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Impact of Digitalisation on Postal Services among Postal Employees in Kanyakumari District

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Abstract *Due to new innovations and digital age, the postal service industry is facing an unavoidable digital transformation in its business. With a view to digitize financial services, banks introduced net banking and ATM facilities. Advances in information and communication technologies are blurring the lines between traditional postal communication deliveries to electronic devices. Therefore, this digitization has had an inordinate impact on the growth of the postal market across the country. The postal departments face some challenges to implement these new technologies across all branches of post offices. The purpose of this study is to find out employee's adaptation, problems faced during adoption and satisfaction with digitalization of postal services. To achieve its results, the researcher conducted a survey by collecting data from the post office employees in the selected areas of Kanyakumari District.*

Keywords: *Digitalization, Net Banking, Postal Market*

INTRODUCTION

The postal sector has been around for more than a thousand years, playing an important role in the economic development of the country. Postal services play an important role in every part of the world. It maintains the country's economy and relations with the people of the country.

There are more than 1.5 lakh post offices in India. 1,39,000 people in rural areas and 23,444 people in urban areas are connected to the postal service, providing banking, financial services, mail and other parcel services. After the advent of privatization and digitization, there has been deterioration in parcel and mail services.

There is a considerable competition in the market with parcel service and private courier companies. With digitization playing an important role in every service sector in the world, the postal sector is not lagging behind in digitizing its services. The postal industry has realized a steady decline in trade in postal and parcel services in latest stages. Hence the Department of Posts has found a new opportunity to increase business and revenue by diversifying its services widely. Non-postal services such as financial and logistic services were focused.

Industrial development of traditional postal services is urgent as both customer and business side adopt digital process in various domains and customer is immersed in high usage, low cost fast service. Digital Advancement of Rural Post Office for New India (DARPAN) project was implemented in 2017.

In many countries the postal sector has a very large network and covers a large rural area. The government has invested Rs 140 million in this project as a part of digitization. Till date, more than 44,000 post offices have been digitized under the DARPAN system.

Efforts towards digitization have impacted the Indian Postal Service at several levels. Postal operators have more alliances with private online ecommerce companies like Snapdeal, Myntra and IndiaMart.

Challenges of Digitalisation

Industrial changes and advancements in the postal industry benefit both customers and postal workers. On the other hand the customer needs to change from old-fashioned manual process to digitized process. The postal department consists of various levels of employees who carry out routine traditional activities. Much creativity was introduced with the broad objectives of widening financial inclusion to overcome the rural-urban gap and for Compensating the declining revenue from outdated postal services. The expected results did not emerge. It is also emphasized that the major problem arising from insufficient infrastructural support for the digitization process.

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Due to the resourcefulness of digitization postal employees are expected to perform their services in digitalized mode.

Services such as savings bank accounts, social security payments and cash certificates are delivered digitally. However, service workers are expected to perform duties at a reduced rate to customers. Lack of training for employees distresses service quality, resulting in stress for the postal service provider.

The Federation of National Postal Organizations (FNPO) has noted that inadequate infrastructure is the foremost problem of the digitalization process.

Around 25% of post offices do not have access to internet conveniences. Also, the service delivery process is affected due to poor connection. Inadequate infrastructure and lack of training are the essential factors that cause the work stress of the entire postal workers community, said by The FNPO Secretary General in a press meet. Employees are ready to follow technological changes with more adequate facilities and training which helps to Customers, Employees and Community.

LITERATURE REVIEW

Thangapandi (2013) Study said that post offices provide numerous services to the economy. The objective is to assess the opinion of the customers towards postal services and how frequently they use the services and to offer suggestions for improvement in them. The focus is on demographic profile of the customer namely literacy, occupation, location where there is a significant change in their relationship.

Giri (2014) Study revealed that the India Post is a very old institution, perhaps one of the oldest. But with the help of incorporating technology reforms covering all aspects. The India Post is a magic wand in the hands of the Government of India for the mammoth tasks regarding technology transformation like e-post office, e-PLI, CBS with the given size and population of this country. This transformation helps Government of India to reduce operating costs and again popularity among global competitor.

Rafee (2015) Researcher highlights the changing face and role of post offices in Indian services sector. India has the largest postal network in the world. Its plays a very crucial role in socioeconomic development. It also focused on the various suggestion for India post to provide better services to citizen. Thus, a transformation role is needed to the India Post.

Birajda et al. (2016) Studies states due to globalization India Post is facing the acute competition from other strong competitors. The conclusive efforts need to be made by India post for improving the overall quality of services. The department of post is trying to make necessary improvements in service delivery process.

