, strategic planning, and policy interventions aimed at enhancing financial inclusion and fostering economic prosperity in this picturesque paradise. With the wave of digital transformation, a pivotal question emerges: What are the perceptions, attitudes, and experiences of bank customers towards the usage of digital banking services in the Andaman Islands? This research attempts to delve extensively into the thoughts of Andamanese residents, exploring their awareness, usage behaviour, satisfaction, and challenges encountered in embracing digital banking services as digital banking services give the opportunity to harness the transformative power to embark on a journey towards financial empowerment and prosperity. The goal is to unravel this enigma and shed light on the particulars of digital banking adoption in this pleasant archipelago.

REVIEW OF LITERATURE

There are several studies pertaining to digital banking both in Indian and foreign context. As the technology is growing day by day, it is essential for the customers and also to the corporate to adhere to the technological upgradation. Among the authors who have conducted the studies on digital banking Black et al., (2001) found out that those with the highest income with a greatest use of information technology were most likely to purchase financial services using internet channel. Earlier studies by Barczak et al., (1997), Danniel & Strong (1997), Lia et al., (1999), and Polatoglu & Ekin (2001) report several factors such as convenience, flexibility, security concern, complexity, and responsiveness being associated with a higher propensity to use internet banking.

While investigating the determinants of the internet technology adoption for the provision of banking services in the Italian context, Corrocher (2002) found that the banks seem to perceive Internet banking as a substitute for the existing branching structure, although there is also some evidence that banks providing innovative financial services are more inclined to adopt the innovation than traditional banks. Technology has had a remarkable influence on the growth of service delivery portions.

Kumbhar (2011) evaluates major factors (i.e. service quality, brand perception and perceived value) affecting on customers' satisfaction in e-banking service settings. This study also evaluates influence of service quality on brand perception, perceived value and satisfaction in e-banking.

Nippatlapalli (2013) examined customer satisfaction as a measure of how products and services supplied by a company meet or surpass customer expectation. Saini (2013) made an effort to examine the relationship between service quality and customer satisfaction of two private sectors bank of India. Service quality has been described as a form of attitude that results from the comparison of prospect with recital. Devan (2013), in his study on "Mobile Banking in India- Issues and challenges" found that the rapid growth and changing technology is highly impact on banking system and banks should provide all the technological products and service to their customers but it also revealed that most of the customer feel comfortable with mobile banking but some customers are still not so comfortable with mobile banking transactions they think that it is risky.

Tondon et al. (2015), Digital banking is regarded as a delivery channel, which over a period of time has gained recognition. It is in fact growing in many countries and has changed the traditional banking. This channel has been provided competitive advantage to the banks. With the help of digital banking the consumer has an access to number of services just at click of mouse.

Nandhini (2016) has conducted a study on customer satisfaction towards online banking in Coimbatore District, and found that customer satisfaction is considered to be the most important thing in the banking industry. So, the bankers are in the position to apt to the information technology to change the way of service to attract customers and increase their satisfaction levels. This study gives information about online banking and their services methodology, design and validation of questionnaire, and factor analysis were used to enhance the reliability of findings. Shamsher and Ravish (2019) conducted a study that focus on customer who uses digital banking. The objective of the study was to find the customer perception and adoption of the digital banking. Major findings of the research were popularity of digital banking among the young lots such as students and employees.

Shweta and Shubhlaxmi (2020) conducted a study with the main objective to find out the present scenario of Digital Banking in HDFC Bank in order to find out customer satisfaction relating to Digital banking services. They found that 61.3% of customer's prefer digital banking is the best medium of transaction purpose. Findings also reveal that people know about the services but still many people are unaware so the bank should try promotional strategies to retain the customers. Overall, they concluded that the digital banking services could become improved by establishing orientation programmes to educating and explaining about the benefits of digital banking services.

Pavithra and Geetha (2021) conducted a study with the aim to identify the factors affecting the customers' perception towards digital banking services, to know the satisfaction level and preference towards digital banking services. The result reveals that respondents of various age groups prefer doing digital banking over traditional banking. The customers perform their digital banking services using their smartphones. Users feel that digital banking is convenient, ubiquitous, instant transfer of funds and they are satisfied with digital banking services.

