

# New Media for local e-governance “FRIENDS” and the changing consumer behavior

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**Abstract** In the Global media presence, the diffusion of new media technology even at the grassroots level brings about a new changing pattern of living is visible. A lot of experiments are taking place in this direction and it is important to evaluate, how it is working and what is its effect on the society. In this paper, the researchers attempted to observe, how the ICT enabled local governance project FRIENDS visibly brought about change in the urban social environment of the selected nine districts in the state of Kerala and how far the use of new media technology for development brought about desired change.

The project which was piloted in the year 2000 was implemented in all the district headquarters in Kerala. It gave a refreshing outlook for the government services to the public in a clean corruption free environment. When the need for the expansion is demanded from the public by their huge participation, it was the beginning of a new trend of e-governance in the state, which was inspired by the national e-governance plan. FRIENDS project addressed the needs of the busy schedule of the public in their day to day life. The researchers embarked upon adopting an ‘Ex post-Facto’-Research Design, where, stratified random sampling method was adopted for the study.

**Keywords** – e-governance, Behavioral change, Diffusion, Occupation

## 1 INTRODUCTION

The present investigation is an attempt to understand how the ICT mediated governance brought about the desired change in the minds of users at different levels. The governments, the world over experiment with various types of effective mechanisms of governance to reach out to people, especially, at the grass root levels. And in this direction e-governance is an important mile stone converging information technologies and media technologies. In this endeavor the Government of India took early initiatives and launched its national e-governance plan in the year 2006. This triggered a chain of effects in all the state governments in India to come out with different e-governance strategies of their own to suits their geographical and social context. This phenomenon reflects that governance is good when it allocates and manages resources and efficiently provides public goods of necessary quality to its citizen [11]. Hence when a new experiment of this magnitude is launched, the excitement that it brings about inducing change amongst the citizens is always either underrated or overrated. Because communication and social influence are intimately related to each other, for influence cannot occur without some form of communication points out [14] similarly ‘if one theme underlies all systems of communication, it is social influ-

velopment advocates (Schramms Katz etc) all of them evinced a keen interest in understanding the influence of communication on the behavioral changes. It is truly a reflection of the dynamics of communication succinctly remarked that “the man who never alters a opinion is like standing water and breeds reptiles of the mind”. On similar lines the pioneer of technological school R E Park’s remark that ‘everynew technical device brings about a new social order’ – the concept which was religiously pursued by his disciples LikeInnis and McLuhan is worth mentioning here [2].

Thus based on this premise it is interesting to investigate the technology based e-governance experiment FRIENDS -Fast Reliable Instant Efficient Network for the Disbursement of services conceived and implemented by the IT Mission Kerala in the present study. In this paper researchers attempted, with an objective as to how the ICT enabled local governance project FRIENDS has brought about change in the urban social environment of the selected nine districts in the state of Kerala.

## 2 REVIEW OF RELATED LITERATURE

With a view to understand the theoretical and methodological applications on the subject under investigation, which relies on central theme of interventionist nature of ICT mediated communication experiment in influencing the desired change in the process of e-governance, some of the studies were critically reviewed and presented here. The ICT has to be seen in the context of the overall development of society[1]. As early as in 1986, Donnelly asserts that the effects of new

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ence’, remarks, [8]. This is common to those scholars be it technological (R.E.Park, McLuhan, Innisses), contemporary critical scholars(Murdock, Goldingese) are the de-

electronic media can be assessed by a fact based and involved understanding of these new media. At this juncture, Cultural indicator theory comes as handy for its direct periodical analysis of trends in the composition of structure and message system, cultivating consumptions of life relevant to socialization and public policy [5]. [10] In this study observes that the change in perception occur over time, of the use and effects of new media in the general rate of adoption. [12] The work on information kiosks of Madurai district, applying Structurisation theory, which allows the researcher to investigate the perceived use of ICT as a mediator of development. [6] The technology will retain if the users find that the technology has value in meeting his or her needs. [3] The people might consume more of what they want if given more options. [10] The studies on direct effect offer us how the new media diffusion alters a social environment in a society. The central point of these studies has been the power of the new media and its influence. The new media take different patterns of use at different diffusion levels. [15] The study observes that mere presence of technology leads to familiar and standard applications of that technology which in turn bring about social change. Further [1] the study amplifies governance as 'the manner in which power is exercised in management of countries economic and social resources for development'. It can be better understood as , 'the complex mechanisms, processes, relationships and institutions through which citizens and groups articulate their interests, exercise their rights and obligations and mediate their differences'. Further it is advocated that e- governance is the use of ICT by the government, civil society and political institutions to engage citizens through dialogue and feedback to promote their greater participation in the process of governance of these institutions. [12] Forsee India's capability to become the super power in terms of economic prosperity, living standard, Health, Education, efficient government services through e-governance within 20-30 years, but it need to focus upon on some areas to make it possible, he cautions. IT and e-governance play a significant role in shaping the future of India. There is a strong need for medium term, long term action plans which could not suffer on the account of lack of funds, expertise or the necessary political will. The security issue too, should not be lost sight of in the governments' quest for quick scalability of services. All the more, the changes will only occur with awareness and it takes its own time to adopt and it is a long changing process. Hence the government should sustain and support such initiatives in spite of the initial teething problem. It is going to be the technology that would play a significant role in accelerating developments in areas that lags behind on traditional industries. Investments in communication