Hillebrand et al. (2016) According to their study technology is the key enabler for such new services. Consumers in general benefit from new technology which enables them to access an increasing range of new services, particularly in relation to online retail fulfillment.

Subramanyachary (2017) In an initiative by the Central Government of India, the technology sector is "designed to transform India into a global digital hub" by revitalizing India's comprehensive digital sector with the help of improving digital connectivity and capacity building and various incentives.

Kaul and Mathur (2017) Study revealed that digital campaign aimed to connect rural areas with high speed internet network and to improve the digital literacy. Indian economy is growing at a fast pace that requires the people to be financial literate to take judicious decisions.

Otsetova (2019) In EU there was lot of changes in postal sector due to digitalization. He said that the new technologies are to be utilized to improve the quality of digital services.

Samal (2013) Due to the immense use of electronic media, customer demand, globalization, corporatization and liberalization challenges, the postal sector has to make an effort to digitize their services to survive in the market. 45 post offices are computerised and 500 post offices are modernised at a initial stage – by "Project Arrow" while emphasizing the initiatives of digitalization concept during the year 2002. He also states the more than ten thousand post offices in India were modernised under 11^{th} plan.

Shekond and Gupta (2018) Founds digitization improves effectiveness and efficiency of work being done. Digitization of governance activities, i.e., e-governance, enhances quality of life of its citizenry by increased transparency in Government departments and easing service delivery. It increases speed and reduces time duration requirements for performing various activities and functions.

The factors used for this study are identified using the above literature survey.

The factors used to study the impact of digitalisation on postal services among postal employees in Kanyakumari district are broadly classified as follows:

- Adoption of digital services
- Challenges in adopting digital services
- Satisfaction in digitalisation of services

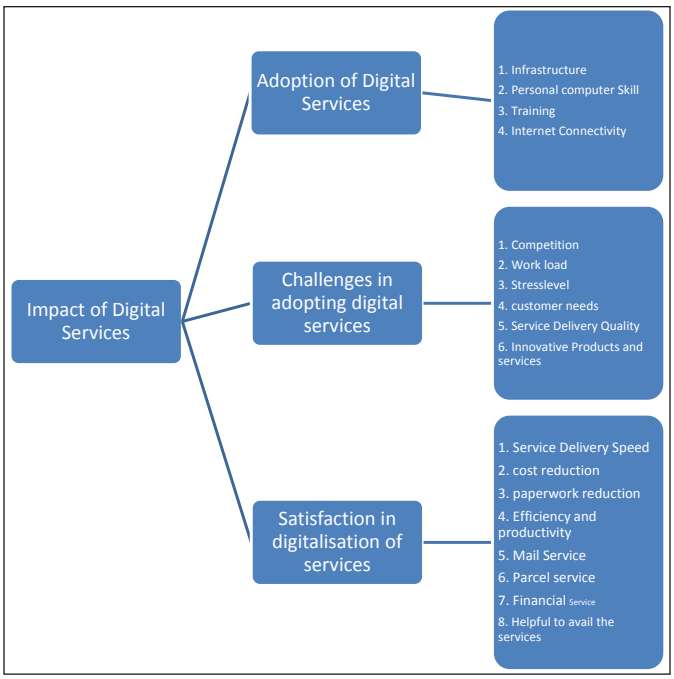

Fig. 1

Factors related to Adoption of digital services are:

- Infrastucture
- Personal computer Skill
- Training
- Internet Connectivity

Factors related to Challenges in adopting digital services are:

- Competition
- Work load
- Stresslevel
- customer needs
- Service Delivery Quality
- Innovative Products and services

Factors related to satisfaction in digitalisation of services are:

- Service Delivery Speed
- Cost reduction
- Paperwork reduction
- Efficiency and productivity
- Mail Service
- Parcel service
- Financial Service
- Helpful to avail the services

OBJECTIVES OF THE STUDY

- To know the demographic profile of postal employees in Kanyakumari district.
- To find the impact of digitalisation on postal services among postal employees.
- To know the challenges faced by postal employees in Kanyakumari district towards digitalisation on postal services.
- To identify the satisfaction level of postal employees in Kanyakumari district on digitalisation of postal services.

LIMITATIONS OF THE STUDY

It is not possible to establish contact with the respondents until unless the researcher personally visits the workstation of the respondents. There are six taluk and two revenue divisions in Kanyakumari District. The revenue divisions are Nagercoil and Padmanapapram. The respondents are selected only from Agastheeswaram and Thovalai Taluk of Nagercoil division. Only 50 respondents were responded in this method.

