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# EXPLORING USER AWARENESS OF THE UMANG APPLICATION IN THE DIGITAL ERA: A FACTOR ANALYSIS APPROACH

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## ABSTRACT

*In today's digital world, understanding how much people know about government apps like UMANG is important for making public services easier to use. This study looked at 252 people and used a method called Factor Analysis to see what things affect how much people know about the UMANG app. By carefully looking at the answers from surveys, we found out what specific factors help people know about UMANG better. This information can help make plans to get more people interested and involved in using government apps online. We found that things like how easy the app is to use, how information about it is spread, and how much people know about it all play big roles in how much it's used. This study helps policymakers and others understand what people need and want from online services, so they can make these services better for everyone.*

**KEYWORDS:** *UMANG Application, Government services, Government online apps.*

## INTRODUCTION

In today's digital age, technology is a big part of our daily lives and affects many parts of society. Within this framework, government service apps like Unified Mobile Application for New-age Governance have emerged as indispensable tools for citizens to access a wide range of governmental services conveniently. Despite the proliferation of such applications, user awareness remains a pivotal determinant influencing their adoption and usage. Understanding the factors that make users aware of the UMANG application is essential for maximizing its effectiveness in delivering services efficiently and promoting digital governance. This study uses Factor Analysis to explore the complex aspects influencing how people perceive UMANG in today's digital age. It examines elements such as how easy it is to access and use,

how well it is promoted, how trustworthy it is perceived to be, and what benefits users believe it offers, aiming to uncover the core factors shaping user awareness of the application. This investigation holds particular relevance given the rapid digitization of government services and the pressing need to ensure equitable access and effective utilization across diverse segments of society. Through a thorough analysis of these factors, this research seeks to provide valuable insights that can guide strategies aimed at enhancing user engagement and maximizing the effectiveness of the UMANG platform in delivering governmental services to citizens in the digital age.

## LITERATURE REVIEW

1. DimpalVij(2018) conducted a study titled "Digital India: A Vision to Empower Rural India". The research paper focused on how India, which was once predominantly rural, faced development challenges as rural areas lagged behind urban areas despite numerous initiatives. To address this issue, the Indian government initiated "Digital India," a program designed to expand high-speed internet access to rural areas, encourage digital education, and transition the country into a knowledge-based economy.The program offered solutions in education, health, agriculture, administration, and financial inclusion, striving to bridge the urban-rural digital gap. The research paper assessed the impact of Digital India, identified challenges, and proposed additional initiatives to empower rural India, fostering development and integration into the global digital revolution. The study concluded that Digital India made significant progress in India, with positive news coming daily, especially from villages. However, it recognized that more needed to be done to empower villages. Knowledge is power, and Digital India played a crucial role in providing the right information at the right time. Beyond empowering rural India, the program had the potential to uplift rural women by offering access to new opportunities and markets. To realize those benefits, the government needed to fully implement the Digital India program

2. DestaMengistu et al., (2009) in their study on a research paper titled "M-Government: Opportunities and Challenges to Deliver Mobile Government Services in Developing Countries". This research paper highlighted that M-Government utilizes mobile technologies for administering government services to citizens and businesses, marking a significant advancement in service delivery. It emphasizes the use of wireless devices to enhance access to public services for all stakeholders, including citizens, businesses, and government officials. The paper aimed to explore the primary challenges and opportunities of M-Government, focusing on its mobile service offerings in developing countries. It concluded that integrating mobile technologies into development agendas is critical for enhancing public service

accessibility and efficiency. Governments in developing nations were encouraged to adopt M-Government strategies, adjust existing programs, and prioritize high-impact mobile services for swift implementation. Initial services could include information dissemination, message retrieval, and emergency reporting, setting the stage for broader M-Government reforms within E-Government frameworks.

## OBJECTIVES OF THE STUDY

1. To understand how aware young citizens are of the UMANG application in the digital era.
2. To identify the key factors influencing user awareness of the UMANG application, including User-friendly access, Service Attributes, Government initiatives, and time.

## RESEARCH METHODOLOGY

• NO OF RESPONDENTS: 252 Respondents.

• METHODS OF DATA COLLECTION:

1. Primary data– Questionnaire, Interviews.
2. Secondary data– Articles, Journals and Books.

• TYPE OF SAMPLING: Convenience sampling.

• AREA OF THE STUDY: Chennai

• STATISTICAL TOOLS USED: Percentage analysis, Factor Analysis using SPSS.

