

Toward World Smart Government Rank

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ABSTRACT

Smart government is growing concept in government affairs and public administration today. The objective of this study is to explore smart government concept and make the world rank of smart government. This study used official world e-government and government data to defined component of smart government: Economic Growth, Policy Making, Citizen Engagement, Accountability, Interoperability, Key Enablers Innovation, Smart Service and Government Effectiveness.

Keywords: Smart Government, Indexing World Wide, Government

HOW TO CITATE: Nurmandi, A
(2023). Toward World Smart
Government Rank. Jurnal
Studi Pemerintahan. Volume
14 No 1 February 2023. 1-21

ARTICLE HISTORY:

Received: Dec 12, 2022

Revise: Jan 31, 2023

Accepted: Feb 25, 2023

ABSTRAK

Smart government merupakan konsep yang sedang berkembang dalam urusan pemerintahan dan administrasi publik saat ini. Tujuan dari penelitian ini adalah untuk mengeksplorasi konsep smart government dan menjadikan smart government peringkat dunia. Studi ini menggunakan data e-government dan pemerintah dunia resmi untuk mendefinisikan komponen smart government: Pertumbuhan Ekonomi, Pembuatan Kebijakan, Keterlibatan Masyarakat, Akuntabilitas, Interoperabilitas, Inovasi Pemberdaya Utama, Layanan Cerdas, dan Efektivitas Pemerintah.

Kata kunci: Smart Government, Indexing World Wide, Government

INTRODUCTION

The impact of ICT on government activities is dominantly growing in last decade and the future, particularly in recent pandemic. Governments in over the world faced a degree of uncertainty when making policy decisions ([Ansari et al., 2010](#); [Blanchet et al., 2017](#); [Juhola & Kruse, 2015](#); [Ramalingam et al., 2020](#)). All parties involved are aware that the great majority of information is suspect. It is crucial to be aware of the types of health-related information that may be available on the web ([Ansari et al., 2010](#); [Blanchet et al., 2017](#); [Juhola & Kruse, 2015](#); [Lele, 2018](#); [Quach & Hoang, 2020](#); [Ramalingam et al., 2020](#)). Although some health-related content found online may be trusted, there is also a great deal of misinformation and hoaxes to be wary of ([Nurmandi et al., 2022](#)). The government is training to be more agile so that it can better respond to pandemic conditions. Agility is a technique that was first used in the software development sector and has subsequently spread throughout other industries ([Janssen & Voort, 2020](#)).

In the study in Brazil, the understanding of smart government

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varies according public servant experience. The important conclusion that smart government needs a stronger organizational culture and the coordination and unification of the government's database ([Melati & Janissek-Muniz, 2020](#)). In the other word, smart government needs an overlap of two organizational domains—the domain of e-governance and the domain of human development ([Addo & Senyo, 2021](#)). Smart citizen is a prerequired condition for smart government ([Rempel et al., 2018](#)). The three aspects of public involvement namely communication, consultation, or participation changes from informing publics about some aspect of a technology to the participation of publics in the deliberation and development of technology.

However, some studies on smart government based on national experience ([Ameen et al., 2020](#); [Lemke et al., 2020](#); [Schedler et al., 2019](#)). There are a range of initiatives towards smart government in many countries around the world, including Switzerland. Many of these promising initiatives are still in early stages, and many barriers must still be overcome if smart government is to be successfully implemented ([Guenduez et al., 2018](#)). There is no previous study on comparative one or ranking study. Hence, in this study we try to compare all countries in the world in term of smart government ranking and indicators.

LITERATURE REVIEW

Smart governance (SG) lacks a defined definition. Although the previous definition for “smart” leads to a public administration that uses servant systems, such a definition is too close to electronic or digital or internet-based (or e-) or even open government definitions like the use of ICT by governments to become more effective, efficient, transparent, and accountable. ([Anthopoulos et al., 2021](#)). Smart-government organizations and networks (e.g. a city, town, nation) will leverage new and nanotechnologies and novel techniques to better understand their communities and constituents (being percipient) ([Lemke, F, et . al., 2020](#)). “Smart government” is a government capable

of feeling and reacting to the environment, through collecting data to be transformed into information and knowledge to improve decision-making in the public sector ([Melati & Janissek-Muniz, 2020](#)). In summary, smart government is a government capable to improve decision making by using novel ICT techniques to become more effective, efficient, transparent and accountable.

