

# Analysis of Internet Inclusion among the Populous Countries

Sankara Moorthy K, Krishnaraj R, Celina P, Arunkumar C  
SRM Institute of Science and Technology  
India  
sankaramoorthy.k@gmail.com  
drrkraj6@gmail.com  
celinealf@gmail.com



**ABSTRACT:** *The study of Internet inclusion is a major criterion used to understand the online activity of countries. In this paper, we have studied the Internet inclusion among many nations by providing empirical data. We have provided a few focussed analyses in this work.*

**Keywords:** Internet Inclusion, Internet Index, Internet use

**Received:** 10 November 2017, Revised 18 December 2017, Accepted 22 December 2017

© 2018 DLINE. All Rights Reserved

## 1. Introduction

According to Internet World Stats, around 50 percent of the internet usage in the world belongs to Asian countries. Most of the businesses opt out from brick and mortar stores and switch to completely online web store due to the ease of business as well as the reduced operation costs. The competition among the e-commerce companies has benefitted the consumers with reduced prices and introduced to the era of assisted marketing. Social media has become important medium to provide instant feedback about products and services. Companies have started to consider the conversation among the consumers in the online space much more seriously. The backbone for the growth in the online space depends upon the Internet infrastructure and the consumption pattern of a country. An inclusive growth along with citizens of various demography becomes mandatory for a sustainable development. The Internet Inclusive Index is designed by The Economist provides an overview of the Internet Inclusivity among various countries.

## 2. Literature Review

Digital citizenship has become significant with the increasing growth of internet users in various countries. Even in the most

populous countries, there is a substantial percentage of the population does not have an access to internet. (Karen et al, 2008) Information and communication technology policies of a country become important in Internet inclusion of a nation. Access to internet using public infrastructure enhances the participation of citizens in the digital space. (Cristina Ponte, 2012) Analysis of the Internet usage behavior of a nation gives an idea about Social Inclusion of citizens and expatriates. (Parker et al, 2007). The impact of the digital divide among the age group and various demography has an impact of the users in terms of education. (Livingstone et al, 2007).

The new responsibility of the teachers in rural schools is the digital inclusion activities for the children. Education in Information and Communication Technology is inevitable for the access to public policy activities designed by the country based on the digital medium. (Alvaro Salinas, 2009). Reducing the barriers to digital inclusion among the adult with developmental disabilities is important for a nation. (Susan, 2007)

### 3. Research Methodology

Data on Internet Exclusion Index is extracted from the website by The Economist and analyzed using MS Excel. The comparative Analyzer in the website is used for a cross country Analysis on the various parameters.

### 4. Analysis and Interpretation

Internet inclusion Index is developed using four components namely Availability, Affordability, Relevance and Readiness. Availability deals with the quality and breadth of available infrastructure required for access and levels of internet usage. Affordability deals with the cost of access relative to income and the level of competition in the internet marketplace. Relevance deals with existence and extent of local language content and relevant content. Readiness deals with capacity to access the internet, including skills, cultural acceptance and supporting policy.

Bases on the overall ranking of Internet inclusion (Table 1), we could infer that U.S. tops the list with a score of 88.2, while Pakistan has a score of 50.7 and holds the 10<sup>th</sup> Rank.

Rank	Country	Overall Rank Internet Inclusion
1	United States	88.2
2	Russia	80.2
3	Brazil	78.0
4	China	69.7
5	Mexico	69.6
6	Indonesia	65.4
7	India	64.4
8	Nigeria	59.4
9	Bangladesh	57.8
10	Pakistan	50.7

Table1. Table showing the Top 10 populous countries based on the Overall Internet Inclusion Ranking

Availability ranks in Table 2 clearly indicate that U.S tops the list with 78.1 with the infrastructure towards the internet access and Nigeria holds the 10<sup>th</sup> rank with the score of 35.5.

Affordability ranking in Table 3 clearly indicates that Internet is more affordable in U.S. with a score of 98.8 and china holds 10<sup>th</sup> rank with a score of 73.

<b>Rank</b>	<b>Country</b>	<b>Availability of Internet</b>
1	United States	78.1
2	Russia	70.6
3	Brazil	65.8
4	China	61.2
5	Mexico	61.1
6	Indonesia	52.0
7	India	47.3
8	Bangladesh	43.4
9	Pakistan	36.6
10	Nigeria	35.5

Table 2. Table showing the Top 10 populous countries based on the Availability of Internet

<b>Rank</b>	<b>Country</b>	<b>Affordability of Internet</b>
1	United States	98.8
2	Russia	93.5
3	Brazil	92.3
4	Nigeria	90.2
5	Indonesia	84.1
6	India	81.0
7	Bangladesh	78.4
8	Pakistan	74.3
9	Mexico	73.5
10	China	73.0

Table 3. Table showing the Top 10 populous countries based on Affordability of Internet

Relevance Ranking in Table 4 indicates that U.S. tops the list with score of 90.6 and Pakistan holds 10<sup>th</sup> rank with a score of 47.2

