

CUSTOMERS' LEVEL OF AWARENESS TOWARDS DIGITALISED SERVICES OFFERED OF TNEB

Dr. T. KUMAR

Assistant Professor, Department of Business Administration, PS.PT. MGR Govt Arts and Science College, Srikali- Puthur.

T. SENTHIL KUMAR

Ph.D. Research Scholar, Department of Business Administration, Annamalai University, Annamalai Nagar.

Abstract

Recent years Consumers are gradually more adopting electronic channels for purchasing their day-by-day wanted products. After globalization development of information technology have shown a growing interest of customers and have enhanced customer awareness and created a situation where people prefer in online channels. The purpose of this study is to examine the users' perception towards digitalized services of TNEB. Mainly, the primary data were collected for the study through interview schedule. In this study key dimensions of digitalized services of TNEB as perceived by consumers in Chennai city were analysed by using appropriate tools. The result of the study will be helpful for developing strategies related to the digitalized services generally used by internet users.

Keywords: Service Quality, Structural Analysis, Digitalized Services and Electronic Channels

INTRODUCTION

Today, information technology (IT) has become the center of all sectors, IT has particularly brought an entire paradigm shift on the public sectors' performance and on the customer service delivery through digital mode. Customer satisfaction and client service delivery could be a key parameter for public sector undertakings to establish digitalized channels effectively. Electricity boards in Tamil Nadu started perceiving digital technology as a vital component to realize operational goals and have invested heavily for digitalization to improve the standard of valuable additional harvest and customer service delivery. At present TNEB is in the midst of a digital revolution. Nowadays TNEB have moved from disbursed to a centralized environment, which shows the impact of digitalization. Mostly all the transactions are going through digital technology based solutions. The application of digitization has reduced the scope of traditional or manual operations. The Digital Revolution has altered consumer behavior drastically. Today's customer often referred to as a "smart customer" has the power to make or break any business with just a single click. Customer experience has become a driver for a change in corporate strategy in this new age of digitalization. The researches on the impact of digitization on TNEB performance and customer service delivery system are broad. Hence, there is a requirement to measure the impact of digitization on customer satisfaction in TNEB within the continuous period of time. It will be helpful to electricity board and Government for planning IT strategies, to achieve the excellent performance and exploring better services to customers.

REVIEW OF LITERATURE

Pradhan Prasad (1990) suggested in his article that a two-part tariff structure can be evolved which will improve not only the load factor but also the demand factor. In agriculture, a suitable minimum guarantee charge for electricity is likely to lead to community utilization of equipment such as for lift irrigation. This will encourage installation of a network of lift irrigation schemes by co-operatives and may result in the pooling of resources of small cultivators enabling them to derive the benefits of rural electrification, which have been denied to them so far. In industry, a minimum guarantee charge will be resisted on the ground that the higher cost of electricity will raise overall cost of production. But this argument is baseless since, except for a few industries like aluminium, cold storage and inorganic heavy chemicals, electricity is not a significant item in the cost structure. Madhav Godbole (2004) the author has spoken that a number of state governments including Maharashtra have announced free power for farmers. In this run towards competitive populism, the earlier period practice of states that adopted the desperate policy of giving free power for agriculture appears to have been lost sight wholly. Furthermore, bearing in mind those subsidies for agricultural utilization largely advantaged a big farmers and other well-to-do public, the subsidization of these sections by common taxpayers militates against all cannons of the welfare state.

Padnapriya. K and P.V. Narasaiah (2012) The author supposed that the position of electricity is so wonderful that economists often set up a one to one communication between energy and economic development. Therefore, it is known as “the industry of industries”. The present power scenario demands a very inclusive and pragmatic move toward development of the economy. Reforms of Power Sector in India have gained drive with the scheme taken by most of the State Electricity Boards. Amrita Tandon (2013) the author has pointed out that the Power Management System can offer a most important decline in the equipment cost by expending lifetime of equipment. Continuing savings are achieved by endlessly working at a near-to optimal situation and preventing likely system overload situations. Intelligent Load Shedding will save money by minimizing required load shedding, therefore plummeting scheme downtime. Load Shedding Validation evaluates and confirms the load shedding decisions in real time mode. The design of PMS makes for an easy execution, allowing for a problem free process, which starts with the system model of the electric network. All the way through the use of PMS one can bring power system to life it can imprison the benefits of intelligent load shedding applications, optimization, energy management system, and real time simulation and control and event playback capabilities.