infrastructure and in training and learning would enable developing countries to increase their competitiveness as external service providers. The implementation phase would require translating commitment into action at both national and regional level. The big challenge would be to bring national e-strategies into overall development and governance practices.

### 3 RESEARCH METHODOLOGY

Considering the background of the study, the researcher embarked upon adopting an 'Ex post-Facto'-Research Design, a non-experimental research design, extensively explored in social-science research, mostly relying on survey procedures. A multi-stage sampling technique was adopted by the researcher to identify eligible respondents (beneficiaries), who are included in the sample for the present investigation.

Considering the study [13] amplification of "occupation" of the citizen as a major factor influencing Information Society, the researcher have taken "occupation" as an independent variable for the study. Besides, [9] and [10] dictum that the new media at adoption changes over time has been considered and the investigation explored the 'length of use' and 'e-governance' as an independent variable in this study. Out of the 14 districts in Kerala nine districts that are included in the study are Thiruvananthapuram, Kottayam, Thrissur, Palakkad, Malappuram, Calicut, wayanad, Kannur and Idukki. A total of 750 completed questionnaires are included for the study and to test the association between the variables correlation Chi-square test was used and to understand the difference in perception ANOVA is used in the present investigation.

### 4 BACKGROUND

The state of Kerala is situated in the south western part of India with a population of "33387677" people living in "38,863" sq km area which has its own unique features. The state has high literacy rate(90.9%) in the country, low birth and death rate and the sex ratio in favor of women (17366387) compared to men (16,021,290).

### 5 FRIENDS PROJECT

FRIENDS when expanded Fast Reliable Instant Network for Disbursement of Services works as a one stop integrated citizen service center for the government, where public can remit utility bill payments, submit applications, seek information about government programs and schemes. After the success of pilot in 2000 at Trivandrum and there after launched at all district headquarters and the project sustained successfully for last 12 years.

One of the peculiar features of FRIENDS center is that it works from 9AM to 7PM continuously without lunch break and it works on all Sundays other than second Sat-

urday and public holiday. Counter Service Officers (CSO'S) work on two shifts from 9AM to 2PM and 2PM to 7PM. Reducing transaction time and cost (No user charges are obtained from citizens) in FRIENDS center during last few years the centre witness more participation of citizen in the 'e-governance'.

### Utility bills handled in FRIENDS for various Departments

1. Motor vehicle department
  - One time vehicle tax
  - Motor vehicle tax(105 types)
  - Fee for licenses for motor vehicle department (20 types)
  - Fee for permits from motor vehicle department (142 types)
  - Registration fee for motor vehicles (37 types)
  - Fee for fitness certificates of motor vehicles and one time cess collection
2. Electrical Inspectorate
  - Kerala state electricity licensing board fee
  - Inspection fees for electrical installations
  - Inspection fees for cinema installations
  - Board of examiners for cinema operators fees
  - Testing fees for electrical instruments
3. Kerala state electricity board(K S E B)
  - Monthly electric bill (low tension and spot billing)
4. Kerala water authority(KWA)
  - Water bill and other related bills
5. Civil supplies department
  - Fee for new ration card
  - Various certificate fee for trade license (11 types)
6. Revenue department
  - Building tax
  - Basic land tax
  - Revenue recovery
7. Local body(Corporation/Municipality)
  - Property tax
  - Professional tax
  - Trade licence fee
  - Fee for food license
8. University
  - University exam fees (352 types)
  - General fees (96 types)
9. BSNL-Land line and Mobile bills

10. Booking of railway ticket (waynad and Mlappuram)

## 6 SAMPLE CHARACTERISTICS

It can be seen from the tables 1 to 3, there were 497 men and 253 women included in the study amongst the 7 groups of age categories. Similarly, 58 of the samples is less than tenth standard to 115 post graduates are included in the study. Further, farmers (50), students (151), businessmen (72), housewives (89), professionals (28), employed class (174), retired and others (11), government employed (147) and unorganized sector (28) forms the total of 750 samples included in the study.

