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A statistical analysis on the opinion of Indian citizens about opportunities and challenges of digital India mission

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Abstract
Digital India is an ambitious project of the Government of India with a vision to transform all services of government available electronically from anywhere and anytime. This mission focused on to create a countrywide digital infrastructure as a utility for every citizen, ensuring governance and services on demand and digital empowerment of citizens. Though it is a great initiative but connecting 141.72 crores Indian population digitally is a great challenge. Here we have discussed opportunities and challenges of different factors of Digital India mission and presented a statistical analysis of the opinions of Indian citizens, especially youths on this.

Keywords: Digital India movement, government services, connectivity, statistical analysis, Chi-square test, significant association.

Introduction
India has achieved impressive progress in the field of science and technology. Our country is emerging as one of the strongest economies in the developing world. Information and communication technologies have brought significant changes in the development of the Indian society. Digital India programme is the outcome of the changes brought by the information and communication technology. It is an initiative of Government of India to connect the Government Departments and the citizens of India. It's focus is to ensure the availability of all Government service electronically from any location at any time. The mission also includes plan to connect rural areas with high speed internet networks. It is an initiative to transform the country into digitally empowered through three major components, to develop stable and secure digital infrastructure, to deliver government services digitally and to provide digital literacy.

Digital India is built on nine foundations of growth areas as follows
- **Universal Access to Mobile Connectivity:** To ensure mobile connectivity in all parts of the country for every citizen.
- **Public Internet Access Program:** To improve the connectivity within the country by creating Common Service Centres (CSCs) in each gram panchayat and also converting post offices into multiservice centers.
- **Broadband Highways:** To provide basic internet connectivity to all citizens in all areas within the country.
- **E-Kranti:** The most pivotal initiatives of Digital India, involving access of many services like e-health care, e-justice, e-education, farming, security and financial services.
- **E-Education:** Developing Massive Open Online Courses (MOOCs) which is beneficial for education and providing citizens access to huge amounts of knowledge along with a forum for students and teachers. It also includes e-scholarship scheme.
- **E-Governance:** Making the best use of growing technology to provide services like banking, civil services, postal services, etc to every citizen.

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- **Information for All:** Aims to store documents of citizens digitally so that there would not be any fear of theft and loss of important documents. At the same time, the authenticity of the document could be verified.
- **Early Harvest Programs:** Contains multiple services like the national portal for lost and found children (KhoyaPaya), biometric scanners in all government offices, mass messaging app for government employees, etc.
- **Manufacturing of electronic items (Make in India):** This initiative aims at decreasing imports and also plans to provide jobs by promoting the establishment of electronics manufacturing plants within the country. Its final goal is to have net zero import of electronics. It would attract the investors also.

However, the initiative also lacks many crucial components including lack of legal framework, lack of privacy and data protection laws, civil liberties abuse possibilities, lack of parliamentary oversight for e-surveillance in India, lack of intelligence related reforms in India, insecure Indian cyberspace, etc. These issues have to be managed strongly for the successful implementation of Digital India mission.

Another major obstacle of connecting citizens of India digitally is poverty and illiteracy. Digital services should be in local languages also and people should be educated to understand those services.

Literature Review

Gupta and Arora (2015) [3] worked on rural India and explained how digital India would help in empowerment of rural entrepreneurship. Gulati (2016) [2] discussed on challenges and opportunities of digital India by showing the global and domestics challenges that would block the successful implementation of it and also by highlighting the opportunities that would help to achieve the goal of Digital India. Sharma (2016) [6] discussed about the impact of digital India in respect of economic, social and environmental impact. According to Haldankar (2018) [4], if Digital India became successful, it would surely transform India by giving access to multimedia information, content and services to the citizens of India. Digital India programme was launched on 1st July, 2015 to enable digital delivery of services to citizens. Based on the success of the programme, the Union Cabinet during August 2023 approved the expansion of the Digital India programme. In our study, we framed questions on all nine pillars of Digital India program and on various challenges of it. We analyzed the opinion of the citizens, especially youths on this mission.

Research Methodology

A survey was conducted through a Google form to analyse the opportunities and challenges of Digital India mission of the Government of India to provide various services of Government digitally to the citizen of India. 179 persons from various areas participated in this survey. SPSS software is used to analyse the primary data. Descriptive statistics and chi-square tests are used to find if there is any significant association between various factors on the study.