Rationale of the Topic

The fast increase in number of internet users in India provides a bright vision for providing services through online. This rapid enlargement in the number of digital and social channels users has promoted a confidence in many business circles that the web represents a vast service opportunity. Digitalization in public sectors is in nascent stage of development in rural areas. Digitalised services save the customers the moving from one resident to EB office to buy the avail different services they necessitate. However, TNEB offering a huge range of services, it becomes unpopular for even well-educated to decide what and from where the services can

avail. Therefore, understanding how consumers perceive benefits of digitalization of transaction is important from an electricity board perspective.

Significance of the Study

The study is much significance for public sectors and also private sectors service providers. The study is made to recognize the major factors contributing to the consumers to go for digitalized services through online mode and also present study will help to consumers to change their attitude towards transaction through online. Further, it shows the relationship between various demographic factors and influencing factors go for digitalized services. It would help the individual consumers to understand risk associated with digitalized services. The present study would help the TNEB to add value and achieve a competitive edge against their competitors and remain successful in the long run. The present study also would help to Government to identify the problems and risks that affect consumers and required legislations to solve that risks and procedures needed in order to satisfy in digitalized services. The findings will help to know pulse of the customers and TNEB overall development of the execution of healthier positioned to transmit services positively.

Statement of the Problem

Due to the emergence of digitalization there is a stiff competition among the service providers and they are focusing attention in capturing the customers. Present days, the growth of digitalization is vital factor for country's economic growth and trend in this market is defined by the decisions of consumers because consumers are the backbone of the all market. With all the benefits and growth stories associated with digitalization there are also certain limitations to it. The major challenge of digitalization is the internet infrastructure. Though digital literacy and digital infrastructure has still not achieved the full strangle. A customer's online experience contains many-things starting from information search, evaluation of services, decision-making, making bill payments and customer support service.

There are still apprehensions regarding the quality of internet connectivity in rural areas. Lack of awareness and low digital literacy among the Tamil Nadu consumers is one of the major important factors hampering the growth of digitalized services. Large part of consumer population is not having the required tools to operate online and many of them still worried about using online payment as a mode of payment. In India, large number of online services offering through the use of credit cards in the semi urban and rural area has lower penetration of credit cards; it is one of the core problem consumers not preparing digitalized services. Online service providers sometimes fail to ensure that their web store should be the final choice for the consumers to avail services. TNEB digitalized services is still at its growth stage. There is numerous studies have addressed customer's perception of service quality and their satisfaction in the traditional TNEB service scenario. In order to create a loyal customer, the TNEB should strengthen their service quality. However, integrative attempts of outcome with TNEB website aspects i.e., website design, security, website quality etc are lacking. In this situation, it is very important for TNEB to build strong relationship with consumers to achieve customer loyalty to the web services. A need is identified to study the consumers perception

towards services through digital mode and association between TNEB service quality and customer s' satisfaction in Indian context. Hence the current study is undertaken to fill the gaps in the existing research in the field of digitalized services.

In this background, the study has elevated the following research questions:

- i. What are the factors that influence the consumers' to go for digitalized services?
- ii. Does level of awareness consumers about use of digitalized and other services of TNEB is vary on the bases of demographical profile?

These questions assist to focus, the significance and objectives of the study.

Objectives of the Study

The present study is undertaken with the following specific objectives.

- i. To assess the level of awareness about use of digitalized and other services of TNEB.
- ii. To analyze whether the demographical profile of the respondent significantly influences the adoption of digitalized services of TNEB.

Hypotheses

The following hypotheses were formulated and tested in the present study

Ho1: Customers are not fully digitalized services of TNEB in Chennai city.

Ho2: There is no significant relationship between socio-economic factors of the respondents and their level of awareness about online shopping.

Scope of the Study

This present study confined with to its scope of digitalized servers offered by TNEB in selected circles in Chennai city focused digital literacy and digital infrastructure in the study area. Further, the present study was restricted to perception of selected digital services of TENB.