METHODOLOGY OF THE STUDY

Sample Size of this study is 50 and Target Population of this study is postal employees in Kanyakumari district. Convenience Sampling technique is used to collect data. In this study, the primary data is collected using the questionnaire. Secondary data refers to data that is collected by someone other than the user. Information collected by government departments, Censuses, Organisational records and data that was originally collected for other research purposes are the common sources of secondary data for social science. The secondary data is collected from the journals, articles related to this study. The instrument used for data collection in this study is Questionnaire. Primary data were collected through questionnaire survey. The respondents were asked to give their opinion relating to major factors of digitalisation. The first part of the questionnaire comprises the socio demographic factors with optimal questions. The second part contains statements related to digitalisation with Likert's five Point's Scale. All related statements were included to derive responses. The researcher circulated the framed questionnaire among the postal employees in Kanyakumari district. The information related to the study was collected through personal standardized questionnaire. The mixed mode of data collection was followed through offline personally by the researcher.

DATA ANALYSIS AND INTERPRETATION

The female respondents are very few in number, it clearly express that males give most prefer to postal services as their career.

24% of the respondents belong to 36-45 age groups, 20% of the respondents belong to above 46 age group and more than 50% of the respondents belong to young and middle age group. It clearly interprets that the youngsters prefer postal services job.

46% of the respondents are undergraduates, 32% of the respondents are postgraduates and 20% of the respondents have professional qualification.

72% of the respondents are Postal Assistants, 10% of the respondents are Assistant Superintendent of Post, 8% of the respondents are Inspector of Post, 6% of the respondents are Superintendent of Post and 4% of the respondents Branch Post Masters. This shows that majority of the respondents are postal assistants.

22% of the respondents belong to experience category below 10 years, 46% of the respondents belong to experience category 11-15 years and 32% of the respondents belong to experience category above 16 years.

4% of the respondents earn below Rs.20,000 and Rs.40,000 to Rs.50,000, 68% of the respondents earns Rs.20,000 to Rs.40,000 and 24% of the respondents earns above Rs.50,000.

92% of the respondents said that digitalisation has positive effect on postal services and 8% of the respondents said that digitalisation has no positive effect on postal services.

62% of the respondents learn the new technology on their own and 38% of the respondents learn the new technology through trainers.

Personal computer skill of the respondents is the most effective factor that influence the adoptability of digital services.

Competition from private players is the most challenging factor that the respondents have to face.

Factors Affecting Satisfaction in Digitalisation of Services

Ranks Given by the Respondents

Factors	GARRETT RANK							
	Rank1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank7	Rank 8
Service Delivery Speed	6	7	8	5	4	6	8	6
cost reduction	8	6	5	4	3	12	5	7
paperwork reduction	13	4	5	4	8	2	8	6
Efficiency and productivity	9	9	5	8	7	5	4	3
Mail Service	17	8	5	9	4	3	2	2
Parcel service	4	6	5	7	8	5	9	6
Financial Service	10	11	6	2	5	6	7	3
Helpful to avail Services	9	10	6	6	7	5	3	4

Percent Positions and Garret Values

Sr. No.	100(Rij-0.5)/ Nj	Calculated Value	Garret Value
1	100(1-0.5) / 8	6.25	80
2	100(2-0.5) / 8	18.75	68
3	100(3-0.5) / 8	31.25	60
4	100(4-0.5) / 8	48.75	51
5	100(5-0.5) / 8	56.25	47
6	100(6-0.5) / 8	68.75	40
7	100(7-0.5) / 8	81.25	32
8	100(8-0.5) / 8	93.75	20

Calculation of Garrett Value and Ranking

Description	GARRETT RANK								Total	Ave-rage	Rank
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8			
Service Delivery Speed	1040	1360	1740	969	376	480	416	40	6421	55.35	IV
Cost reduction	1120	1632	1200	1173	846	480	160	-	6611	56.99	III
Paperwork reduction	1920	272	420	1479	658	400	736	100	5985	51.59	V
Efficiency and productivity	1200	2244	1380	816	658	400	128	20	6846	59.02	I
Mail Service	2320	1700	840	612	423	600	256	80	6831	58.88	II
Parcel service	960	408	600	255	1692	880	576	140	5511	47.50	VI
Financial Service	560	272	540	357	282	720	800	820	4351	37.50	VII
Helpful to avail Services	160	-	240	306	517	680	640	1120	3663	31.58	VIII

Based on the Garrett's Ranking Technique it was revealed that Efficiency and productivity is the major factor with highest Garret score of 6846 and an average score of 59.02. Accordingly Mail Service with average scores of 6831 and an average score of 58.88 is represented second. The calculation with an average score of 56.99 ranked cost reduction facility third. Helpful to avail Services with average score of 31.58 is the least.