## 7 RESULTS OF THE STUDY

To understand whether any association exist between the demographic variable (occupation) and their pattern of use of the services offered by the FRIENDS centres, the researchers applied the Test of association using Chi-square. The results are given below.

As is revealed in the table-4, the chi-square pertaining to the association between the occupational status of the respondents and their usage of services such as paying Kerala State Electric Bills, fee for ration card, university fees, RTO fee for licenses and permit for motor vehicle tax, trade licenses, building tax, basic land tax, revenue recovery, property tax, professional tax, electrical inspectorate, water bill and telephone bill are analyzed.

There is a significant association between the occupational status of the respondents and in the usage of paying KSEB bills (chi-square value – 144.549). It can be observed that 590 respondents out of 750 utilizing the service. It can be seen from the analysis that the 'employed' group (147 out of 590 users) and 'government employed' (124 out of 590) is paying KSEB bills more than the other groups. The rest of the groups are moderate users of paying KSEB BILLS.

**Hence, it can be concluded that there is an association between the occupational status of the respondents and the usage of paying KSEB bills**

The chi-square pertaining to the occupational status of the respondents and paying of 'fee for ration card', it is found there is no significant (chi-square value- 6.141). It can be seen from the analysis that only 31 respondents out of 750 are using the services.

**Hence, it may be concluded that there is no association between the occupational status of the respondents and the usage of paying bills of 'fee for ration card' as detailed above.**

There is a significant association between the occupa-

tional status of the respondents and to the paying of 'University fees' (chi-square value of  $-298.730$ ). It can be seen from the analysis that 185 respondents out of 750 are using the service. The table reveals that the 'student' group is using the services more than any other group with a total of 118 out of 185 total users. And second major users are the 'employed' group (28 users). Obviously it can be noticed that 'unorganized' sector and 'retired' group are not using the services.

**Hence, it can be concluded that there is an association between the occupational status of the respondents and 'University fees' payment behavior.**

There is a significant association between the occupational status of the respondents to that of payment of 'RTO fee for licenses' (chi-square value of  $-47.101$ ) and 'RTO permit for motor vehicle tax' (chi-square value of  $-29.846$ ). It can be seen from the analysis that 136 respondents paid 'RTO fee for licenses' and 109 respondents paid 'RTO permit for motor vehicle tax' in the FRIENDS centre. The table reveals that the 'employed' group dominates in the usage of paying 'RTO fee for licenses' (52 out of 136 users) and 'RTO permit for motor vehicle tax' (40 out of 109).

**Hence, it may be concluded that there is significant association between occupational status of the respondents and to the payment of 'RTO fee for licenses and RTO permit for motor vehicle tax'.**

It can be ascertained from the table-4 that there is significant association between the occupational status of the respondents and payment of trade licenses (chi-square value of  $-112.550$ ). The analysis reveals that only 29 respondents out of 750 using this service in FRIENDS centres. The table reveals that the 'business' group dominates in the usage of service with a number of 19 out of 29 users.

**Hence, it can be concluded that there is a significant association between the occupational status of the respondents to that of payment of trade licenses in the FRIENDS centres.**

It can be ascertained from the table-4 that there is an association between the occupational status of the respondents and to that of payment of building tax (chi-square value of  $-21.591$ ). It can be seen from the analysis that 103 respondents out of 750 are paying 'building tax' in the FRIENDS centres. The table reveals that 'employed' group dominates in the usage with a total of 26 out of 103 followed by 'government employed' (23 out of 103 users) and the group of 'business' (18 out of 109) are the major users of the service.

**Hence, it may be concluded that there is significant association between the occupational status of the respondents to that of payment of building tax in the FRIENDS centres.**

There is a no association between the occupational status of the respondents and to the paying of 'Basic land tax' (chi-square value of  $-13.654$ ). A total of 48 respondents out of 750 is paying 'basic land tax' where 'employed' leading in usage of the service (11 out of 48).