STATEMENT OF THE PROBLEM

Understanding how commercial bank clients use digital banking services is crucial in the current period of the banking sector's digital transformation, as banks keep coming out with new innovations and technology. Almquist et al. (2015) assert that comprehension of consumers' usage behavior becomes even more important, particularly with regard to knowing the particular features and functions that customers use the most and how they use them. The Andaman Islands, where traditional banking infrastructure may be limited and geographical constraints exist, make it crucial to determine the relevance of various factors, including technological infrastructure, limitations, connectivity issues, security concerns, and a lack of digital literacy, in impeding the adoption and usage of digital banking services as these services continue to evolve and offer a wide range of functionalities (Alimed and Sur, 2023; Kaur et al., 2021). Therefore, research is required to find solutions to the issues customers are having with the Andaman Islands' digital banking system.

NEED FOR THE STUDY

Several studies have been conducted on digital banking in western context. However, studies pertaining to digital banking usage in Indian context are limited. Further, research on customers' opinion towards digital banking in Andaman Islands is very few. In the digitalization era, people use technology is several aspects, and banking services is not an exemption. They use different technologies pertaining to banking to make their work ease. However, there are several factors that influence the customers in the usage of digital banking technologies, which are need of the hour. The present study has been designed to find out the influence of level of awareness about digital banking system on level of satisfaction towards digital banking system in Andaman Islands.

RESEARCH GAP

Previous studies on digital banking technology explain how customers use different services through online and other sources. However, the awareness level among the customers is less, particularly in Andaman Islands as majority of the customers visit banks to avail the services. Studies pertaining to digital banking also provides support to various factors that influence digital banking, but studies conducted in Andaman Islands on the usage of digital banking requires more attention which has not been probed in previous research. Hence, the present study is being conducted to fulfil the gap identified in the existing literature review.

OBJECTIVES OF THE STUDY

Following objectives are framed for the study

• To find out the influence of level of awareness about digital banking system on the level of satisfaction towards digital banking system.

METHODOLOGY

The methodology employed for the research topic and objectives outlined aims to provide a comprehensive understanding of customers' perceptions, behaviours, and experiences with digital banking services in the Andaman Islands. Descriptive research design is used in this study aiming to gather insights into customers' perceptions, behaviours, and experiences with digital banking services. Data were collected through survey method using a well structure interview schedule. The required primary data was collected from the responded through personal interview schedule method. Sample size is an important aspect of any empirical study requiring that inferences be made about a population based on a sample. Essentially, sample sizes are used to represent parts of a population chosen for any given survey.

Yamane (1973) formula has been used to determine the sample size. According to him, determine sample size needed to achieve a 95% confidence level with a margin of error (precision) of 5% for the estimated population, as per Lead Bank Report, 2023, there are 5,34,718 CASB accounts exist in the commercial banks in Andaman Islands. For a population of 5,34,718 the required minimum sample size is 400. In anticipation of errors and to increase the accuracy, it is desired to increase 50 percent of the minimum sample size which result 600 sample units.

Hence, the study is aiming to collect data from 600 commercial bank customers in Andaman Islands. Convenient sampling method is used to identify the respondents from both public sector and private sector commercial banks situated in Andaman Islands. After getting permission from the Manager of each bank, researcher approached the bank customers by explaining the aim of the study and sought their cooperation. After collecting the data, it is found that 17 respondents have given improper response and hence their responses were rejected. Finally, 583 data have been fit for further analysis.

ANALYSIS AND INTERPRETATION

After collecting the data from the respondents, the data were fed into the computer for analysis purpose using SPSS software. In the present study, the respondents include both male and female respondents with different age and income groups.

Table: Regression analysis – Influence of Level of Awareness about Digital banking on Level of Satisfaction towards Digital Banking System