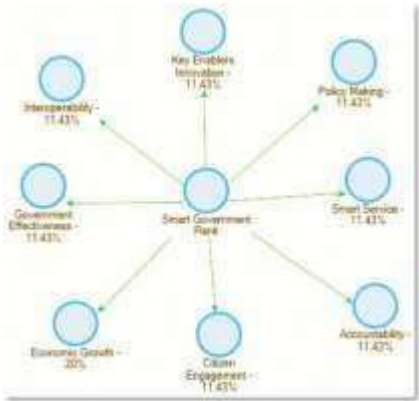
Open data, sharing, service integration, innovation, citizen involvement, information transparency, co-developing policies—all made possible by new technologies (such as big data, open government data, IoT, gather, link, and analyze massive volumes and diversity of data collected and processed in (near) real-time)—form the foundation of the “smart government” idea. ([Schedler et al., 2019](#); [Bensaid & Baina, 2021](#)). In an effort to make governments more accessible, efficient, and appealing to their constituents, SG was developed as the next phase of open government ([Anthopoulos et al., 2021](#)). Furthermore [Bensaid & Baina \(2021\)](#) proposed three approaches to study smart government namely smart participation approach, competence approach and entrepreneurial approach. The smart participation approach refers to the shift from open to smart participation. which really gives power to citizens and aims to strength Citizen engagement and Empowerment. The competent approach: aims to enhance internal efficiency and effectiveness through a set of concepts: creativity, smart work, Data-Driven Decision Making cross-organizational information as well as knowledge integration. Entrepreneurial approach: mainly aims at increasing the accessibility, responsiveness, smartness of public services and economic growth as well as citizens’ well-being ([Bensaid & Baina, 2021](#)). In this provident stage, organizational structures of government will not be entirely changed anymore. Policy adjustments and new legislative procedures will help to legally connect third-party applications and data-security laws for government databases. Data gathering due to the help of those implemented e-services will offer new possibilities for governments to predict economic

changes and movements of society on the long- and short-term scale (Florian, et al., 2020). Systems integrated across different functions and public/private structures-Systems process data simultaneously-Systems interact with clients based on processed data (Florian, et al., 2020).

In short, components of smart government study done by Anthopoulous with two-round Delphi methodology with a sample of experts, the components of smart government namely Citizens Engagement, Economic Growth and Accountability, interoperability, key enabler innovation, smart services and government effectiveness (Anthopoulous et al., 2021). It was concluded that Citizens Engagement, Economic Growth and Accountability are more important for SG, compared to the other components in all the three dimensions and it is hard to decide about the less important component (or components). Third, the role of ICT Innovation appears to be the most important compared to emerging technologies and data (Anthopoulous et al., 2021). Based on this study, we will use the Anthopoulous’s component to rank smart government in all over the world with the average weight as described below.

DEFINED ‘SMART GOVERNMENT RANK’ INDICATORS

Below, we provide the details of each indicator used to calculate the “Smart Government Rank” and the logic for choosing it.



Fig, 1. Displays the Key indicators of the ‘Smart Government Rank’

INDICATOR OF 'ECONOMIC GROWTH.'

The 'Economic Growth' indicator will check the Country's Gross Domestic Product (GDP) details. We will get information against this indicator from the World Bank Website to calculate the 'Economic Growth' indicator value. The weightage of this indicator will be '20%'. The highest value against the 'Economic Growth' indicator can be attained as '20%,' and the lowest value against it will be '0%'. The reason for adding 'Economic Growth' as an indicator for the calculation of 'Smart Government Rank' is that it is the most important factor for any Country's Government motive to advance toward Smart Governance. To make it happen, the economic situation of the country provides the foundation on which any Government can build the structure of Smart Governance because we know Smart Governance implementation requires more resources and attention from the government, so it is essential that the government of the country already achieved the target of the basic necessity given to the citizens. Then they can move towards making the way of Governance smarter. That is why we will be taking the 'Economic Growth' indicator into account due to its significant impact, which can't be neglected and is very crucial for the successful transition to Smart Government. We know that we can't consider each country's challenges in the Smart Governance implementation as a constant factor without being fully aware of the country's economic condition. It will always vary from country to country like we can't say the way Smart Government will be implemented in 'Zimbabwe' is the same way it will be implemented in 'Sweden.' Therefore, the country's economic situation will always play a role in how each country will spend time and resources for its success. It is also why we gave more weightage to this indicator as compared to other indicators.