### DATA ANALYSIS AND INTERPRETATION
### PERCENTAGE ANALYSIS

| | | | |
|---|---|---|---|
| Age | Under 18 | 7 | 2.8 |
| | 18 – 24 | 87 | 34.5 |
| | 25 – 34 | 63 | 25 |
| | 35 – 44 | 42 | 16.7 |
| | 45 – 54 | 30 | 11.9 |
| | 55 – 64 | 17 | 6.7 |
| | 65 or above | 6 | 2.4 |

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| | | | |
|---|---|---|---|
| Occupation | Public sector | 21 | 8.3 |
| | Private sector | 76 | 30.2 |
| | Self-employed | 43 | 17 |
| | Retired | 15 | 6 |
| | Student | 77 | 30.6 |
| | Homemaker | 20 | 7.9 |

***Source*** **–** Questionnaire

## Interpretation

The above table shows that the majority of respondents fall within the 18-24 age range, comprising 34.5% of the sample. The occupation distribution shows that students represent the largest group at 30.6%, followed by the private sector at 30.2%.

# FACTOR ANALYSIS

## KMO and Bartlett's Test

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .853 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1146.346 |
| | Df | 231 |
| | Sig. | <.001 |

***Source*** **–** Questionnaire

## Interpretation

In this study, KMO analysis revealed that the KMO Measure of Sampling Adequacy value is 0.853. Bartlett's test and chi-square have (1146.346) also been observed to be highly significant (since $p < .001$). So, Factor analysis is appropriate for this study. The significant value of this study is 0.000 which is below 0.05. So, this study meets all the requirements for conducting Factor analysis.

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# COMMUNALITIES

| Communalities | | |
|---|---|---|
| | **Initial** | **Extraction** |
| I understand the services offered through the app. | 1.000 | .564 |
| I see advertisements or promotions related to the app. | 1.000 | .349 |
| I find the interface is user-friendly and easy to Use | 1.000 | .437 |
| It provides a wide range of services | 1.000 | .434 |
| I believe that it is Convenient access to government service | 1.000 | .391 |
| It saves time to use the app when compared to traditional methods of accessing government services. | 1.000 | .585 |
| I feel sure that awareness about using the app to avail of various government services. | 1.000 | .577 |
| The app supports the impacts of the government's digital initiatives. | 1.000 | .419 |
| The app adequately addresses my needs for accessing government services. | 1.000 | .384 |
| I trust the security measures implemented in the app to protect my personal information. | 1.000 | .506 |
| The app is a necessary tool for citizens in the digital era. | 1.000 | .259 |
| I encounter seamless experiences while using the app. | 1.000 | .433 |
| The app bridges the gap between citizens and government services effectively. | 1.000 | .458 |
| The app is recognized and utilized by people in my social circle | 1.000 | .454 |
| I believe the app is transparency in government services. | 1.000 | .352 |
| The app adequately addresses the diverse needs of users. | 1.000 | .289 |
| I feel empowered as a citizen through the use of the app. | 1.000 | .387 |
| I encounter frequent updates and improvements in the app. | 1.000 | .486 |
| The app helps from the government's vision for digital governance | 1.000 | .362 |
| Using the app satisfies my overall satisfaction with government services. | 1.000 | .493 |
| The app is accessible to people from all demographics. | 1.000 | .298 |
| I believe the app will stagnate and deteriorate in the future. | 1.000 | .397 |
| Extraction Method: Principal Component Analysis. | | |

***Source*** – Questionnaire

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## Interpretation:

From the above table shows, it was found that the 22 variables ranged from 0.259 to 0. 585. It implied that the 22 variables exhibit a variance ranging from 26% to 59%. These variance limits were more appropriate for variable groupings and the formation of factors.

## TOTAL VARIANCE EXPLAINED

| Components | Initial Eigen values | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Total | % of Variance | Total | % of Variance |
| 1 | 5.475 | 24.885 | 24.885 | 5.475 | 24.885 | 24.885 |
| 2 | 1.362 | 6.189 | 31.074 | 1.362 | 6.189 | 31.074 |
| 3 | 1.274 | 5.790 | 36.864 | 1.274 | 5.790 | 36.864 |
| 4 | 1.204 | 5.474 | 42.338 | 1.204 | 5.474 | 42.338 |
| 5 | 1.163 | 5.285 | 47.623 | 1.163 | 5.285 | 47.623 |
| 6 | .986 | 4.483 | 52.106 | | | |
| 7 | .951 | 4.321 | 56.427 | | | |
| 8 | .889 | 4.042 | 60.470 | | | |
| 9 | .832 | 3.783 | 64.252 | | | |
| 10 | .810 | 3.684 | 67.936 | | | |
| 11 | .786 | 3.575 | 71.511 | | | |
| 12 | .765 | 3.475 | 74.986 | | | |
| 13 | .727 | 3.306 | 78.291 | | | |
| 14 | .689 | 3.132 | 81.423 | | | |
| 15 | .664 | 3.016 | 84.439 | | | |
| 16 | .609 | 2.770 | 87.209 | | | |
| 17 | .563 | 2.561 | 89.770 | | | |
| 18 | .531 | 2.412 | 92.181 | | | |
| 19 | .494 | 2.246 | 94.427 | | | |
| 20 | .461 | 2.097 | 96.524 | | | |
| 21 | .433 | 1.970 | 98.494 | | | |
| 22 | .331 | 1.506 | 100.000 | | | |

***Source*** – Questionnaire

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## Interpretation

The 22 variables are reduced to 4 predominant factors of cumulative variance of 42.338%. These 4 factors individually possess 24.885%, 6.189%, 5.790%, and 5.474%. The Rotated Component Matrix provides the loadings for each variable.