**Hence, it may be concluded that there is no association between the occupational status of the respondents to that of paying of 'Basic land tax' in the FRIENDS centres.**

The chi-square pertaining to the occupational status of the respondents and the payment of 'revenue recovery', it is found that there is no significance (chi-square value of  $-5.216$ ). The table reveals that only 6 respondents out of 750 has paid 'revenue recovery' charges in the centres.

**Hence, it may be concluded that there is no significance between the age of the respondents to that of payment for revenue recovery.**

In the case of chi-square pertaining to the occupational status of the respondents and the payment of 'property tax' it is found that there is significant association (chi-square value of  $-18.532$ ). The table reveals that 37 respondents out of 750 has paid 'property tax' in the FRIENDS centre where the 'employed' group dominates with 12 out of 37 users.

**Hence, it may be concluded that there is a significant association between the occupational status of the respondents to that of payment of property tax.**

It can be determined from the table-4 that there is a significant association between the occupational status of the respondent to that of the payment of professional tax. (Chi-square value  $-50.430$ ). It can be observed that a total of 47 respondents out of 750 is using the service for the payment of professional tax and 25 of them constitutes the group 'government employed' and 16 of them 'employed' out of 47 users.

**Hence, it may be concluded that there is a significant association between the occupational status of the respondents to that of payment of professional tax through FRIENDS centre.**

It can be ascertained from the table-4 that there is no association between the occupational status of the respondents and to that of payment of electrical inspectorate. (Chi-square value  $-11.653$ ). It can be observed from the table that only 26 respondents out of 750 is utilizing FRIENDS centre for the payment of electrical inspectorate.

**Hence, it may be concluded that there is no association between the occupational status of the respondents to that of payment of electrical inspectorate through FRIENDS center.**

There is a significant association between the occupational status of the respondents and to the paying of water bills. (Chi-square value – 37.642). It can be observed from the table that 243 respondents out of 750 are paying water bills in FRIENDS centre, whereas 64 respondents belong to the 'employed' group and 55 respondents are government employees and 41 house wives are also utilizing this service of FRIENDS.

**Hence, it can be concluded that there is an association between the occupational status of the respondents and the usage of paying of water bills in FRIENDS centres.**

There is a significant association between the occupational status of the respondents and to the paying of telephone bills. (Chi-square value – 94.261). It can be observed from the table that 552 respondents out of 750 are paying telephone bills through FRIENDS centres. The table reveals that 142 'employed' respondents and 123 'government employed' are the major users of the service, where all other groups are moderate users of the service.

**Hence, it can be concluded that there is a significant association between the occupational status of the respondents and the usage of paying of telephone bills in FRIENDS centres.**

## RESULTS OF ANOVA

To understand the difference in perception between different demographic groups, the scores of the instrument used for the study were subjected to a one-way analysis of variance (ANOVA). The results of ANOVA are detailed below.

The scores of the independent variables on usage (how long they use) of FRIENDS centre by respondents for total of reach and access, uses, effects (level of satisfaction) and the future of e-governance were subjected to a one way analysis of variance (ANOVA).

The table-5 (a) of ANOVA reveals for the total perception of reach and access and uses and effects effects (level of satisfaction) and the future of e-governance project FRIENDS (F-4.182) is significant. Hence it may be concluded that overall the respondents all the nine district surveyed are positively inclined towards the value of services offered in the FRIENDS e-governance project. Further a detail analysis of table of means reveal that the new adopters (three months and six months) with a M-72.36 and 72.68 respectively show more positive inclination when compared to others however the consistent mean value for other respondents also reveal success of FRIENDS e-governance project and its future in Kerala. This confirms to the theoretical notion that, in the

length of adoption do influence the behavioral changes positive towards e-governance.

The results of One-way Analysis of Variance (ANOVA) as shown in the table reveals that there is a very significant effect of the respondents frequency of use on paying various utility bills in the FRIENDS centre-electric bill payment ( 'F' 2.392), university examination fee payment ( 'F' 2.928), RTO fee for licenses ( 'F' 7.687), RTO permit for motor vehicle payment ( 'F' 4.820), water bill payment ( 'F' 4.315), BSNL bill payment ( 'F' 6.516).

The table of means illustrates that those who use the FRIENDS service for three months ( 'M' 1.3636) and six months ( 'M' 1.2571) for paying electric bill shows a strong inclination towards the service.