TESTING OF HYPOTHESIS

Independent Sample T-Test

1. Independent Sample t-test was conducted to know if there is any differences in Adoption of digitalisation in postal services of the respondents with respect to their Gender.

Hypothesis

H0- There is no significant mean difference in Adoption of digitalisation in postal services based on Gender.

H1- There is a significant mean difference in Adoption of digitalisation in postal services based on Gender.

Group Statistics

Gender		N	Mean	Std. Deviation	Std. Error Mean
Adoption of digitalisation in postal services	Male	39	4.32	1.001	0.154
	Female	11	4.18	0.914	0.289

From the Group Statistics table, it is inferred from the mean values that the male (4.32) has High level of adoption of digitalisation in postal services than female (4.18).

Independent Sample T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	Df	Sig. (2-tailed)
Adoption of digitalisation in postal services	Equal variances assumed	.573	.453	-.387	50	.701
	Equal variances not assumed			-.409	14.610	.688

*Significant at 0.05 level (two tailed).

The Levene's test statistics shows that the p value (.453) is greater than the level of significance (5%). Therefore, Homogeneity of variance is assumed.

The Independent Sample t-test results show that the significance p-value (.701) is greater than the Level of Significance (0.05).

There is no significant mean difference among Male and Female as we failed to reject the null hypothesis.

2. Independent Sample t-test was conducted to know if there is any differences in Adoption of digitalisation in postal services of the respondents with respect to their Nature of job.

Hypothesis

H0- There is no significant mean difference in Adoption of digitalisation in postal services based on Nature of learning.

H1- There is a significant mean difference in Adoption of digitalisation in postal services based on Nature of learning.

Group Statistics

	Nature of Learning	N	Mean	Std. Deviation	Std. Error Mean
Adoption of digitalisation in postal services	Self-Learning	19	4.56	1.057	.243
	Trainer	33	4.14	.909	.158

From the Group Statistics table, it is inferred from the mean values that the self learning (4.56) has High Adoption of digitalisation in postal services than Learning through a trainer (4.14).

Independent Sample T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	Df	Sig. (2-tailed)
Adoption of digitalised postal services	Equal variances assumed	1.632	.207	-1.529	50	.133
	Equal variances not assumed			-1.467	33.213	.152

The Levene's test statistics shows that the p value (.207) is greater than the level of significance (5%). Therefore, Homogeneity of variance is assumed.

The Independent Sample T test results show that the significance p-value (.133) is greater than the Level of Significance (0.05). There is no significant mean difference among self-learners and learning through trainer, as we failed to reject the null hypothesis.

Cross Tabulation

H0 - There is no significant impact of digitalisation on cost reduction.

H1 - There is a significant impact of cost reduction after digitalisation.

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Cost reduction after digitalisation	50	1.00	5.00	3.4936	0.22556	1.56672	**2.764**
Overall Quality of Digitalisation	50	1.00	5.00	3.1753	0.18971	1.46786	**2.145**
Satisfaction with present online Services	50	1.00	5.00	3.5630	0.19567	1.43896	**2.197**
Contribution of new technology to the success of post office	50	1.00	5.00	3.1876	0.19876	1.45632	**2.321**
Digitalisation of post office is helpful to avail the services	50	1.00	5.00	3.0864	0.17651	1.42872	**2.091**
Valid N (listwise)	50						

The above table shows that the cost reduction after digitalisation of post office means is 3.49 and standard deviation is 1.66 likewise variance 2.76, the overall quality of computerization of post office mean 3.17, standard deviation is 1.46, variance 2.14, satisfaction with present online service shows mean is 3.56, standard deviation is 1.43, likewise variance 2.19, contribution of new technology to the success of post office identified mean 3.18, standard deviation 1.45, variance 2.32, digitization of post office is helpful to avail services identified mean 2.92, standard deviation 1.45, likewise variance 2.10.

Spearman correlation is calculated using cross tab statistics of SPSS. It was found there is a high correlation (0.799) and (P value was 0.000 P value is greater than 0.05). Which implies that H0 is rejected and alternative hypothesis is accepted that there is a significant impact of cost reduction after digitalisation.