## ROTATED COMPONENT MATRIX

| Rotated Component Matrix | | | | |
|---|---|---|---|---|
| VARIABLES | Component | | | |
| | 1 | 2 | 3 | 4 |
| I trust the security measures implemented in the app to protect my personal information. | .699 | | | |
| The app adequately addresses my needto access government services | .557 | | | |
| The app is recognized and utilized by people in my social circle | .554 | | | |
| I believe that it is Convenient access to government service | .554 | | | |
| Using the app satisfies my overall satisfaction with government services | .511 | | | |
| It provides a wide range of services | .501 | | | |
| I encounter frequent updates and improvements in the app. | .490 | | | |
| The app adequately addresses the diverse needs of users | .489 | | | |
| I see advertisements or promotions related to the app | .422 | . | | |
| I feel sure that awareness about using the app to avail of various government services. | | .721 | | |
| I encounter seamless experiences while using the app. | | .627 | | |
| I believe the app will stagnate and deteriorate in the future. | | .503 | | |
| I find the interface is user-friendly and easy to use | | .484 | | |
| The app is accessible to people from all demographics | | .423 | | |

| | | | | |
|---|---|---|---|---|
| I believe the app is transparency in government services | | .405 | | |
| The app is a necessary tool for citizens in the digital era. | | .366 | | |
| The app bridges the gap between citizens and government services effectively | | | .666 | |
| The app helps from the government's vision for digital governance | | | .543 | |
| The app supports the impacts of the government's digital initiatives. | | | .518 | |
| I feel empowered as a citizen through the use of the app | | | .497 | |
| I understand the services offered through the app. | | | | .719 |
| It saves time to use the app when compared to traditional methods of accessing government services | | | | .698 |
| Extraction Method: Principal Component Analysis.<br>Rotation Method: Varimax with Kaiser Normalization. | | | | |
| a. Rotation converged in 7 iterations. | | | | |

***Source*** – Questionnaire

## Interpretation

The above shows the **first factor** contains 9 variables which are as follows,

I trust the security measures implemented in the app to protect my personal information. (.699)

The app adequately addresses my need to access government services (.557)

The app is recognized and utilized by people in my social circle (.554)

I believe that it is Convenient access to government service (.554)

Using the app satisfies my overall satisfaction with government services (.511)

It provides a wide range of services (.501)

I encounter frequent updates and improvements in the app. (.490)

The app adequately addresses the diverse needs of users (.489)

I see advertisements or promotions related to the app (.422)

These factors are named **USER FRIENDLY ACCESS.**

**The second factor** contains 7 variables

I feel sure that awareness about using the app to avail of various government services. (.721)

I encounter seamless experiences while using the app.( -.627)

I believe the app will stagnate and deteriorate in the future. (.503)

I find the interface is user-friendly and easy to use (.484)

The app is accessible to people from all demographics (.423)

I believe the app is transparency in government services (.405)

The app is a necessary tool for citizens in the digital era. (.366)

These factors are named **SERVICES ATTRIBUTES.**

**The third factor** contains 4 variables

The app bridges the gap between citizens and government services effectively (.666)

The app helps from the government's vision for digital governance (.543)

The app supports the impacts of the government's digital initiatives. (.518)

I feel empowered as a citizen through the use of the app (.497)

These factors are named **GOVERNMENT INITIATIVES.**

**The fourth factor** contains 2 variables

I understand the services offered through the app. (.719)

It saves time to use the app when compared to traditional methods of accessing government services (.698)

These factors are named as **TIME.**

## FINDINGS & SUGGESTIONS OF THE STUDY

1. Promotional campaigns and government initiatives effectively boost user awareness of the UMANG application.
2. Continuous improvement and innovation are vital for maintaining and enhancing user engagement with the UMANG platform in today's fast-changing digital environment.
3. Advertise the UMANG Application to more people, showing them how useful and easy it is to use.
4. Regularly collect user feedback and perform usability testing to find areas for improvement, Then implement updates to boost the application performance and user satisfaction.

## CONCLUSION

This study concludes that the factors like accessibility, usability, promotion, trust, and perceived benefits that influence user awareness of the UMANG app. Improving the interface, increasing promotions, providing support, fostering trust, and seeking feedback is vital for enhancing user satisfaction. Long-term sustainability and adaptation to new technologies are crucial for the UMANG application's success, and addressing these factors can improve government service delivery through the UMANG application.

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