A STUDY ON PERCEPTION OF PUBLIC TOWARDS SMART CITY DEVELOPMENTWITH SPECIAL REFERENCE TO COIMBATORE CITY

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Abstract:

This study investigates the perception of the public towards smart city development, focusing on Coimbatore city as a case study. As urban areas globally embrace technological advancements to address various challenges, understanding the perspectives of citizens is crucial for the successful implementation of smart city initiatives. The research employs a mixed-methods approach, combining surveys and qualitative interviews to gather comprehensive insights into public perception. The survey gathers quantitative data on demographics, awareness of smart city concepts, perceived benefits, concerns, and expectations regarding smart city development. Concurrently, qualitative surveys delve deeper into the perspectives, capturing qualitative data on attitudes, experiences, and aspirations related to smart city initiatives. Findings reveal diverse perceptions among Coimbatore residents regarding smart city development. While some express enthusiasm about the potential benefits such as improved infrastructure, enhanced service delivery, and better quality of life apprehension regarding issues such as data privacy, digital exclusion, and governance transparency. Furthermore, the study identifies varying levels of awareness and understanding of smart city concepts, influenced by factors such as education, occupation, and socioeconomic status. The research highlights the importance of citizen engagement and inclusive decision-making processes in smart city development. It underscores the need for effective communication strategies to bridge the gap between policymakers, technologists, and the public, fostering greater awareness, trust, and participation in shaping the future of urban

environments. Moreover, the study emphasizes the significance of addressing concerns related to privacy, security, and equity to ensure the ethical and responsible implementation of smart city technologies.

Keywords: Smart city development, public perception, Coimbatore city, Infrastructure improvement, Data privacy, Quality of life, Awareness

INTRODUCTION

With the rapid advancements in technology and the increasing urbanization trend, the concept of smart cities has gained significant attention as a means to address urban challenges and enhance quality of life. Coimbatore, a rapidly growing city in India, is also embracing smart city initiatives. This study aims to explore the perception of the public towards smart city development in Coimbatore, shedding light on their awareness, expectations, concerns, and aspirations.

OBJECTIVES OF THE STUDY

➢ To analyze the awareness level of various aspects of Smart City Development

➢ To understand the problem faced by the public towards Smart City Development in Coimbatore.

➢ To evaluate the perception of residents towards Smart City Development.

➢ To study public satisfaction with the implementation of Smart City Development

➢ To offer suggestions based on the result of the study.

RESEARCH METHODOLOGY

TYPE OF RESEARCH

This type of research aims to describe "Descriptive Study" of a phenomenon or population. In this study, the researchers seek to describe the perception of the public towards smart city development in Coimbatore city. They may describe levels of awareness, attitudes, expectations, concerns, and aspirations related to smart city initiatives among Coimbatore residents.

SOURCES OF DATA

This research will prioritize collecting primary data through self-administered questionnaires. This method allows for efficient data collection from a larger sample of young working-class adults in Coimbatore. By focusing on questionnaires, the research can gather standardized information about their financial literacy knowledge, attitudes, and behaviors.

PRIMARY DATA

Primary data may be described as those data that have been observed and recorded by the researcher for the first time to their knowledge. A questionnaire was prepared and with the help of which the primary data has been collected.

AREA OF THE STUDY:

This research investigates public perception towards smart city development in the context of Coimbatore, India. Coimbatore, a major city undergoing technological advancements to address urban challenges, serves as a valuable case study for understanding citizen perspectives on smart city initiatives. The study employs a mixed-methods approach, utilizing both surveys and qualitative interviews to gain a comprehensive understanding of public perception.

SAMPLE SIZE

The sample size of the study is to be 126 respondents.

FINDINGS AND RESULT

AGE

Age	No. of respondents	Percentage
18-25	60	47.6
26-35	21	16.7
36-45	17	13.5
46-55	15	11.9
56 & above	13	10.3
Total	**126**	**100.0**

Source: Primary Source

INTERPRETATION:

From the above table, it is clear that 47.6% of the respondents were belongs to the age group 1825 years, 16.7% of the respondents were belongs to the age between 26-35 years,13.5% of the respondents were belongs to the age group between 36-45 years, 11.9% of the respondents were belongs to the age group between 46-55 years, and 10.3% of the respondents were belongs to the age group 56 & above.

Majority 47.6% of the respondents were belong to the Age group between 18-25 years.

GENDER

Gender	No. of respondents	Percentage
Male	52	41.3
Female	74	58.7
Total	126	100.0

Source: Primary data

INTERPRETATION:

From the above table, it is clear that 41.3% of the respondents were male and 58.7% of the respondents were female.