The table of means reveals that those who use the FRIENDS service for three year and above three year for paying university bills show strong inclination towards the service with ( 'M' 1.7288) and ( 'M' 1.8136)

The table of means reveals that those who use the FRIENDS service for 6 months and one year for paying RTO fee licenses show strong inclination towards the service ( 'M' 1.9429) and ( 'M' 1.9405)

The table of means illustrates that those who use the FRIENDS service for 6 months and one year for paying RTO permit for motor vehicle shows a strong inclination towards the service ( 'M' 1.9429) and ( 'M' 1.9412)

The table of means reveals that those who use the FRIENDS service for 3 months and 6 months for paying Water bill show strong inclination towards the service ( 'M' 1.7955) and ( 'M' 1.9143)

The customers of FRIENDS service in the case of payment of Water bill those who use it for one year is also showing inclination towards the service ( 'M' 1.7765)

The table of means reveals that those who use the FRIENDS service for 3 months and 6 months for paying BSNL bills show strong inclination towards the service ( 'M' 1.5227) and ( 'M' 1.4857). Hence conforming to early analysis that the lengths of adoption do influence the utility of FRIENDS services this result also shows that even the specific use of various services offered by the FRIENDS centres the length of adoption shows a positive inclination towards types of services that are being utilized.

## 8 DISCUSSION

The findings of the study is significant in the context of various hurdles such as social divide, poverty, lack of infrastructure, low literacy rate the rural urban divide and reluctance to adopt etc. Since FRIENDS is a 12 years old e-

governance project in Kerala spread across all the 14 districts of the State gives rise to a positive hope for the future of e-governance not only in India but for other developing countries also. Continued and sustained efforts with a perseverance to overcoming and offering services for a longer period of time and focusing on the demographics of end users such as occupation may bring about the desired results for e-governance as has been established in this investigation. India should continue to support and bring under its folds more departments and public services under e-governance so as to change the complexion of public administration and governance in this country.

## 9 CONCLUSION

At last a new emerging media technology ICT lends hopes in realizing the architect of scientific India Jawaharlal Nehru's vision of scientific governance, free of corruption. If e-governance practices are seriously viewed, studied, further enhanced, re-structured and implemented, India can establish yet another benchmark in the ICT mediated development and set an example for the developing countries to follow.

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[Table-1 Showing Age of the respondents and their Gender

		Gender		Total
		Male	Female	
Age	15-20	36	40	76
	21-25	92	37	129
	26-30	49	16	65
	31-35	47	36	83
	36-40	52	39	91
	41-45	63	35	98
	46above	158	50	208
<b>Total</b>		497	253	750

Table-2 Showing Age of the respondents and their Educational Qualification

		Count						Total
		Educational Qualification						
		Less than 10th	10 <sup>th</sup> std	Higher Secondary	Diploma	Graduate	Post Graduate	
Age	15-20	0	1	21	4	47	3	76
	21-25	1	5	19	10	79	15	129
	26-30	3	10	9	4	22	17	65
	31-35	4	13	14	9	29	14	83
	36-40	9	15	11	11	27	18	91
	41-45	8	21	21	13	17	18	98
	46 above	33	60	24	12	49	30	208
<b>Total</b>		58	125	119	63	270	115	750

**Table-3 Showing Age of the respondents and their Occupational status**

		Occupational status									Total
		Farmer	student	Business	Housewife	Professional	Employed	Unemployed/retired	govt employed	Unorganised sector	
Age	15-20	0	70	0	0	1	2	1	0	2	76
	21-25	0	77	9	5	4	28	1	3	2	129
	26-30	1	2	7	6	6	30	0	12	1	65
	31-35	8	1	10	20	3	21	1	18	1	83
	36-40	10	1	12	16	2	17	2	27	4	91
	41-45	8	0	19	17	3	16	0	32	3	98
	46 above	23	0	15	25	9	60	6	55	15	208
Total		50	151	72	89	28	174	11	147	28	750

**Table-5 (a) Results of one way analysis of variance (ANOVA) showing how long respondents using the service to the perception of reach and access, uses, effects (level of satisfaction) and the future of e-governance.**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1717.272	5	343.454	4.182	.001
Within Groups	61100.147	744	82.124		
Total	62817.419	749			