RESEARCH METHODOLOGY

Research Design

Based on the objectives of the study, the researcher has chosen a pathway of descriptive research design to understand the level of awareness and perception of consumers in reference to digitalized services of TNEB. It seeks to determine how the dependent variable changes with variations in the independent variable. This involves having a hypothesis of the study followed by the objectives followed by survey, data analysis and conclusion.

Nature of Data and Tools for Data Collection

The current study based on primary data. The primary data was collected through structured interview schedule.

Pilot Study

Prior to final data collection, the researcher conducted a pilot study from 50 sample respondents for pre- testing the interview schedule. After the collection of sample data, the researcher had made scrutinized the questions, which are given in the interview schedule to check the consistency, reliability and validity. After an in-depth analysis and discussion with experts, the schedule was revised to improve the presentation of the items, based on comments and feedback of officials and exports in this field.

Size of Population

The target population for the present study comprises the customers of TNEB in selected circles in Chennai city.

Selection of the Sample

Data was collected directly from the field of survey. Probability sampling technique i.e., simple random sampling technique was employed to identify the samples for the present study. The researcher at first was able to get a list of customers from EB office with their mobile number / residential addresses. First the Chennai city is purposively selected. 580 sample units were personally contacted and interviewed on verbal-written mode.

Tests of Normality

The normality of the sample has been checked. The two tests for normality are run. For dataset small than 2000 elements, researcher has used the Shapiro-Wilk test; otherwise, the Kolmogorov-Smirnov test was also used. The resultant is Avg_ Exp_ Score .954 with Sig 312 and Kolmogorov-Smirnov statistic .097 with sig 194*. The p-value is more than 0.05. So, researcher can conclude that the data comes from a normal distribution.

Tools for Data Analysis

The collected data are processed and analyzed by SPSS software version 20.0. In order to suit the requirements of the present study, the following tools have been employed. Simple percentage analysis, Descriptive Statistics, Factor Analysis, Cronbach's Alpha test, ANOVA, t-Test, Chi-square Test, Correlation Analysis, Regression and Multiple Regression Analysis. The tests in this study were carried out by formulating suitable hypotheses and were also tested at 5% level of significance.

Customers' Awareness about TNEB Services

Consumers have several rights to utilize different types of services provided by TNEB there is a synopsis of rights available under the Electricity Act, 2003 to protect consumers and TNEB should be created awareness among the customers regarding the rights and service available, how to access the application form website, how to download through electronic media, The formulates regarding receive application form(s) for obtaining new service connections for LT (single phase/three phase) and HT and also format of the agreement to be executed at prescribed fee from any of the section offices of distribution licensee in their area of supply, knowing the status of their application and information about the reasons of non-disposal or rejection

thereof, personal hearing, appeal and removal of deficiencies. demand proof identity from such representatives of the electricity distribution licensee visiting their premises, receive a copy of the agreement after the same has been executed, Tariff related charges, Miscellaneous charges, namely, apacitor Compensation charge; Excess demand charge; Excess contracted load charge; Belated payment surcharge, Additional security Deposit, when so called upon; Service /Line shifting charge, Name transfer charge, Reconnection charge, Consumer meter card replacement charge; Dishonored cheque service charge, Meter related charges, Application Registration charge, Minimum charges where applicable. TNEB also be understood that the level of quality that consumers may reasonably expect from the electricity board. In the competitive environment, the TNEB provide a lot of services to customers through digital and non-digital mode. At the same time, the level of awareness of the customers is not up to the mark. Against this background, in this section an attempt has been made to investigate the status of awareness among the TNEB customers about various services offered through on and off line by TNEB in the study area and the results of the evaluation are reported in Table 1.