Statistical Analysis and Finding
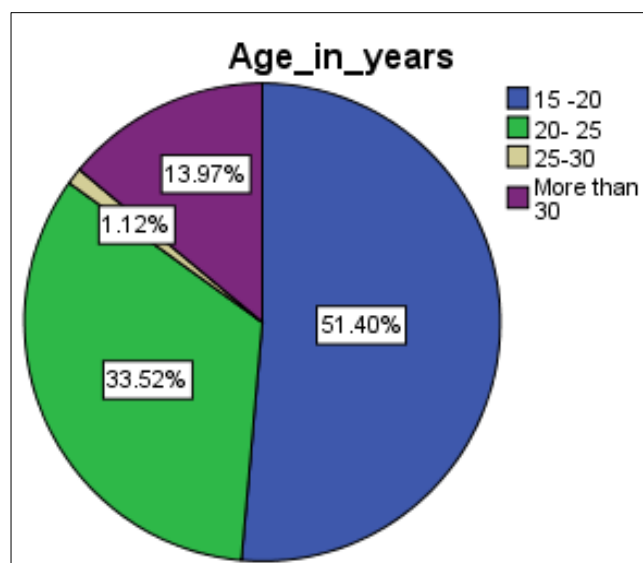
Table 1: Gender wise distribution of respondents

Gender	Frequency	Percent
Female	100	55.9
Male	79	44.1
Total	179	100.0
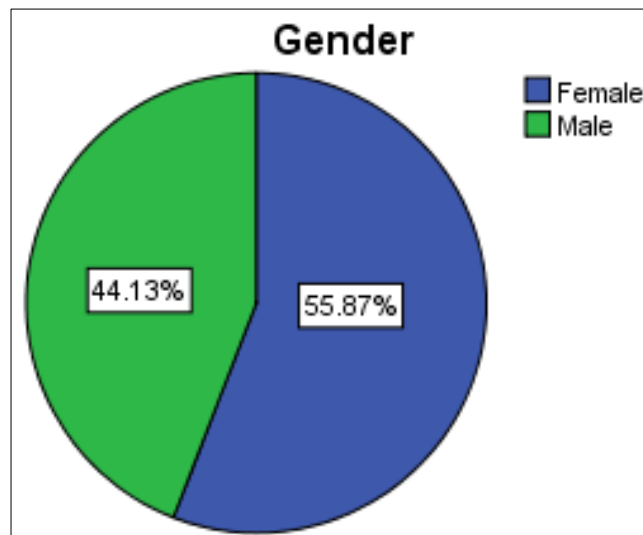
Fig 1: Gender wise distribution of respondents

Table 2: Age wise distribution of respondents

| Age in years	Frequency	Percent
15-20	92	51.4
20-25	60	33.5
25-30	2	1.1
More than 30	25	14.0
Total	179	100.0

Fig 2: Age wise distribution of respondents

Table 3: Occupation wise distribution of respondents

Occupation	Frequency	Percent
Business	2	1.1
Salaried	30	16.8
Self Employed	1	.6
Students	146	81.6
Total	179	100.0

Table 4: Do you aware about Digital India (DI) movement of Government of India where all government services and information will be available digitally which can be accessible from anywhere and anytime?

Awareness about Digital India Movement	Frequency	Percent
No	28	15.6
Yes	151	84.4
Total	179	100.0
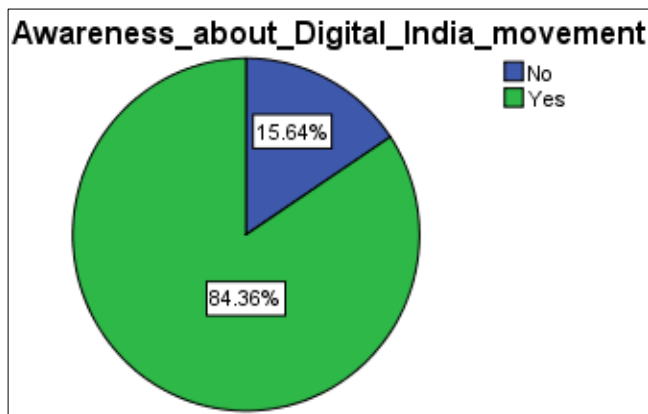
Fig 3: Do you aware about Digital India (DI) movement of Government of India where all government services and information will be available digitally which can be accessible from anywhere and anytime?

Table 5: Do you believe that Digital India project would bring a great amount of public accountability through mandated delivery of Government services electronically?

	Frequency	Percent
Agree	101	56.4
Disagree	12	6.7
Strongly agree	66	36.9
Total	179	100.0

Table 6: Do you believe that Digital India programme will put an end to corruption system which becomes the main concern in our country now?