**Table-5 b Table of means**

variables	N	Mean	Std. Deviation
3 months	44	72.3636	10.17313
6 months	35	72.6857	8.19889
One year	85	69.5294	8.94505
Two year	130	70.3000	8.17981
Three year	118	67.3814	8.74122
Above three year	338	68.2426	9.44641
Total	750	69.0587	9.15797



**Table 6 (a) Showing, itemwise ANOVA of the services offered by the FRIENDS project and difference in perception by the 'length of adoption', of the respondents.**

		Sum of Squares	df	Mean Square	F	Sig.
Electric bill payments	Between Groups	1.991	5	.398	2.392	.036
	Within Groups	123.876	744	.166		
	Total	125.867	749			
Fee for new ration card	Between Groups	.143	5	.029	.718	.610
	Within Groups	29.576	744	.040		
	Total	29.719	749			
Kerala/Calicut/MG University examination fee	Between Groups	2.689	5	.538	2.928	.013
	Within Groups	136.678	744	.184		
	Total	139.367	749			
Fee for licenses motor vehicle department	Between Groups	5.475	5	1.095	7.687	.000
	Within Groups	105.831	743	.142		
	Total	111.306	748			
Permits from the motor vehicle department	Between Groups	2.923	5	.585	4.820	.000
	Within Groups	90.236	744	.121		
	Total	93.159	749			
Trade licence	Between Groups	.093	5	.019	.496	.779
	Within Groups	27.783	742	.037		
	Total	27.876	747			
Building tax	Between Groups	.996	5	.199	1.685	.136
	Within Groups	87.840	743	.118		
	Total	88.836	748			
Basic land tax	Between Groups	.156	5	.031	.519	.762
	Within Groups	44.772	744	.060		
	Total	44.928	749			
Revenuerecovery	Between Groups	.020	5	.004	.510	.769
	Within Groups	5.932	744	.008		
	Total	5.952	749			
Property tax	Between Groups	.383	5	.077	1.636	.148
	Within Groups	34.789	743	.047		
	Total	35.172	748			
Professional tax	Between Groups	.507	5	.101	1.733	.125
	Within Groups	43.547	744	.059		
	Total	44.055	749			
Electricalinspectorate	Between Groups	.174	5	.035	1.042	.392
	Within Groups	24.924	744	.034		
	Total	25.099	749			
Water bill payment	Between Groups	4.629	5	.926	4.315	.001
	Within Groups	159.639	744	.215		
	Total	164.268	749			
Bsnl	Between Groups	6.218	5	1.244	6.516	.000
	Within Groups	141.981	744	.191		
	Total	148.199	749			

**Table 6(b) Table of means.**

Frequency of use		K S E B Bills	Fee-Ration Card	Uni. Fees	RTO. Fee Licenses	RTO Per-mit. M.V Tax.	Trade licence	Building tax	Basic land Tax	Revenue recovery	Property tax	Professional tax	Electrical Inspectorate	Water bill	Bsnl bill
3 months	N	44	44	44	44	44	44	44	44	44	44	44	44	44	44
	M	1.3636	1.9318	1.6136	1.8182	1.8409	2.0000	1.9545	1.9773	2.0000	1.9773	1.9773	1.9318	1.7955	1.5227
	S.d	.48661	.25497	.49254	.39015	.36999	.00000	.21071	.15076	.00000	.15076	.15076	.25497	.40803	.50526
6 months	N	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	M	1.2571	1.9429	1.7143	1.9429	1.9429	1.9714	1.9143	1.9714	1.9714	2.0000	1.9143	2.0000	1.9143	1.4857
	S.d	.44344	.23550	.45835	.23550	.23550	.16903	.28403	.16903	.16903	.00000	.28403	.00000	.28403	.50709
1 Year	N	85	85	85	85	85	85	85	85	85	85	85	85	85	85
	M	1.2353	1.9412	1.7176	1.9405	1.9412	1.9529	1.9048	1.9412	1.9882	1.9882	1.9647	1.9529	1.7765	1.3059
	S.d	.42670	.23669	.45282	.23802	.23669	.21302	.29531	.23669	.10847	.10847	.18562	.21302	.41908	.46351
2 Year	N	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	M	1.2538	1.9769	1.7000	1.8538	1.9077	1.9615	1.8538	1.9385	1.9923	1.9615	1.9615	1.9769	1.6615	1.2462
	S.d	.43689	.15073	.46003	.35463	.29058	.19305	.35463	.24125	.08771	.19305	.19305	.15073	.47502	.43244
3 Year	N	118	118	118	118	118	118	118	118	118	118	118	118	118	118
	M	1.2119	1.9746	1.7288	1.9068	1.8983	1.9492	1.8814	1.9237	1.9915	1.9402	1.9576	1.9831	1.6695	1.2797
	S.d	.41037	.15808	.44647	.29198	.30354	.22062	.32475	.26656	.09206	.23819	.20230	.12963	.47240	.45075
Above 3 Year	N	338	338	338	338	338	338	338	338	338	338	338	338	338	338
	M	1.1686	1.9556	1.8136	1.7308	1.7899	1.9613	1.8314	1.9290	1.9941	1.9320	1.9112	1.9586	1.6183	1.2012
	S.d	.37499	.20624	.39000	.44422	.40795	.19314	.37499	.25722	.07681	.25220	.28481	.19956	.48651	.40880
	T	750	750	750	750	750	750	750	750	750	750	750	750	750	750