Mod	el R	R Square	Adjusted R S	Sauare	F		Sig.
	.784ª	.615	.561		11.298		.000 ^b
. Pr	edictors: (Constant), Account Mar	agement, Financial Literacy	v and Awareness.	Knowledge	of Digital Banking	Services, S	Security Awarene
	erstanding of Digital Financial Pr						
onv	venience, Customer Support and As	sistance, Privacy and Data I	Protection, Risk M	anagement	and Fraud Preventic	n, Regulato	ory Compliance a
ega	l Knowledge, Financial Education	Resources, and Data Privac	y and Consent Ma	nagement			
oef	ficients ^a						
		Unstandar	Unstandardized				
lod	odel		Coefficier	nts	Coefficients	t	Sig.
			В	SE	Beta		
	(Constant)		1.863	.546		3.412	.001
	Account Management		.103	.074	.114	1.390	.168
	Financial Literacy and Awareness		.280	.100	.263	2.786	.006
	Knowledge of Digital Banking Services		.219	.088	.197	2.498	.014
	Security Awareness		.133	.088	.120	1.518	.132
	Understanding of Digital Financial Products		.652	.086	.651	7.555	.000
	Awareness of Emerging Technologies in Banking		.182	.088	173	2.063	.042
	Digital Financial Literacy		.121	.088	.124	1.368	.174
	Accessibility and Convenience		.521	.112	.501	4.640	.000
	Customer Support and Assistance		.298	.082	.319	3.619	.000
	Privacy and Data Protection		.114	.091	.116	1.252	.214
	Risk Management and Fraud Prevention		.065	.071	.074	.913	.364
	Regulatory Compliance and Lega	l Knowledge	.041	.116	.033	.355	.724
	Financial Education Resources		.017	.073	.020	.230	.818
	Data Privacy and Consent Manag	ament	.123	.098	.127	1.293	.149

Studies shows that the level of satisfaction depends on several factors, and one among them is awareness level. However, there are several aspects which has to be considered under the level of awareness about digital banking system, namely Account Management, Financial Literacy and Awareness, Knowledge of Digital Banking Services, Security Awareness, Understanding of Digital Financial Products, Awareness of Emerging Technologies in Banking, Digital Financial Literacy, Accessibility and Convenience, Customer Support and Assistance, Privacy and Data Protection, Risk Management and Fraud Prevention, Regulatory Compliance and Legal Knowledge, Financial Education Resources, and Data Privacy and Consent Management. To test the influence of independent variables taken up for the study on dependent variable, regression analysis was performed. The independent variables are the various dimensions of awareness level, and the dependent variable is level of satisfaction.

Table represents the results of multiple regression where the value of co-efficient of regression determination (R²) is 0.615 which implies that 61.5 percent of the variation on the level of satisfaction towards digital banking technology is explained by various dimensions of awareness level. To check whether this R² is statistically significant, ANOVA is performed. The F value obtained is 11.298 (p < 0.001) and hence it is ascertained that there is significant relationship between dependent and independent variables. It is concluded from the regression result that among the fifteen independent variables taken for the study, six variables significantly influence the level of satisfaction towards digital banking system. The variables are 'financial literacy and awareness' (t = 2.786; p = 0.006), 'knowledge on digital banking services' (t = 2.498; p = 0.014), 'understanding of digital financial products' (t = 7.555; p < 0.001), 'awareness of emerging technology in banking' (t = 2.063; p = 0.042) 'accessibility and convenience' (t = 4.640; p < 0.001), and 'customer support and assistance' (t = 3.619; p < 0.001).

Among the influencing items, 'understanding of digital financial products' has been considered as the most influencing element which is followed by 'accessibility and convenience', 'customer support and assistance', 'financial literacy and awareness', 'knowledge on digital banking services', and 'awareness of emerging technology in banking' influence positively on level of satisfaction towards digital baking system. However, Account Management, Security Awareness, Digital Financial Literacy, Privacy and Data Protection, Risk Management and Fraud Prevention, Regulatory Compliance and Legal Knowledge, Financial Education Resources, and Data Privacy and Consent Management do not significantly influence level of satisfaction towards digital baking system.

The result concluded that, 'understanding of digital financial products' is the first variable that influences level of satisfaction towards digital banking system. 'Accessibility and convenience' contribute secondly with respect to level of satisfaction towards digital banking system, which is followed by 'customer support and assistance', 'financial literacy and awareness', 'knowledge on digital banking services', and 'awareness of emerging technology in banking'.

FINDINGS

Study result reveals that the first and foremost influencing item of level of satisfaction towards digital banking system in Andaman Islands is understanding of digital financial products. That is, the customers who understands the digital financial products offered by the bank is the foremost influencing variable of their satisfaction with digital banking.

Result also reveals that accessibility and convenience of digital banking services is the next highly influencing factor of awareness level, that enhances the level of satisfaction. It is true that if the customers have easy access to the digital banking devices or services may be satisfied with the services offered by the bank. Further, if the services are convenient to them to use, they will be highly satisfied. Hence, accessibility and convenience are found to be the second influencing variable of awareness level on satisfaction level towards digital banking system.