	Frequency	Percent
Agree	101	56.4
Disagree	33	18.4
Strongly agree	40	22.3
Strongly disagree	5	2.8
Total	179	100.0

Table 7: National scholarship portal, a project under DI, will digitalize all scholarship process provided by the Government of India right from submission of application, verification, sanction and disbursal to end beneficiary. Do you believe that it would encourage aspirants?

	Frequency	Percent
Agree	110	61.5
Disagree	10	5.6
Strongly agree	57	31.8
Strongly disagree	2	1.1
Total	179	100.0

Table 8: Do you believe that it will benefit people of India in every village in terms of knowledge improve by using internet in day-to-day life?

	Frequency	Percent
Agree	94	52.5
Disagree	22	12.3
Strongly agree	59	33.0
Strongly disagree	4	2.2
Total	179	100.0

Table 9: Do you believe that implementation of DI project will result a bank account of every Indian?

	Frequency	Percent
Agree	113	63.1
Disagree	20	11.2
Strongly agree	45	25.1
Strongly disagree	1	.6
Total	179	100.0

Table 10: Under DI programme, the target is to stop import of electronics items and make it by Indian electronics manufacturer. Do you agree that it will attract global investors to invest their funds in this sector?

	Frequency	Percent
Agree	106	59.2
Disagree	14	7.8
Strongly agree	57	31.8
Strongly disagree	2	1.1
Total	179	100.0

Table 11: Do you believe that the DI mission will create an exponential growth in job market in IT sectors?

	Frequency	Percent
Agree	96	53.6
Disagree	20	11.2
Strongly agree	61	34.1
Strongly disagree	2	1.1
Total	179	100.0

Table 12: Do you agree that E-Pathshala, a project under DI program would help students to update themselves independently through online courses?

	Frequency	Percent
Agree	103	57.5
Disagree	16	8.9
Strongly agree	54	30.2
Strongly disagree	6	3.4
Total	179	100.0

Table 13: In India where people are diversified in terms of culture, language, food habits, customs, traditions and laws, do you agree that integrations of language and technology will be one of the main obstacles of the digital India mission?

	Frequency	Percent
Agree	100	55.9
Disagree	35	19.6
Strongly agree	38	21.2
Strongly disagree	6	3.4
Total	179	100.0

Table 14: Do you believe that there is a need to have a standardization of the software and hardware protocols in different states of India for better connectivity of e-governance?

	Frequency	Percent
Agree	112	62.6
Disagree	10	5.6
Strongly agree	54	30.2
Strongly disagree	3	1.7
Total	179	100.0

Table 15: Do you believe that the lack of proper coordination and cooperation of all government departments would delay the proper implementation of Digital India movement to acquire digitally empowered economy?

	Frequency	Percent
Agree	98	54.7
Disagree	14	7.8
Strongly agree	64	35.8
Strongly disagree	3	1.7
Total	179	100.0

Table 16: Do you believe that the high illiteracy and poverty in India is a major challenge in expanding the reach of internet to every citizen of the country?

	Frequency	Percent
Agree	91	50.8
Disagree	16	8.9
Strongly agree	69	38.5
Strongly disagree	3	1.7
Total	179	100.0

Table 17: Do you believe that the DI programme should ensure that there should be some strong privacy norms and a proper authentication system for all the documents uploaded online by the citizens and its will be available for right person at the right time?

	Frequency	Percent
Agree	101	56.4
Disagree	6	3.4
Strongly agree	72	40.2
Total	179	100.0

Table 18: Do you believe that it is a great challenge to build entire country wide broadband connection which is the main pillar of the Digital India movement?

	Frequency	Percent
Agree	107	59.8
Disagree	11	6.1
Strongly agree	59	33.0
Strongly disagree	2	1.1
Total	179	100.0

Table 19: Do you agree that cyber-crime and cyber-attack are the main threats of Digital India mission which should be handled by the Government with strict action?

	Frequency	Percent
Agree	73	40.8
Disagree	8	4.5
Strongly agree	95	53.1
Strongly disagree	3	1.7
Total	179	100.0

Chi-Square Test to test the significance of Association between various factors at 5% Level of Significance

Chi-Square Test 1: To test the null hypothesis
H_{01}: There is no significant association between Gender of public and their feeling that Digital India mission will create an exponential growth in job market in IT sectors.
Here, $p\ value = 0.019$, which is less than 0.05, so we can reject null hypothesis H_{01} at 5% level of significance and conclude that there is a significant association between Gender of public and their feeling that Digital India mission will create an exponential growth in job market in IT sectors.