Cost Reduction after Digitalisation and Digitalisation of Post Office is Helpful to Avail the Service

Cross Tabulation

			Digitalisation of Post Office Is Helpful to Avail the Services					Total
			Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied	
Cost reduction after digitalisation	Highly Dissatisfied	Count	8	3	0	0	0	11
		%within Cost reduction after digitalisation	72.7%	27.3%	0%	0%	0%	100.0%
	Dissatisfied	Count	0	5	0	0	0	5
		%within Cost reduction after digitalisation	0%	100.0%	0%	0%	0%	100.0%
	Neutral	Count	0	4	0	0	0	4
		%within Cost reduction after digitalisation	0%	100.0%	0%	0%	0%	100.0%
	Satisfied	Count	0	4	0	0	0	4
		%within Cost reduction after digitalisation	0%	100.0%	0%	0%	0%	100.0%
	Highly satisfied	Count	1	1	5	8	11	26
		%within Cost reduction after digitalisation	3.8%	3.8%	19.2%	30.77%	42.30%	100.0%
Total		Count	9	17	5	8	11	50
		%within Cost reduction after digitalisation	18.0%	34.0%	10.0%	16.0%	22.0%	100.0%

On applying cross tab in SPSS it was found that 42.3% majority of respondents were in the category of highly satisfied, that means respondents are agreeing to the fact that there is very high impact of digitization on cost reduction.

The Association Between Personal Factors, Adoption Factors, Challenges Related Factors And Satisfaction Related Factors

Correlation

H0: There is no association between Satisfaction, Personal Factors, adoption factors and challenges Related Factors.

H1: There is a association between Satisfaction, Personal Factors, adoption factors and challenges Related Factors.

Correlations

		Personal Factors	Adoption Related Factors	Challenges Related Factors	Satisfaction
Personal Factors	Pearson Correlation	1	.479**	.245	.523**
	Sig. (2-tailed)		.000	.068	.000
	N		50	50	50
Adoption related factors	Pearson Correlation		1	.252	.262
	Sig. (2-tailed)			.061	.051
	N			50	50
challenges Related Factors	Pearson Correlation			1	.220
	Sig. (2-tailed)				.146
	N				50

**. Correlation is significant at the 0.01 level (2-tailed).

The significant p values remain significant at the 1% level of confidence for all variables. Personal Factors has moderate positive relationship with adoption related factors at 0.479, personal factors has weak positive relationship with challenges Related Factors at 0.245, adoption related factors has weak positive relationship with challenges Related Factors at 0.262. Personal Factors has moderate positive relationship with satisfaction 0.523, Adoption related Factors has weak positive relationship with satisfaction at 0.252 and challenges Related Factors has weak positive relationship with satisfaction at 0.220.

Anova

		Sum of Squares	Df	Mean Square	F	Sig.
Personal Factors	Between Groups	5.573	3	1.858	3.843	**.018**
	Within Groups	16.437	46	.483		
	Total	22.010	49			
Adoptionrelated Factors	Between Groups	1.412	3	.471	1.516	.228
	Within Groups	10.556	46	.310		
	Total	11.968	49			
Factors related to Challenge	Between Groups	4.578	3	1.526	3.372	**.030**
	Within Groups	15.389	46	.453		
	Total	19.968	49			

Interpretation

The ANOVA statistics, for 'Contribution of Personal Factors and Income Group', is statistically significant at 5% level of significance with the p value of .018. Therefore it is inferred that there is a difference among different income groups towards the level of satisfaction.

The ANOVA statistics, for 'Contribution of adoption related factors and Income Group', is not statistically significant at 5% level of significance with the p value of .228. Therefore it is inferred that there is no difference in the opinion among different income groups towards the contribution of adoption related factors.

The ANOVA statistics, for 'Challenge-related Factors and Income Group', is statistically significant at 5% level of significance with the p value of .030. Therefore it is inferred that there is a difference in the opinion among different income groups towards the Challenge related factors.

FUTURE IMPLICATIONS AND CONCLUSION

- Digital India has to ensure that government services are made available to citizens electronically by improving online infrastructure and by increasing internet connectivity or by making the country digitally empowered in the field of technology.
- India had started experiencing the digital transformation, it takes some time to feel the full impact of this change.
- Government of India has provided training for each employees to know digital programming.
- The training programmes should be more effective.
- Most of the postal employees are not satisfied towards digitalisation.
- Poor network connectivity, lack of proper training and fewer infrastructures provided are the factors influence dissatisfaction.
- To render continuous services, it is suggested to provide adequate facilities and equipment.
- Also training for various levels of employees is to be conducted by the postal departments.

CONCLUSION

The process of digitization in postal services has had a great impact on the work culture of postal employees. Traditional methods of delivery of services have been followed from the introduction of postal services. The changes in the process make the employees to find difficult in adopting the technology. This research paper considers only the impact of digitalisation on postal services among postal employees in Kanyakumari District. Future research can be conducted to analyse the impact of digitalisation of postal services in other districts of Tamil Nadu and all over India.

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