**Table-4 Chi – Square showing the association between –Occupation/** Electricity bill payments, Fee for new ration cards, Kerala Calicut MG University examination fee, Motor Vehicle Tax (Fee for licenses, Permit from motor vehicle tax), Trade licenses, Building tax, Basic land tax, revenue recovery, property tax, professional tax, Electrical inspectorate, water bill payment, Telephone bills of Bharat Sanchar Nigam Ltd

Occupational status		Farmer	Student	Business	Housewife	Professional	Employed	Not Mentioned	Govt . Employed	Un-organized Sector	Total	Grand Total	Chi-Square Value	df	Asymp.s sig.(2-sided)																																																																																																																																																																																																																																																																																																																																																										
K S E B Bills	Y	48	67	63	85	23	147	7	124	26	590	750	144.549	8	.000																																																																																																																																																																																																																																																																																																																																																										
	N	2	84	9	4	5	27	4	23	2	160					Fee- Ration Card	Y	3	8	3	3	0	5	0	9	0	31	750	6.141	8	.631	N	47	143	69	86	28	169	11	138	28	719	University Fees	Y	3	118	6	8	6	28	0	16	0	185	750	298.730	8	.000	N	47	33	66	81	22	146	11	131	28	565	RTO-Fee for Licenses	Y	5	15	23	6	6	52	1	27	1	136	750	47.101	8	.000	N	45	136	49	83	22	122	10	120	27	614	RTO Permit for motor Vehicle Tax	Y	3	14	16	6	2	40	3	24	1	109	750	29.846	8	.000	N	47	137	56	83	26	134	8	123	27	641	Trade Licenses	Y	0	4	19	0	1	3	1	1	0	29	750	112.550	8	.000	N	50	147	53	89	27	171	10	146	28	721	Building Tax	Y	6	9	18	15	4	26	2	23	0	103	750	21.591	8	.006	N	44	142	54	74	24	148	9	124	28	647	Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91	N	43	147	64	82	26	163	10	139	28	702	Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5
Fee- Ration Card	Y	3	8	3	3	0	5	0	9	0	31	750	6.141	8	.631																																																																																																																																																																																																																																																																																																																																																										
	N	47	143	69	86	28	169	11	138	28	719					University Fees	Y	3	118	6	8	6	28	0	16	0	185	750	298.730	8	.000	N	47	33	66	81	22	146	11	131	28	565	RTO-Fee for Licenses	Y	5	15	23	6	6	52	1	27	1	136	750	47.101	8	.000	N	45	136	49	83	22	122	10	120	27	614	RTO Permit for motor Vehicle Tax	Y	3	14	16	6	2	40	3	24	1	109	750	29.846	8	.000	N	47	137	56	83	26	134	8	123	27	641	Trade Licenses	Y	0	4	19	0	1	3	1	1	0	29	750	112.550	8	.000	N	50	147	53	89	27	171	10	146	28	721	Building Tax	Y	6	9	18	15	4	26	2	23	0	103	750	21.591	8	.006	N	44	142	54	74	24	148	9	124	28	647	Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91	N	43	147	64	82	26	163	10	139	28	702	Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																						
University Fees	Y	3	118	6	8	6	28	0	16	0	185	750	298.730	8	.000																																																																																																																																																																																																																																																																																																																																																										
	N	47	33	66	81	22	146	11	131	28	565					RTO-Fee for Licenses	Y	5	15	23	6	6	52	1	27	1	136	750	47.101	8	.000	N	45	136	49	83	22	122	10	120	27	614	RTO Permit for motor Vehicle Tax	Y	3	14	16	6	2	40	3	24	1	109	750	29.846	8	.000	N	47	137	56	83	26	134	8	123	27	641	Trade Licenses	Y	0	4	19	0	1	3	1	1	0	29	750	112.550	8	.000	N	50	147	53	89	27	171	10	146	28	721	Building Tax	Y	6	9	18	15	4	26	2	23	0	103	750	21.591	8	.006	N	44	142	54	74	24	148	9	124	28	647	Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91	N	43	147	64	82	26	163	10	139	28	702	Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																	
RTO-Fee for Licenses	Y	5	15	23	6	6	52	1	27	1	136	750	47.101	8	.000																																																																																																																																																																																																																																																																																																																																																										
	N	45	136	49	83	22	122	10	120	27	614					RTO Permit for motor Vehicle Tax	Y	3	14	16	6	2	40	3	24	1	109	750	29.846	8	.000	N	47	137	56	83	26	134	8	123	27	641	Trade Licenses	Y	0	4	19	0	1	3	1	1	0	29	750	112.550	8	.000	N	50	147	53	89	27	171	10	146	28	721	Building Tax	Y	6	9	18	15	4	26	2	23	0	103	750	21.591	8	.006	N	44	142	54	74	24	148	9	124	28	647	Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91	N	43	147	64	82	26	163	10	139	28	702	Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																												
RTO Permit for motor Vehicle Tax	Y	3	14	16	6	2	40	3	24	1	109	750	29.846	8	.000																																																																																																																																																																																																																																																																																																																																																										