<b>Rank</b>	<b>Country</b>	<b>Relevance of Internet</b>
1	United States	90.6
2	Russia	84.9
3	Brazil	84.3
4	Mexico	78.2
5	China	77.5

6	India	66.8
7	Indonesia	60.3
8	Nigeria	59.2
9	Bangladesh	54.3
10	Pakistan	47.2

Table 4. Table showing the Top 10 populous countries based on Relevance of Internet

Readiness ranking in Table 5 indicates U.S. tops the list with score of 92.2 while Pakistan holds the 10<sup>th</sup> rank with the score of 43.7

Rank	Country	Readiness of Internet
1	United States	92.2
2	India	78.3
3	China	78.1
4	Mexico	74.7
5	Indonesia	73.5
6	Brazil	70.9
7	Russia	69.0
8	Nigeria	62.9
9	Bangladesh	60.3
10	Pakistan	43.7

Table 5. Table showing the Top 10 populous countries based on Readiness of Internet

Karl Pearson coefficient among overall Inclusion index and the Land area is .789. This shows that the land area of a country is highly related to Internet inclusion

#### Correlations

		Over all rank	land area
Over all rank	Pearson Correlation	1	.789**
	Sig. (2-tailed)		.007
	N	10	10
land area	Pearson Correlation	.789**	1
	Sig. (2-tailed)	.007	
	N	10	10

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

Table 6. Table showing correlation between overall inclusion index and Land area of the country

Karl Pearson coefficient among the population density and Internet inclusion is negative with a score of -.534. Population density has a negative relation Internet inclusion

		<b>Over all rank</b>	<b>pop dens</b>
Over all rank	Pearson Correlation	1	-.534
	Sig. (2-tailed)		.112
	N	10	10
pop dens	Pearson Correlation	-.534	1
	Sig. (2-tailed)	.112	
	N	10	10

Table 7. Table showing correlation between Overall inclusion index and population density of a country

Karl Pearson coefficient among the urbanization percentage and Internet inclusion is .852. The more the urbanization of a country the more inclusion in internet of the nation.

		<b>Over all rank</b>	<b>urbperc</b>
Over all rank	Pearson Correlation	1	.852**
	Sig. (2-tailed)		.002
	N	10	10
urbperc	Pearson Correlation	.852**	1
	Sig. (2-tailed)	.002	
	N	10	10

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

Table 8. Table showing correlation between overall inclusion index and urbanization percentage of the country

## 5. Conclusion

The future of providing access to public policy decisions of developing nation depends on technology. Education on the technology products among the citizen of the nation becomes significant for the social inclusion in the upcoming days. Affordability and availability of the Internet infrastructure in a country becomes an important aspect for Financial Inclusion as well. Rural areas of nation have to get better accessibility and infrastructure of urban areas for a better inclusion.

## References

- [1] Alvaro Salinas, Jaime Sa´nchez. (2009). “Digital inclusion in Chile: Internet in rural schools, *International Journal of Educational Development*, 29. 573–582
- [2] Balboni, M. R., Schwartz, G. (2005). Citizenship and digital media management. *Lect. Notes Comput. Sci.* 3081, 407–416.
- [3] Barzilai-Nahon, K. (2006). Gate keeping in virtual communities: on politics of power in cyberspace, *In: Paper presented at the 39th Annual Hawaii International Conference on System Sciences HICSS’06, Hawaii.*

- [4] Chau, R., Yu, S. (2001). The Social Exclusion of Chinese People in Britain, *Critical Social Policy*, 21 (1) 103-125
- [5] Ponte, Cristina. (2012). “Digitally empowered? Portuguese children and the national policies for internet inclusion, *Estudos em Comunicação* n° 11, 53-70.
- [6] Cuban, L., Kirkpatrick, H., Peck, C. (2001). High access and low use of technologies in high schools classrooms: explaining an apparent paradox. *American Educational Research Journal*, 38 (4) 813–834.
- [7] Dahlgren, P. (2005). The Internet, Public Spheres and Political Communication, *Political Communication*, 22 (2) 147-162
- [8] Mossberger, Karen., Caroline, J., Tolbert, Ramona, S., McNeal. (2008). *Digital Citizenship The Internet, Society, and Participation*, The MIT Press Cambridge, Massachusetts London, England.
- [9] Livingstone, Sonia., Helsper, Ellen. (2007). Gradations in digital inclusion: children, young people and the digital divide. *New Media & Society*, 9 (4) 671-696.
- [10] Parker, David., Song, Miri. (2007). Inclusion, Participation and the Emergence of British Chinese Websites. *Journal of Ethnic and Migration Studies*, 33 (7) 1043-1061.
- [11] Moisey, Susan. (2007). Inclusion and the Internet: Teaching adults with developmental disabilities to use information and communication technology, *Developmental Disabilities Bulletin*, 35 (1 & 2) 72-102 I
- [12] Warschauer, M. (2004). *Technology and Social Inclusion. Rethinking the Digital Divide*. MIT Press, Cambridge, MA.