INDICATOR OF 'POLICY MAKING.'

The 'Policy Making' indicator will evaluate the Country's ability

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to create and implement sound policies and regulations for the smooth implementation of Smart Governance. We will get data for this indicator from the World Bank Website for calculating the value of the 'Policy Making' indicator. The weightage of this indicator will be '11.43%'. The maximum value against the 'Policy Making' indicator can be achieved as '11.43%,' and the minimum value against it will be '0%'. The purpose behind adding 'Policy Making' as an indicator for the calculation of 'Smart Government Rank' is that it is more critical that any Country's Government that wants to move to Smart Governance should have a smooth mechanism of 'Policy Making' to make it happen because many of the Smart Governance initiatives requires changes in the current way of processes which relates to Education Quality, Health Sector, Transport Management, even Environment factor, etc., all of them needed the new approach of thinking from government and after mindset is changed then the formulating and implementation of the policy for the citizens to follow will play a very significant role in the successful working of the Smart Governance. That is the reason we will take 'Policy Making' as the indicator due to its influence of it on the successful implementation of Smart Governance.

INDICATOR OF 'CITIZEN ENGAGEMENT'

The 'Citizen Engagement' indicator will assess the capacity of the Country's government to make interactive ways to engage its Citizens and support or train them for the successful execution of Smart Governance. We will fetch stats regarding this indicator from the United Nation Website in order to compute the score for the indicator of 'Citizen Engagement.' The weightage for this indicator will be '11.43%'. The uppermost value against the 'Citizen Engagement' indicator can be acquired as '11.43%,' and the lowermost value against it will be '0%'. The motive behind making 'Citizen Engagement' an indicator for the 'Smart Government Rank' calculation is that it

is so vital for the accomplishment of any initiative or project that people involved in it should be motivated and trained enough to use it correctly to acquire the desired results, but if they don't utilize it efficiently or even didn't feel the reason of using it then any great initiative will fail and we can't do much about it. That is why any Country's Government that wants to implement Smart Governance and there is a communication gap between government and citizens or a lack of communication mode between them, the country can't be able to implement this initiative successfully. That is the rationale we will be making 'Citizen Engagement' one of the indicators due to its effect. There must be a bridge of engagement between government and citizens to make the Smart Governance transition easy.

INDICATOR OF 'ACCOUNTABILITY.'

The 'Accountability' indicator will analyze the Country's structure of making any government initiative open for citizens' criticism and making changes according to the positive feedback they received for the successful accomplishment of Smart Governance. We will get info about this indicator from the World Bank Website for successfully getting the score of 'Accountability.' The weightage for this indicator will be '11.43%'. The topmost value against the 'Accountability' indicator can be acquired as '11.43%', and the bottommost value against it will be '0%'. The cause behind adding 'Accountability' as an indicator for the 'Smart Government Rank' formulation is that to make any initiative practically possible, real-time feedback should be obtained, and changes to the project based on the feedback. Government should be open to any criticism, and they should take it positively as it is for the betterment of the project. That is the basis on which we will be getting 'Accountability' as one of the indicators due to its effect. Therefore, there must be an environment in the country where Citizen's criticism and feedback be openly given to the government, and government should

value it, which is vital for Smart Governance's smooth flow.

INDICATOR OF 'INTEROPERABILITY.'

The 'Interoperability' indicator will examine the Country's way of making the government transparent and clear about any initiative to its citizens for the successful working of Smart Governance. We will attain information for this indicator from the World Justice Project Website for calculating the score. The weightage of this indicator will be '11.43%'. The utmost value against the 'Interoperability' indicator can be attained as '11.43%,' and the downmost value against it will be '0%'. The aim behind creating 'Interoperability,' the indicator for 'Smart Government Rank,' is that without having transparency and openness in any government initiative, it always creates doubts and opens room for speculation regarding the government motive behind it and makes any initiative fail due to it. That is why we will account the 'Interoperability' as one of the indicators due to its impact. Therefore, the government should ensure transparency to implement Smart Governance.