In addition to that, even though customers get access to the services, and convenient for them to transact, there will be some external source to help them in completing their services in the beginning stage. Hence, customer support and assistance for availing digital banking services are important to get more satisfaction towards digital banking system, and hence, customer support and assistance occupy third important position while influencing level of satisfaction. Financial literacy and awareness, 'knowledge on digital banking services', and 'awareness of emerging technology in banking' are the other influencing dimensions of level of awareness on level of satisfaction towards digital baking system.

It is also identified that some dimensions of awareness level which do not significantly influence level of satisfaction towards digital banking system, namely account Management, Security Awareness, Digital Financial Literacy, Privacy and Data Protection, Risk Management and Fraud Prevention, Regulatory Compliance and Legal Knowledge, Financial Education Resources, and Data Privacy and Consent Management.

SUGESTIONS

Since, understanding of digital financial product is the foremost influencing item of awareness level on level of satisfaction towards digital banking system, it is suggested to bank authorities to create awareness about various digital financial products and they have to make sure that the digital financial product knowledge reaches all the customers of respective banks in Andaman Islands. Road shows, television advertisements, hoardings, banners, bit notices, pamphlets, etc. may be adopted by the banks to reach their customers in creating awareness about digital banking services. Accessibility and convenience have been considered as the second most influencing item of awareness level on satisfaction level towards digital banking services. Getting easy access to various digital financial products will make the customers to use the service. If the service availed is convenience to them, they can frequently use the service. Hence, it is suggested to bank authorities to provide digital service points in many places, and also making the process simple while availing these digital financial services is widely acceptable by the customers to get high satisfaction level. Hence, bank management should increase the customer service call centres to assist their customers round the clock.

CONCLUSION

Satisfaction level varies depends on several factors and one among them is awareness level. The present study was conducted to identify the influence of level of awareness on level of satisfaction towards digital banking services among the customers of Andaman Islands. With 583 respondents, the study was conducted among the customers of both public sector banks and private sector banks, using a well-structured interview schedule at their respective branches in Andaman Islands. The study result reveals that understanding digital financial products as the most important item of level of awareness on level of satisfaction towards digital banking system. Result also proved that, accessibility and convenience

as the second major factor that influence level of satisfaction. Customer support is the third major influencing item of level of satisfaction towards digital banking system. Financial literacy and awareness, 'knowledge on digital banking services', and 'awareness of emerging technology in banking' are the other influencing dimensions of level of awareness on level of satisfaction towards digital baking system. Hence, it is concluded that if the level of awareness is high then the level of satisfaction will also high. That is, if the customers understand about the digital financial products, and if the digital products and services are available and accessible to them easily, then the level of satisfaction towards digital banking system will be high among the bank customers in Andaman Islands. Customer support and assistance will add more value to enhance the level of satisfaction.