Table 1: Status of Awareness among Customers about Various Services Offered By TNEB

Services	Fully aware	Aware	Somewhat aware	Less aware	Not aware	Total	Mean	Mean percentage
Using /Navigate methods	193 (33.30)	170 (29.30)	88 (15.20)	100 (17.20)	29 (5.00)	580 (100.00)	3.69	73.72
Medium of website language	214 (36.90)	155 (26.70)	82 (14.10)	100 (17.20)	29 (5.00)	580 (100.00)	3.73	74.66
Method of inputting data in portal	154 (26.60)	215 (37.10)	76 (13.10)	88 (15.20)	47 (8.10)	580 (100.00)	3.59	71.76
Tariff transfer through online	54 (9.30)	88 (15.20)	70 (12.10)	77 (13.30)	291 (50.20)	580 (100.00)	2.20	44.03
Risk in cash less transaction	41 (7.10)	87 (15.00)	70 (12.10)	70 (12.10)	312 (53.80)	580 (100.00)	2.09	41.90
Transaction canceling process	182 (31.40)	140 (24.10)	46 (7.90)	101 (17.40)	111 (19.10)	580 (100.00)	3.31	66.24
Using complaints portal	145 (25.00)	92 (15.90)	46 (7.90)	113 (19.50)	184 (31.70)	580 (100.00)	2.83	56.59
Surrendering service connection through digital mode	47 (8.10)	111 (19.10)	39 (6.70)	192 (33.10)	191 (32.90)	580 (100.00)	2.36	47.28
Negligible risk in website portal	29 (5.00)	50 (8.60)	57 (9.80)	194 (33.40)	250 (43.10)	580 (100.00)	1.99	39.79
Charges in speculative online transactions	50 (8.60)	50 (8.60)	81 (14.00)	210 (36.20)	189 (32.60)	580 (100.00)	2.24	44.90
Name transfer through online	261 (45.00)	156 (26.90)	69 (11.90)	59 (10.20)	35 (6.00)	580 (100.00)	3.95	78.93
Method of converting single phase service to three phase through website	24 (4.10)	30 (5.20)	59 (10.20)	219 (37.80)	248 (42.80)	580 (100.00)	1.90	38.03

Knowing bill status through website	242 (41.70)	151 (26.00)	65 (11.20)	70 (12.10)	52 (9.00)	580 (100.00)	3.79	75.90
Payment gateway	252 (43.40)	130 (22.40)	76 (13.10)	94 (16.20)	28 (4.80)	580 (100.00)	3.83	76.69
Knowing payment due date	253 (43.60)	164 (28.30)	100 (17.20)	47 (8.10)	16 (2.80)	580 (100.00)	4.02	80.38
Procedure for obtaining LT (Low tension)/ HT(High tension) industrial service connection	257 (44.30)	165 (28.40)	94 (16.20)	53 (9.10)	11 (1.90)	580 (100.00)	4.04	80.83
Procedure for obtaining domestic/commercial service connection	246 (42.40)	112 (19.30)	94 (16.20)	112 (19.30)	16 (2.80)	580 (100.00)	3.79	75.86
Procedure for obtaining agricultural service connection	41 (7.10)	28 (4.80)	100 (17.20)	248 (42.80)	163 (28.10)	580 (100.00)	2.20	44.00
Making advance payment for bills through online	201 (34.70)	180 (31.00)	104 (17.90)	77 (13.30)	18 (3.10)	580 (100.00)	3.81	76.17
Apply for temporary supply connection	228 (39.30)	159 (27.40)	93 (16.00)	88 (15.20)	12 (2.10)	580 (100.00)	3.87	77.34
Apply through online for shifting meter	206 (35.50)	176 (30.30)	85 (14.70)	65 (11.20)	48 (8.30)	580 (100.00)	3.74	74.72
Apply through online for tariff change	256 (44.10)	141 (24.30)	75 (12.90)	66 (11.40)	42 (7.20)	580 (100.00)	3.87	77.34
Apply through online for changing electricity pools	250 (43.10)	171 (29.50)	81 (14.00)	48 (8.30)	30 (5.20)	580 (100.00)	3.97	79.41
Apply through online for solar services connection	298 (51.40)	111 (19.10)	87 (15.00)	72 (12.40)	12 (2.10)	580 (100.00)	4.05	81.07
Apply through online for one day service connection	232 (40.00)	159 (27.40)	99 (17.10)	78 (13.40)	12 (2.10)	580 (100.00)	3.90	77.97
Apply through online for temporary services connection	224 (38.60)	127 (21.90)	99 (17.10)	89 (15.30)	41 (7.10)	580 (100.00)	3.70	73.93
TNEB helpline numbers /customer care numbers	193 (33.30)	148 (25.50)	103 (17.80)	94 (16.20)	42 (7.20)	580 (100.00)	3.61	72.28
Scan QR code (through Android app/ IOS app)	192 (33.10)	160 (27.60)	97 (16.70)	95 (16.40)	36 (6.20)	580 (100.00)	3.65	73.00
Customers 12 digit numbers	191 (32.90)	149 (25.70)	91 (15.70)	101 (17.40)	48 (8.30)	580 (100.00)	3.58	71.52
Using reading entry user manual	29 (5.00)	29 (5.00)	66 (11.40)	213 (36.70)	243 (41.90)	580 (100.00)	1.94	38.90
Online payment with and without registration	243 (41.90)	190 (32.80)	33 (5.70)	90 (15.50)	24 (4.10)	580 (100.00)	3.93	78.55
Quick pay system	263 (45.30)	257 (44.30)	24 (4.10)	30 (5.20)	6 (1.00)	580 (100.00)	4.28	85.55
Demand special type meter (Trivector Meters)	98 (16.90)	52 (9.00)	70 (12.10)	180 (31.00)	180 (31.00)	580 (100.00)	2.50	49.93
Mobile number registration	281 (48.40)	191 (32.90)	27 (4.70)	27 (4.70)	54 (9.30)	580 (100.00)	4.07	81.31
Tariff schedule and Free 100 units	307 (52.90)	190 (32.80)	39 (6.70)	30 (5.20)	14 (2.40)	580 (100.00)	4.38	87.66