INDICATOR OF 'KEY ENABLERS INNOVATION'

The 'Key Enablers Innovation' indicator will check the Country's participation in Global Innovation Index. We will get material against this indicator from the Global Economy Website to calculate the 'Key Enablers Innovation' indicator value. The weightage for this indicator is '11.43%'. The highest value against the 'Key Enablers Innovation' indicator can be acquired as '11.43%,' and the lowest value against it is '0%'. The reason for adding 'Key Enablers Innovation' as an indicator for the calculation of 'Smart Government Rank' is that the Factor of Innovation done by the countries and continuing the research work for it is critical because Smart Governance is the way of governance which relatively new there are so much to be achieved on it so with having approach towards research and development and converting it into the innovation will be very

difficult for any country to keep making progress on Smart Governance and keeping up with the world. That is the reason we will be taking the ‘Key Enablers Innovation’ indicator into consideration due to its significant influence, which can’t be neglected and is very crucial for the sustainability of the Smart Government initiative. We know that Technology can’t improve itself automatically unless a group of people works very hard for its betterment of it. Without it, the technology will not be sustained with time and will degrade. That is why Innovation needs to be focused on the future endeavor.

INDICATOR OF ‘SMART SERVICE’

The ‘Smart Service’ indicator will evaluate the Government of the Country’s capability to have and provide a vast mode of communication for the smooth implementation of Smart Governance. We will get data on this indicator from the United Nation Website to calculate the score of the ‘Smart Service’ indicator. The weightage of this indicator will be ‘11.43%’. The maximum value against the ‘Smart Service’ indicator can be achieved as ‘11.43%,’ and the minimum value against it will be ‘0%’. The purpose behind adding ‘Smart Service’ as an indicator is that it is more beneficial if the way the government and citizen will communicate should have diverse options which are synced with current technological advancements; through this way, the Smart Governance facilities will be easily acquired by citizens and they can able to share their thoughts through the mode of communication which will help in the better service of the feature of Smart Governance. That is the logic we will take ‘Smart Service’ as the indicator due to its importance in successfully providing the service of Smart Governance to citizens.

INDICATOR OF ‘GOVERNMENT EFFECTIVENESS’

The ‘Government Effectiveness’ indicator will assess the competence of the Country’s government to maintain quality and can effectively engage its Citizens to execute Smart Governance

successfully. We will fetch details about this indicator from the World Bank Website to compute the score of the ‘Government Effectiveness’ indicator. The weightage for this indicator will be ‘11.43%’. The uppermost value against the ‘Government Effectiveness’ indicator can be acquired as ‘11.43%,’ and the lowermost value against it will be ‘0%’. The motive behind making ‘Government Effectiveness’ an indicator for the calculation of ‘Smart Government Rank’ is that the Government that will implement the Smart Governance initiative, its quality of working, its Efficiency in delivering results and giving effective outcomes will play a vital role. The Initiative can be as good as it can be on paper, but implementing it practically requires so much skill and competence from the government. That is the rationale for which we will add ‘Government Effectiveness’ as one of the indicators due to its importance. The government must have the skill and team to succeed in the Smart Governance initiative.

RESEARCH METHOD

This study used quantitative research techniques with information gathered from different sources. To gain more detailed, accurate, and reliable information, this technique summarizes the data and further evaluates it. A business intelligence tool is utilized to collect data, and it was carefully reviewed before processing. The values listed below will be calculated using the assessment process described below.

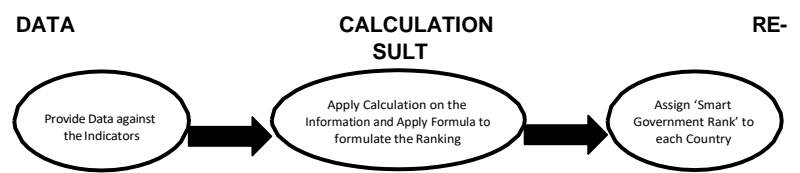


Fig. 2. The flow of evaluation of the Calculation

According to the significance of their impact, the following

essential indicators from Table 1 are highlighted, which will aid in an accurate calculation.