Chi-Square Test 2: To test the null hypothesis
H_{02}: There is no significant association between the awareness of public about Digital India mission of Government and their feeling that that E-Pathshala, a project under DI program would help students to update themselves independently through online courses
Here, $p\ value = 0.023$, which is less than 0.05, so we can reject null hypothesis H_{02} at 5% level of significance and conclude that there is a significant association between the awareness of public about Digital India mission of Government and their feeling that that e-Pathshala, a project under DI program would help students to update themselves independently through online courses

Chi-Square Test 3: To test the null hypothesis
H_{03}: There is no significant association between the awareness of public about Digital India mission of Government and their believe that Digital India project would bring a great amount of public accountability through mandated delivery of Government services electronically.
Here, $p\ value = 0.001$, which is less than 0.05, so we can reject null hypothesis H_{03} at 5% level of significance and conclude that there is a significant association between the awareness of public about Digital India mission of Government and their believe that Digital India project would bring a great amount of public accountability through mandated delivery of Government services.

Chi-Square Test 4: To test the null hypothesis
H_{04}: There is no significant association between the believe that Digital India programme will put an end to corruption system which becomes the main concern in our country now and their believe that the lack of proper coordination and cooperation of all government departments would delay the proper implementation of Digital India movement to acquire digitally empowered economy.
Here, $p\ value = 0.039$, which is less than 0.05, so we can reject null hypothesis H_{04} at 5% level of significance and conclude that there is a significant association between the believe that Digital India programme will put an end to corruption system which becomes the main concern in our country now and their believe that the lack of proper coordination and cooperation of all government departments would delay the proper implementation of Digital India movement to acquire digitally empowered economy

Chi-Square Test 5: To test the null hypothesis
H_{05}: There is no significant association between the believe that Digital India programme will put an end to corruption system which becomes the main concern in our country now and their believe that Digital India will encourage the students for all scholarship process provided by the Government of India right from submission of application, verification and disbursal of amount on National scholarship portal.
Here, $p\ value = 0.042$, which is less than 0.05, so we can reject null hypothesis H_{05} at 5% level of significance and conclude that there is a significant association between the believe that Digital India programme will put an end to corruption system which becomes the main concern in our country now and their believe that Digital India will encourage the students for all scholarship process provided by the Government of India right from submission of application, verification and disbursal of amount on National scholarship portal

Chi-Square Test 6: To test the null hypothesis
H_{06}: There is no significant association between the believe that there is a need to have a standardization of the software and hardware protocols in different states of India for better connectivity of e-governance and their believe that the Digital India programme should ensure that there should be some strong privacy norms and a proper authentication system for all the documents uploaded online by the citizens and its will be available for right person at the right time.
Here, $p\ value = 0.00024$, which is less than 0.05, so we can reject null hypothesis H_{06} at 5% level of significance and conclude that there is a significant association between the believe that there is a need to have a standardization of the software and hardware protocols in different states of India for better connectivity of e-governance and their believe that the Digital India programme should ensure that there should be some strong privacy norms and a proper authentication system for all the documents uploaded online by the citizens and its will be available for right person at the right time

Conclusions
These are the following conclusions
1. 85% people are aware about Digital India movement of Government of India where all government services and

information will be available digitally which can be accessible from anywhere and anytime.

2. 79% people believe that Digital India programme will put an end to corruption system which becomes the main concern in our country now.

3. 93% people believe that Digital India movement will encourage the students for all scholarship process provided by the Government of India right from submission of application, verification and disbursal of amount on National scholarship portal.

4. 86% people believe that Digital India movement will benefit people of India in every village in terms of knowledge improve by using internet in day-to-day life.

5. 88% people believe that implementation of DI project will result a bank account of every Indian.

6. 88% people believe that the DI mission will create an exponential growth in job market in IT sectors.

7. 91% people believe that DI mission will stop import of electronics items and make it by Indian electronics manufacturer.

8. 88% people agree that E-Pathshala, a project under DI program would help students to update themselves independently through online courses.

9. 93% people believe that there is a need to have a standardization of the software and hardware protocols in different states of India for better connectivity of e-governance.

10. 93% people believe that it is a great challenge to build entire country wide broadband connection which is the main pillar of the Digital India movement.

11. 93% people agree that cyber-crime and cyber-attack are the main threats of Digital India mission which should be handled by the Government with strict action.

So the majority of the people believe that the digital India Mission is a great initiative by the Government of India but the challenges should be minimised by various measures.

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