Replacement of meter card if lost or damaged	179 (30.90)	153 (26.40)	93 (16.00)	83 (14.30)	72 (12.40)	580 (100.00)	3.49	69.79
Using bill calculator link	24 (4.10)	32 (5.50)	63 (10.90)	231 (39.80)	230 (39.70)	580 (100.00)	1.95	38.93
Due date of HT /LT Services	42 (7.20)	46 (7.90)	68 (11.70)	88 (15.20)	336 (57.90)	580 (100.00)	1.91	38.28
Using 'Know your consumers' online link	109 (18.80)	70 (12.10)	64 (11.00)	230 (39.70)	107 (18.40)	580 (100.00)	2.73	54.62
Energy charges per unit before government subsidy	233 (40.20)	112 (19.30)	68 (11.70)	77 (13.30)	90 (15.50)	580 (100.00)	3.55	71.07
Government subsidy per unit	34 (5.90)	52 (9.00)	69 (11.90)	144 (24.80)	281 (48.40)	580 (100.00)	1.99	39.79
Electricity Tax for HT	41 (7.10)	54 (9.30)	66 (11.40)	144 (24.80)	275 (47.40)	580 (100.00)	2.04	40.76
Cable fault locating charges for HT in Chennai area	21 (3.60)	32 (5.50)	61 (10.50)	206 (35.50)	260 (44.80)	580 (100.00)	1.88	37.52
Cable fault locating charges for HT in outside Chennai area	15 (2.60)	128 (22.10)	91 (15.70)	170 (29.30)	176 (30.30)	580 (100.00)	2.37	47.45
Notice period prior to disconnection	215 (37.10)	131 (22.60)	18 (3.10)	106 (18.30)	110 (19.00)	580 (100.00)	3.41	68.10
Belated payment surcharge	12 (2.10)	38 (6.60)	80 (13.80)	269 (46.40)	181 (31.20)	580 (100.00)	2.02	40.38
Criminal proceedings as per EB regulation Act 2003 for unauthorized use of electricity	255 (44.00)	173 (29.80)	22 (3.80)	46 (7.90)	84 (14.50)	580 (100.00)	3.81	76.17
Method of load calculator	69 (11.90)	74 (12.80)	63 (10.90)	171 (29.50)	203 (35.00)	580 (100.00)	2.37	47.41
Tariff related miscellaneous charges	60 (10.30)	83 (14.30)	75 (12.90)	165 (28.40)	197 (34.00)	580 (100.00)	2.39	47.72
Non-Tariff related miscellaneous charges	6 (1.00)	114 (19.70)	87 (15.00)	189 (32.60)	184 (31.70)	580 (100.00)	2.26	45.14
Using consumer registration user manual	246 (42.40)	194 (33.40)	75 (12.90)	41 (7.10)	24 (4.10)	580 (100.00)	4.03	80.59
Using cheque /DD challan preparation user manual	155 (26.70)	196 (33.80)	92 (15.90)	65 (11.20)	72 (12.40)	580 (100.00)	3.51	70.24
Paying EB bill within 20 days from the date of reading	246 (42.40)	143 (24.70)	73 (12.60)	64 (11.00)	54 (9.30)	580 (100.00)	3.80	75.97