Table 1. Smart Government Indicators

INDICATORS	WEIGHTAGE
Economic Growth	20%
Policy Making	11.43%
Citizen Engagement	11.43%
Accountability	11.43%
Interoperability	11.43%
Key Enablers Innovation	11.43%
Smart Service	11.43%
Government Effectiveness	11.43%

Hence, in table 1 above. Every potential indicator that could better describe the country’s “Smart Government Rank” is listed along with its Weightage. Only “Economic Growth” is given a higher weightage than the other indicators because it is the most important indicator that provides the foundation for the government to move towards Smart Governance in the country. Because of this, all other indicators may have an “11.43%” weightage. However, the “economic growth” indicator has a ‘20%’ weightage.

Table 2. Smart Government Rank Categories

SCORE CATEGORY	SMART GOVERNMENT SCORE
Very High	Greater Than ‘4’
High	Greater Than ‘3’ and Less Than Equal ‘4’
Middle	Greater Than ‘2’ and Less Than Equal ‘3’
Low	Greater Than ‘1’ and Less Than Equal ‘2’
Very Low	Less Than Equal ‘1’

Similarly, in Table 2 above, based on the “Smart Government Score,” its score categories will be determined. Based on this, we can categorize a good Smart Government score and a bad Smart Government score. The Calculation Formula will calculate values for each of the variables listed in Table 1 in order to total the evaluation.

Smart Government Rank Score = [*Economic Growth* + *Policy*

*Making + Citizen Engagement + Accountability + Interoperability
+ Key Enablers Innovation + Smart Service + Government Effec-
tiveness] / 8*

Table 3. All Indicators with Source

INDICATORS	SOURCES
Economic Growth	https://data.worldbank.org/indicator/ny.gdp.mktp.kd.zg?view=chart
Policy Making	http://info.worldbank.org/governance/wgi/home/reports
Citizen Engagement	https://publicadministration.un.org/egovkb/data-center
Accountability	http://info.worldbank.org/governance/wgi/home/reports
Interoperability	https://worldjusticeproject.org/rule-of-law-index/global/2020/open%20government/table
Key Enablers Innovation	https://www.theglobaleconomy.com/rankings/gii_index/
Smart Service	https://publicadministration.un.org/egovkb/en-us/data-center
Government Effectiveness	https://info.worldbank.org/governance/wgi/home/reports

Here, in table 3 above. All Indicators with their Sources are mentioned, from which the data against each Indicator is fetched and then used to calculate the “Smart Government Score.”

We’ll use the “Nudge Theory” to assess the situation because it can aid problem-solving decisions and develop a sustainable and workable model. Any BI tool, such as Looker Studio, an online business intelligence platform that facilitates data visualization and enables the creation of interactive reports and dashboards, can be used to visualize the data. There is no additional setup or installation needed to use this Platform. We must point out that adding data in Excel format is not supported by this tool. Therefore, we must export the data from both files to Google Sheets. A program is a web-based tool that facilitates online spreadsheet creation and editing.

RESULT AND DISCUSSION
THE ‘SMART GOVERNMENT RANK’

After getting the data against the indicators from mentioned data sources, the value against each indicator of the country will be multiplied by its given weightage percentage value, so the final value against each indicator we will get. Finally, the abso-

lute value against each indicator of every country will be summed up. Then resultant value will be divided by the total number of indicators which, in this case, is ‘8’. So, we will get the ‘Smart Government Score’ against each country. Through the ‘Smart Government Score,’ we can quickly evaluate each country’s performance based on Smart governance.