REFERENCES

- Ahmed, S., & Sur, S. (2021). Change in the uses pattern of digital banking services by Indian rural MSMEs during demonetization and Covid-19 pandemic-related restrictions. Vilakshan XIMB Journal of Management, 20(1), 166–192.
- Almquist, E., Senior, J., & Bloch, N. (2016). The 30 Elements of Consumer Value: A Hierarchy. In *Harvard Business Review* (Issue September, pp. 46–53).
- Al-Smadi, Mohammad. (2012). Factors affecting adoption of electronic banking: An analysis of the perspectives of banks' customers. International Journal of Business and Social Science. 3. 294-309.
- Anita Singh and Timira Shukla (2016), E-Banking: A Study of Employees" Views on Its Efficacy, International Conference on Management and Information Systems, September, pp 23-24.
- Barczak G.E, Scholder P. & Piling B.K.T. (1997), Developing typologies of consumer motivation for use of technologically based banking services, Journal of Business Research 38 (2), 131-40.
- Black N.J. Lockett A., Ennew C. & Winklhofer H. (2001), Adoption of Internet banking, a qualitative study, International Journal of Retail & Distribution Management 29 (8), 390-8.
- Corrocher, Nicoletta. (2002). Does Internet banking substitute traditional banking? Empirical evidence from Italy.
- Danniel E. & Storey C. (1997), Online banking Strategies & Management Challenges, Long Range Planning 30 (6), 890-8.
- Devan, Deva. (2013). Mobile Banking in India Issues & Challenges. International Journal of Emerging Technology and Advanced Engineering. 3. 516-520.
- Kanal, N. (2014) Growth of Mobile Banking in India, Below Expectations, http://tech.firstpost.com/newsanalysis/growth-of-mobile-banking-inindia-below-expectationsrbi-207199.html (Accessed 24 October, 2014.
- Kaur, B., Kiran, S., Grima, S., & Rupeika-Apoga, R. (2021). Digital banking in Northern India: The risks on customer satisfaction. Risks, 9(11), 209.
- Khraim, Hamza & Shoubaki, Y.E. & Khraim, A.S.. (2011). Factors affecting jordanian consumers' adoption of mobile banking services. International Journal of Business and Social Science. 2. 96-105.
- Kumbhar, V. M. (2011) "Factor affecting customer satisfaction in e-banking: Some evidences from Indian Banks", *Management Practice and research*, 3(4), 1-14
- Lal, R. and Saluja, R. (2012) 'E-banking: the Indian scenario', Asia Pacific Journal of Marketing and Management Review, Vol. 1, No. 4, pp.16–25.
- Liao S. S.Y., Yuan P. S., Wang H. and Chen A. (1999), The adoption of virtual banking: an empirical Study, International Journal of Information Management 19, 63-74.
- Malhotra P and Singh B (2007), "Determinants of Internet Banking Adoption by Banks in India", Internet Research, Vol. 17, No. 3, pp. 323-339.
- Meuter, Matthew & Ostrom, Amy & Roundtree, Robert & Bitner, Mary. (2000). Self-Service Technologies: Understanding Customer Satisfaction With Technology-Based Service Encounters. Journal of Marketing - J MARKETING. 64. 50-64. 10.1509/jmkg.64.3.50.18024.
- Nandhini (2016) "Customer Satisfaction Towards Online Banking in Coimbatore District" International Journal of Multidisciplinary Research and Modern Education, Vol-II, Issue-I, 2016. P.No.62-68.
- Nippatlapalli, A. R. (2013) "Evaluating the features of a variety of electronic payment systems from the perspective of Iranian users," *Journal of Humanities and Social Sciences*, pp. 65-96.
- Pavithra and Geetha (2021). Factors affecting customers' perception towards digital banking services. *Turkish Journal* of Computer and Mathematics Education (TURCOMAT), 12(11), 1608–1614.
- Pikkarainen, Tero & Pikkarainen, Kari & Karjaluoto, Heikki & Pahnila, Seppo. (2004). Consumer acceptance of online banking: An extension of the Technology Acceptance Model. Internet Research. 14. 224-235. 10.1108/10662240410542652.

- Polatoglu, V. N. & Ekin S. (2001), An Imperial investigation of Turkish consumer acceptance of internet banking service, International Journal of Bank Marketing 19 (4), 156-65.
- Ratchford, Mark & Barnhart, Michelle. (2011). Development and Validation of the Technology Adoption Propensity (TAP) Index. Journal of Business Research. 65. 1209. 10.1016/j.jbusres.2011.07.001.
- Saini, M. N. (2013) "The payments system through terminals (pos) at the offices of the notary," *Monthly* Association, 21(1), 139-154.
- Shamsher Singh and Ravish Rana (2019). Customer Perception and Adoption of Digital Banking. Res. J. Humanities and Social Sciences, 10(2), 397-401.
- Shweta Sharma and Shubhlaxmi Raul (2020). Study of customer satisfaction towards digital banking. International Journal of Advanced Research in Commerce, Management and Social Science, 3(1), 161-166.
- Tandon, Ashima & Goel, Manisha & Bishnoi, Sunita. (2016). Consumer Awareness towards Internet Banking: A Comparative Study of Public, Private and Foreign Banks. International Journal of Hybrid Information Technology. 9. 77-90.
- Tandon, Urvashi & Kiran, Ravi & Sah, Ash. (2015). Customer satisfaction using website functionality, perceived usability and perceived usefulness towards online shopping in India. Information Development. 32. 10.1177/0266666915621106.
- Yamane, T. (1973) Statistics: An Introductory Analysis. 3rd Edition, Harper and Row, New York.