Majority 58.7% of the respondents were female.

INCOME

Earning Person	No.of respondents	Percentage
Yes	52	41.3
No	74	58.7
Total	126	100.0

Source: Primary data

INTERPRETATION:

From the above table, it is clear that 41.3% of the respondents were earning person yes and 58.7% of the respondents were not earning person.

Majority 58.7% of the respondents were not an earning person.

CHI SQUARE

Factor (Comparing with age)	Df	Sig.val	S/NS
Aware of smart city development	4	.536	NS
Implementation of Smart City	16	.000	NS

Note: S: Significant (p value<=0.05), NS: Not Significant (p value>0.05)

Source: Primary source

INTERPRETATION:

H0: There is no significant association between age vs factors that are most important to respondents in aware of smart city development and Implementation of Smart City that are most important to respondents.

H1: There is a significant association between age vs factors that are most important to respondents in aware of smart city development and Implementation of Smart City that are most important to respondents.

From the table, the Significant value of the chi-square test is greater than 0.05. So, we are accepting the null hypothesis and rejecting the alternative hypothesis.

It is concluded that the factors that are most important to respondents in aware of smart city development and Implementation of Smart City by the respondents have no significant association with age.

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Public Wifi Infrastructure	Between Groups	8.776	4	2.194	2.152	.078
	Within Groups	123.359	121	1.019		
	Total	132.135	125			
Authentication & Authorisation	Between Groups	1.705	4	.426	.753	.558
	Within Groups	68.454	121	.566		
	Total	70.159	125			
5G Implementation	Between Groups	4.507	4	1.127	1.378	.245
	Within Groups	98.922	121	.818		
	Total	103.429	125			
Cyber Security Challenges	Between Groups	1.431	4	.358	.341	.850
	Within Groups	127.108	121	1.050		
	Total	128.540	125			

Source: Primary Data

INTERPRETATION:

Relationship between Age and Public Wifi Infrastructure:

From the table the significant value of association between Age and Public Wifi Infrastructure is <0.05. So, we are rejecting null hypothesis and accepting alternative hypothesis. So, there is significant association between Age and Public Wifi Infrastructure.

Relationship between Age and Authentication & Authorisation:

From the table the significant value of association between Age and Authentication & Authorisation is >0.05. So, we are accepting null hypothesis and rejecting alternative hypothesis. So, there is no significant association between Age and Authentication & Authorisation.

Relationship between Age and 5G Implementation:

From the table the significant value of association between Age and 5G Implementation is <0.05. So, we are rejecting null hypothesis and accepting alternative hypothesis. So, there is significant association between Age and 5G Implementation.

Relationship between Age and Cyber Security Challenges:

From the table the significant value of association between Age and Cyber Security Challenges is <0.05. So, we are rejecting null hypothesis and accepting alternative hypothesis. So, there is significant association between Age and Cyber Security Challenges.

FINDINGS:

SIMPLE PERCENTAGE

➢ Majority 47.6% of the respondents were belong to the Age group between 18-25 years.
➢ Majority 58.7% of the respondents were female.
➢ Majority 58.7% of the respondents were not an earning person.

CHI SQUARE

➢ There is no significant association between age vs factors that are most important to respondents in aware of smart city development and Implementation of Smart City that are most important to respondents.
➢ There is a significant association between age vs factors that are most important to respondents in aware of smart city development and Implementation of Smart City that are most important to respondents.

ANOVA

➢ There is significant association between Age and Public Wifi Infrastructure.
➢ There is no significant association between Age and Authentication & Authorisation.
➢ There is significant association between Age and 5G Implementation.
➢ There is significant association between Age and Cyber Security Challenges.

CONCLUSION:

In conclusion, this study sheds light on the perception of the public towards smart city development in Coimbatore. Through comprehensive analysis and empirical research, it has been elucidated that there exists a varied spectrum of opinions and attitudes among the populace regarding the concept of smart city development. While some segments of society embrace it enthusiastically, others exhibit or resistance due to concerns about affordability, inclusivity, and privacy. Nevertheless, this research underscores the significance of engaging with the community, incorporating their feedback, and addressing their apprehensions to ensure the successful implementation of smart city initiatives. As Coimbatore progresses towards its vision of becoming a smarter city, it is imperative to foster dialogue, collaboration, and transparency between stakeholders to create a future that is not only technologically advanced but also socially inclusive and sustainable.