Table 4. Shows Top 10 Countries with the Highest ‘Smart Government Score’

	Country Name	Region	Score Category	Economic Growth	Policy Making	Citizen Engagement	Accountability	Interoperability	Key Enablers Innovation	Smart Service	Government Effectiveness	Smart Government Score
1.	Switzerland	Europe	Very High	-6.88	10.72	8.1	11.28	8	7.58	0.09	11.28	5.08
2.	Poland	Europe	Very High	-6.49	11.82	8.11	11.37	9.1	8.82	0.11	11.32	3.08
3.	Denmark	Europe	Very High	-6.21	11.16	8.11	11.18	9.1	8.87	0.11	11.21	5
4.	Sweden	Europe	Very High	-6.59	10.88	8.08	11.1	9.1	7.14	0.1	10.84	4.97
5.	Netherlands	Europe	Very High	-6.79	11.03	8.11	11.21	9.09	8.72	0.1	11.18	4.96
6.	Norway	Europe	Very High	-6.14	10.94	8.1	11.49	9.1	9.89	0.1	11.27	4.95
7.	Ireland	Europe	Very High	1.17	10.5	8.1	10.88	9.09	8.08	0.09	10.88	4.91
8.	Luxembourg	Europe	Very High	-6.98	11.27	8.08	11.54	9.09	9.81	0.09	11.1	4.89
9.	New Zealand	Oceania	Very High	-6.28	11.88	8.11	11.82	9.09	9.87	0.11	10.81	4.84
10.	Australia	Oceania	Very High	0	11.21	8.11	10.88	9.09	9.88	0.11	10.72	4.8

Table 5. Shows Top 10 Countries with the Lowest ‘Smart Government Score’

	Country Name	Region	Score Category	Economic Growth	Policy Making	Citizen Engagement	Accountability	Interoperability	Key Enablers Innovation	Smart Service	Government Effectiveness	Smart Government Score
1.	Libya	Africa	Very Low	-4.79	0.11	0	0.88	0	0	0	0.22	-0.88
2.	South Sudan	Africa	Very Low	0	0.32	0	0.28	0	0	0	0	0.09
3.	Eritrea	Africa	Very Low	0	0.05	0	0.04	0	0	0	0.48	0.88
4.	Equatorial Guinea	Africa	Very Low	-6.89	0.85	0.01	0.22	0	0	0.01	-0.71	0.08
5.	Korea, Dem. Rep.	Asia	Very Low	0	0	0	0	0	0	0	0.77	0.1
6.	Yemen, Rep.	Asia	Very Low	-1.2	0.44	0.08	0.2	0	1.22	0.04	0.05	0.11
7.	Syrian Arab Republic	Asia	Very Low	0	0.38	0.08	0.77	0	0	0.08	0.38	0.13
8.	Sierra Leone	Africa	Very Low	0.88	0.37	0.04	0.33	0	0	0.03	0.11	0.16
9.	Venezuela, RB	South America	Very Low	0	0.16	0.08	0.88	-0.09	0	0.04	-0.27	0.17
10.	Sudan	Africa	Very Low	-6.73	0.08	0.02	1.1	0.05	0	0.08	0.88	0.2

COMPARATIVE ANALYSIS OF COUNTRIES ON THE BASIS OF ‘SMART GOVERNMENT RANK’

After visualizing all Countries data of Smart Government Rank, we have done the comparative analysis between countries having a very high Smart Government Score and countries having a very low Smart Government Score as shown in Table 4 and Table 5. So, based on the analysis we able to find

some common points if on its countries do well then it makes countries to become Smart Government, and also if they do bad on it then it makes them to worst performing countries as Smart Government. On Below we have list down the points which are;

1. The First key differentiation between countries who are performing well as Smart Government and countries who are not, is the Unstable Peaceful situation in the country due to Terrorism, Civil War, Political unrest, Increasing Criminal Activities etc., Because of it countries are not able to focus on the projects relates to Citizens benefits and instead all their efforts and budget is spent to fight the challenges which causing instability in the country. It is the primary and basic requirement for the country progress and development to have a peaceful environment which provides the safety and protection to the citizens and also give the room to the government to start initiative which will make citizens life's better and increase their quality of living. If we see the Table 5 Data of Countries who are performing low in the Smart Government Rank, we can easily see the countries name who are facing worst political and law and order situation like Libya which from 2012 after the Muammar Gaddafi been overthrown from Government and get killed in the hand of Rebels, since then country is in continuous turmoil of civil war between different groups who wanted to seize the Power and rule the country this game of thrones sent the country situation to worst, Or like Yemen which is also in the worst law and order situation from 2014 when Government Allies and Houthi Armed Forces come face to face and increased their influence in order t takeover the country government and take control of power which drastically devastated the country and created a worst humanitarian crises in the country which sent way back country in terms of progress, Or even take example of Somalia which from last 3 decades from 1991 is in ongoing conflict of Civil war between the rebellion