Source: Computed from primary data

An observation of the table 1 shows that more than 70 percent of the respondents are found to be aware on the following aspects Using /Navigate methods , Medium of website language, Method of inputting data in portal, Name transfer through online, Knowing bill status through website, Payment gateway, Knowing payment due date, Procedure for obtaining LT (Low tension)/ HT(High tension) industrial service connection, Procedure for obtaining domestic/commercial service connection, Making advance payment for bills through online, Apply for temporary supply connection, Apply through online for shifting meter, Apply through online for tariff change, Apply through online for changing electricity pools, Apply through online for solar services connection, Apply through online for one day service

connection, Apply through online for temporary services connection, TNEB helpline numbers /customer care numbers, Scan QR code (through Android app/ IOS app), Customers 12 digit numbers, Online payment with and without registration, Quick pay system, Mobile number registration, Tariff schedule and Free 100 units, Energy charges per unit before government subsidy, Criminal proceedings as per EB regulation Act 2003 for unauthorized use of electricity, Using cheque /DD challan preparation user manual, Paying EB bill within 20 days from the date of reading. Towards the following aspects 50 to 70 per cent of the customers have aware about Transaction canceling process , Using complaints portal, Using ‘Know your consumers’ online link, Replacement of meter card if lost or damaged and Notice period prior to disconnection. Towards the following aspects below 50 per cent of the customers have aware about Tariff transfer through online , Risk in cash less transaction, Surrendering service connection through digital mode, Negligible risk in website portal, Charges in speculative online transactions, Method of converting single phase service to three phase through website, Procedure for obtaining agricultural service connection, Using reading entry user manual, Demand special type meter (Trivector Meters),Using bill calculator link, Due date of HT /LT Services, Government subsidy per unit, Electricity Tax for HT, Cable fault locating charges for HT in Chennai area, Cable fault locating charges for HT in outside Chennai area, Belated payment surcharge, Method of load calculator, Tariff related miscellaneous charges and Non-Tariff related miscellaneous charges. It is seen, from the analysis that out of 580 respondents, 20.30 per cent customers have with high awareness. The respondents with medium level of awareness are 12.60 per cent. This category occupies the least proportion of the sample respondents, 67.10 per cent of respondents had low level of awareness towards TNEB services.

Relationship between Socio-Economic Characteristics and Level of Awareness of the Respondents

The association between the profile of the respondents and their awareness on factors leading to choose the TNEB digital and non-digital services has been examined with the help of chi-square test. In order to measure the relationship between the socio-economic characteristics and level of awareness of the respondents, the researcher has framed the following null hypothesis: “There is no significant association between the personal variables of respondents (such as gender, age, educational qualification, educated person, family monthly income, occupation, marital status and size of family) and their awareness level on various services offered through on and offline mode by the TNEB. In order to find the relationship ‘Chi-square’ test (χ^2) was used and the results are shown in following Tables.

Gender and Level of Awareness of the Respondents

Table 2: Association between Gender and Level of Awareness towards Services of TNEB through Online and Offline Mode

Gender	Level of Awareness			Total	Chi-Squire Test	P Value Sig
	Low	Moderate	High			
Male	330 (73.2)	51 (11.3)	70 (15.5)	451 (100.0)	37.080	.000
Female	59 (45.7)	22 (17.1)	48 (37.2)	129 (100.0)		
Total	389 (67.1)	73 (12.6)	118 (20.3)	580 (100.0)		

Source: Computed from collected primary data

It is noted from the above table 2 that the calculated ‘Chi-square’ values 37.080 with the ‘p’ value .000, the result is significant at 5% level. Hence, the hypothesis is rejected. It is found from the analysis that there is association between the gender and the level of awareness of the respondents towards TNEB services.