	N	47	137	56	83	26	134	8	123	27	641					Trade Licenses	Y	0	4	19	0	1	3	1	1	0	29	750	112.550	8	.000	N	50	147	53	89	27	171	10	146	28	721	Building Tax	Y	6	9	18	15	4	26	2	23	0	103	750	21.591	8	.006	N	44	142	54	74	24	148	9	124	28	647	Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91	N	43	147	64	82	26	163	10	139	28	702	Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																																																							
Trade Licenses	Y	0	4	19	0	1	3	1	1	0	29	750	112.550	8	.000																																																																																																																																																																																																																																																																																																																																																										
	N	50	147	53	89	27	171	10	146	28	721					Building Tax	Y	6	9	18	15	4	26	2	23	0	103	750	21.591	8	.006	N	44	142	54	74	24	148	9	124	28	647	Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91	N	43	147	64	82	26	163	10	139	28	702	Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																																																																																		
Building Tax	Y	6	9	18	15	4	26	2	23	0	103	750	21.591	8	.006																																																																																																																																																																																																																																																																																																																																																										
	N	44	142	54	74	24	148	9	124	28	647					Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91	N	43	147	64	82	26	163	10	139	28	702	Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																																																																																																													
Basic Land Tax	Y	7	4	8	7	2	11	1	8	0	48	750	13.654	8	.91																																																																																																																																																																																																																																																																																																																																																										
	N	43	147	64	82	26	163	10	139	28	702					Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734	N	50	148	72	89	28	172	11	146	28	744	Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																																																																																																																																								
Revenue Recovery	Y	0	3	0	0	0	2	0	1	0	6	750	5.216	8	.734																																																																																																																																																																																																																																																																																																																																																										
	N	50	148	72	89	28	172	11	146	28	744					Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018	N	44	148	68	83	27	162	9	144	28	713	Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																																																																																																																																																																			
Property Tax	Y	6	3	4	6	1	12	2	3	0	37	750	18.532	8	.018																																																																																																																																																																																																																																																																																																																																																										
	N	44	148	68	83	27	162	9	144	28	713					Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000	N	50	151	72	89	28	174	11	147	28	703	Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																																																																																																																																																																																														
Professional Tax	Y	0	3	3	0	0	16	0	25	0	47	750	50.430	8	.000																																																																																																																																																																																																																																																																																																																																																										
	N	50	151	72	89	28	174	11	147	28	703					Electrical Inspectorate	Y	1	11	4	1	1	4	0	4	0	26	750	11.653	8	.167	N	49	140	68	88	27	170	11	143	28	724	Water bill	Y	14	24	29	41	10	64	1	55	5	243	750	37.642	8	.000	N	36	127	43	48	18	110	10	92	23	507	Telephone bill	Y	39	68	57	75	23	142	9	123	16	552	750	94.261	8	.000	N	11	83	15	14	5	32	2	23	12	197																																																																																																																																																																																																																																																																									
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