groups who like others wanted the control over the government of the country and get in hand the resources of the country. On this greed for power caused so much loss the country and also made so much casualties of live in the country and made country to go in depth of poverty and hunger. Therefore, with above mentioned examples we can easily see why the Stability in the country is very important and countries who are lacking in managing it is getting worst and worst, and making them weak in the battle to compete with other countries and stopping them to become better as a Smart Government.

2. The Next point which highlighted as a possible reason why countries are not doing good as a Smart Government is the challenges facing by the country's Economy, which is caused by the reason which discussed in above is the Unstable Law and order situation in the country due to it businesses don't flourish in the country and investors take their money out of the country and try to invest it in other country because they don't want to take loss in the investment and most importantly they want to save their lives, people with wealth easily becomes the target of these Rebel groups because they want money to fund their war and buy weapons. This is one reason of Economical Challenge but we also seen the countries who able to make their country peaceful by coping up the unstable issues are still not doing well as a Smart Government which is due to the inefficiency of the government to implement sound policies and their initiatives are not getting the desired result, and reasons are lack of government planning and large amount of Corruption been done by the public servants which makes the situation worst and blocks the way of country progress. Like Venezuela which due to the government poor economic policies and worst political corruption, from 2015 are in the difficult economic situation with dangerous hyperinflation. This situation made citizens of the Venezuela to go throw a phase which is no less bad

than Civil war where people are struggling to survive and get basic earning to buy food and basic health facilities. Similarly, country like Eritrea which have the situation of worse human right problem, where government instead of focusing on citizen betterment only putting their effort to calm down on people to stop them from freedom of speech and criticizing the government policies and corrupt practices. These examples clearly give us the idea that Government effectiveness and free from corrupt practices are as important as country having stable law and order situation and we already discussed that country should have Stable Economic Growth which will create wealth in the country and with wealth Government can fulfill citizens basic needs and after doing that they can focus to move towards E-government and finally to Smart Government. But if country is struggling to fulfill basic necessity of food, health and shelter to their citizens then they can't put efforts to make them better as Smart Government, that is why we count 'Economic Growth' as an indicator and also given highest weightage because it is the foundation of Smart Government Initiative.

3. Another reason which is been pointed as a reason of difference between High and low Rank Smart Government is the Weak Democratic or Political System in the country which gives birth to the lack of transparency in the government, also neglect of meritocracy in the bureaucracy and government project assignments. The Regime which is not build on citizens support are often take advantage of force to stay in the power and to maintain their control over government they instead of giving positions on the basis of skill and effectiveness of person, they prefer people which are influenced by them and will work for the benefit of the regime not the country. This situation overall decreases the efficiency of the country because public servants with lacking ability is running the country institution and after sometime we see many times that when Regime loses the control over the country

then with them whole country collapses due inefficient way of the governance by them. Like we see North Korea in the list of low performing countries in Table 5. We know that how country is been run by one Leader from one family generation after generation, and in order to maintain grip in the power how cruel and unlawful restriction been forced on the citizens which is only benefiting the people in the power and common citizen are suffering because of it, and country going backward in the terms of progress. Same like Syria which now having the issue of Civil War but before it from 1970's is been ruled by Assad Family and running country without any election contesting and as dictator controlling the country government by force but after they lose grip on the power soon country institution collapsed and country turn into a turmoil of Civil unrest and war. These examples are the clear indication for us that the strong Democratic system is very important after political stability and Economic growth to sustain the country progress and country successfully build the structure of transparent answerable government will eventually move to the Smart Government category.