Age and Level of Awareness of the Respondents

Table 3: Association between age and level of awareness towards services of TNEB through online and offline mode

Age	Level of Awareness			Total	Chi-Squire Test	P Value Sig
	Low	Moderate	High			
Less than 30	45 (78.9)	0 (0.0)	12 (21.1)	57 (100.0)	70.828	.000
30-40	36 (38.3)	23 (24.5)	35 (37.2)	94 (100.0)		
40-50	120 (63.2)	23 (12.1)	47 (24.7)	190 (100.0)		
50- 60	100 (74.6)	22 (16.4)	12 (9.0)	134 (100.0)		
Above 60	88 (83.8)	5 (4.8)	12 (11.4)	105 (100.0)		
Total	389 (67.1)	73 (12.6)	118 (20.3)	580 (100.0)		

Source: Computed from collected primary data

It is noted from the above table 3 that the calculated Chi-square value is 70.828 with the ‘p’ value .000, but the result is significant at 5% level. Hence, the hypothesis is rejected. It is found from the analysis that there is association between the age of the respondents and the level of awareness the towards TNEB services.

Educational Qualifications and Level of Awareness of the Respondents

Table 4: Association between Education Qualification and Level of Awareness towards Services of TNEB through Online and Offline Mode

Education Qualification	Level of Awareness			Total	Chi-Squire Test	P Value Sig
	Low	Moderate	High			
School level	90 (67.7)	15 (11.3)	28 (21.1)	133 (100.0)	11.476	.001
Undergraduate	151(74.0)	23 (11.3)	30 (14.7)	204 (100.0)		
Post graduate	60 (62.5)	12 (12.5)	24 (25.0)	96 (100.0)		
Professional courses	34 (65.4)	6 (11.5)	12 (23.1)	52 (100.0)		
Diploma and others	54 (56.8)	17 (17.9)	24 (25.3)	95 (100.0)		
Total	389 (67.1)	73 (12.6)	118 (20.3)	580 (100.0)		

Source: Computed from collected primary data

It is noted from the above Table 4 that the calculated Chi-square value is 11.476 with the ‘p’ value .001, which is significant at 5% level. Hence, the hypothesis is rejected. It is found from the analysis that there is association between the educational status and the level of awareness towards the TNEB services.

No of Educated Members and Level of Awareness of the Respondents

Table 5: Association between Number of Educated and Level of Awareness towards Services of TNEB through Online and Offline Mode

Number Of Educated	Level Of Awareness			Total	Chi-Squire Test	P Value Sig
	Low	Moderate	High			
One	54 (47.8)	6 (5.3)	53 (46.9)	113 (100.0)	92.387	.000
Two	269 (76.0)	56 (15.8)	29 (8.2)	354 (100.0)		
More than two	66 (58.4)	11 (9.7)	36 (31.9)	113 (100.0)		
Total	389 (67.1)	73 (12.6)	118 (20.3)	580 (100.0)		

Source: Computed from collected primary data

It is noted from the above table 5 that the calculated ‘Chi-square’ value is 92.387 with the ‘p’ value.000, which is significant at 5% level. Hence, the hypothesis is rejected... It is found from the analysis that there is association between the number of educated members and the level of awareness towards TNEB services.

Family Monthly Income and Level of Awareness of the Respondents

Table 6: Association between Family Monthly Income and Level of Awareness towards Services Of TNEB through Online and Offline Mode

Family Monthly Income	Level of Awareness			Total	Chi-Squire Test	P Value Sig
	Low	Moderate	High			
Less than Rs.20,000	18 (60.0)	6 (20.0)	6 (20.0)	30 (100.0)	20.736	.002
Rs.20,000 to 30,000	109 (58.9)	35 (18.9)	41(22.2)	185 (100.0)		
Rs. 30,000 to 40,000	163 (70.3)	16 (6.9)	53 (22.8)	232 (100.0)		
Above Rs. 40,000	99 (74.4)	16 (12.0)	18 (13.5)	133 (100.0)		
Total	389 (67.1)	73 (12.6)	118 (20.3)	580 (100.0)		

Source: Computed from collected primary data

It is noted from the above table 6 that the calculated Chi-square value is 20.736 with the ‘p’ value .002, which is not significant at 5% level. Hence, the hypothesis is rejected. It is found from the analysis that there is association between the monthly family income of the respondents and the level of awareness towards the TNEB services.