4. Other possible reasoning of the gap between countries with low and high ranked Smart Government is the factor of Citizens Population in the country, if we see the top countries having the high Smart Government Score are very less densely populated countries with population within 10 million each. It is also very significant finding and logical that if population of the country is limited then it becomes easy for the Government to maintain the country situation and provide the necessary facilities to the citizens of the country. The management becomes easy for the government and also, they don't require large resources to fulfill the needs of the people. On other hand with greater population managing resources effectively and providing facilities to the people becomes challenging for the government and also, they have to work extra in order to generate the revenues for the fulfillment of

people needs. If we see the Table 4. List of Top countries with High Smart Government Score you will find low populated countries of Central Europe and Oceania only which is the main reason of their success as it seems from the data. So, countries are only naturally having low or high population that is why each country needs to plan the Smart government initiative accordingly, but right now clearly countries with high population couldn't able to successfully reach to the highest level of governance efficiency but still with persistency they can able to compete and come to the list of Top 10.

5. Last and final observation point we think is the countries are lacking on Innovation and research activities are not doing good as a Smart Government. We know it that Fundamental of Smart Government is the Effective governance activities in form of Stable country environment, Corruption controlling, Developed Economy, Strong Democratic System, Effective Government Policies etc., and then it on the top of its government can move to next step and automate their processes and practices of governance through E-government implementation. Finally, if they able to successfully implement E-government solution then to reach the level of Smart government it requires strong amount of research and innovation practices to be done in the country. So, if we see Table 4. of countries then we find all countries having are great scores in 'Key Enabler Innovation' Indicator, so countries which are more stable and progressive have the more chances to reach the level of Smart Government and how well they will do as a Smart Government is depends on the contribution of their work on research and innovation activities.

ONLINE VISIBILITY OF 'SMART GOVERNMENT RANK'

In the Future, 'Smart Government Rank' will become more accessible via Online Websites. So, any user worldwide can view any country's 'Smart Government Rank.' Through the online

website, users will be able to examine detailed information about the score assigned against each indicator. The guideline will also be mentioned to advise why any country is lacking behind and what steps they should take to upgrade their ranking and score.

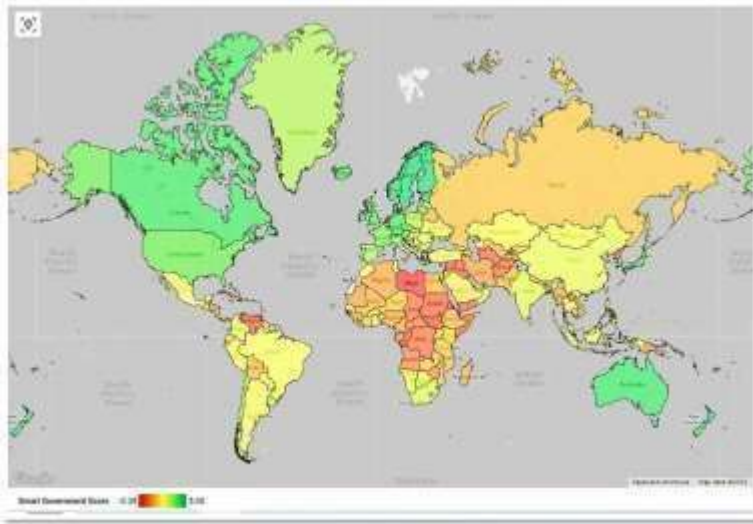


Fig. 3. 'Smart Government Score'

Also, Interactive visibility options to view data like tables, pivots, Charts, Maps, etc., will be provided to visualize data according to the user's ease of analysis. With it, different filters will also be given to quickly view any specific country, region, or category data. For data analytics purposes 'Looker Studio' will be utilized. In the next step, a mobile-based application will also be created for easy accessibility and usage.

CONCLUSION

In Summary this paper discussed the way of creating the Smart Government Rank and suggested the possible indicators which will help in order to calculate successfully Smart Government Score against any Countries based on the mentioned Indicators. Also, the detailed reasoning been given against every indicator for including it. Then Finally we have done the calcu-

lation against every country based on the data been fetched against every indicator form different data sources and ranked the countries based on the calculation. After it we have analyzed the countries ranking and found the out the possible observatory point which makes certain countries to do good on Smart Government and others to do bad as a Smart Government. So, based on the observations which is been mentioned in the Results section we can easily highlight the way forward for the countries wanted to do good as a Smart government they should understand and try to fix the problems which exist in their country and then the road to the Top performing Smart government will be easy to achieve for them.

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