Marital Status and Level of Awareness of the Respondents

Table 7: Association between Marital Status and Level of Awareness towards Services Of TNEB through Online and Offline Mode

Marital Status	Level of Awareness			Total	Chi-Squire Test	P Value Sig
	Low	Moderate	High			
Individual	33 (48.5)	17 (25.0)	18(26.5)	68 (100.0)	31.143	.000
Couple	179 (73.7)	34 (14.0)	30 (12.3)	243 (100.0)		
Couples with Children	177(65.8)	22(8.2)	70(26.0)	269(100.0)		
Total	389(67.1)	73(12.6)	118(20.3)	580(100.0)		

Source: Computed from collected primary data

It is noted from the above table 7 that the calculated ‘Chi-square’ value is 31.143 with the ‘p’ value .000, but the result is significant at 5% level. Hence, the hypothesis is accepted. It is found from the analysis that there is close association between the marital status and level of awareness towards TNEB services.

Family Size and Level of Awareness of the Respondents

Table 8: Association between Total Members in Your Family and Level of Awareness towards Services Of TNEB through Online and Offline Mode

Total Family Members	Level of Awareness			Total	Chi-Squire Test	P Value Sig
	Low	Moderate	High			
Up to 3	151(68.9)	33(15.1)	35(16.0)	219(100.0)	83.521	.000
4-6	221(71.8)	40(13.0)	47(15.3)	308(100.0)		
More than 6	17(32.1)	0(0.0)	36(67.9)	53(100.0)		
Total	389(67.1)	73(12.6)	118(20.3)	580(100.0)		

Source: Computed from collected primary data

It is noted from the above table 8 that the calculated Chi-square value is 83.521 with the ‘p’ value .000, which is significant at 5% level. Hence, the hypothesis is rejected. It is found from the analysis that there is association between family size and level of awareness towards TNEB services.

Effect of Personal Variables on the Respondents’ Level of Awareness -Multiple Regression Analysis

The personal (independent) variables have effect on the awareness level (dependent variable) of the consumers. An attempt is made to examine the effect of the independent variables on the awareness level of the buyers towards digital and non-digital services of TNEB. In order to find the relationship between fifteen selected independent factors and independent factor, eight independent variables were selected they were gender , age , educational qualification, educated members in the family, occupation, family monthly income, marital status and family size. The relationship was analyzed with the help of Multiple Regression Analysis. The results of multiple regression analysis are shown in Table 9.

Table 9: Effect of Personal Variables on the Respondents’ Awareness towards Digital and Non-Digital Services of TNEB - Multiple Regression Analysis

Sl. No.	Variables	Unstandardized coefficients	Standardized coefficients		T	Sig.
		B	Std. Error	Beta		
	(Constant)	8.548	0.509			
1	Gender	-0.328	0.048	0.232	5.027	.000**
2	Age	-0.077	0.049	0.067	3.027	.000**
3	Educational Qualification	0.098	0.097	0.148	7.138	.000**
4	Educated Members	0.157	0.131	0.187	3.102	.000**
5	Family Monthly Income	0.117	0.064	0.157	5.011	.000**
6	Marital Status	0.094	0.041	0.124	6.017	.000**
7	Family Size	0.107	0.064	0.255	5.017	.000**

Source: Calculated primary data

R Value	R ² Value	Degree of freedom – V1	Degree of freedom –V2	F Value	Significance
0.785	0.616.	6	462	10.344	.000**

Note: Figure in brackets is percentages to Row Total

*Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

The multiple linear regression co-efficient (dependent variable) is found to be statistically good fit as R is 0.785 and R² 0.616. It shows that independent variables contribute about 63 per cent of the variation in the level of awareness felt by the selected respondents of the study and this is statistically significant at 5% level. The table indicated that the co-efficient of gender and age are negatively associated with the level of awareness. The co-efficient of education, educated persons in the family, family monthly income, and marital status, family size are positively associated with the level of awareness. Further, it indicated that the contribution of educational qualification, occupation and marital status are high and stronger than the other variables. Thus from the above analysis, the following observation could be made. The level of awareness towards TNEB services education, occupation, marital status, family monthly income, and family size of respondents.

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