Global Perspectives on e-Governance: From Government-Driven to Citizen-Centric Public Service Delivery

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ABSTRACT

E-government is more than a simple digitalization of government through the use of information communication technologies (ICTs). It is a whole-of-government transformation towards efficient, effective and citizen-centric service delivery. E-governance is moving one step further to establish the integral framework for transparent, accountable and trust-based decision-making processes for such service delivery. Although intrinsically related to each other, practice shows that successful e-government and e-governance are not synonymous, but complementary. Based on the first-hand data and findings of the United Nations E-government Survey of 2010, this paper demonstrates that three strategy clusters can bridge e-government and e-governance: Static Supply-based (SS); Dynamic Demand-driven (DD); and Interactive Integration (II) Strategies. It also maintains that although high-income countries fare better in building robust e-government systems, less well-off countries can make considerable strides in moving towards successful e-governance. Finally, the paper argues that strong and healthy e-government can hardly be sustained unless e-governance is strengthened.

Categories and Subject Descriptors

K6.1 [Project and People Management]: Strategic Information Systems Planning; J.1 [Administrative Data Processing]: Government

General Terms

Measurement, Performance, Design

Keywords

e-Government, e-Governance, Development Strategy

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1. INTRODUCTION

E-government and e-governance are the two sides of the same coin. Without government effectively using ICTs, one can hardly expect the citizen-state-private sector interaction to be transformed. Reciprocally, healthy e-government systems can flourish more easily in collaborative environments where PPPPs (public-private-people partnerships, defined by Singapore) are more than just window-dressing, but an everyday reality. Yet, the 2010 United Nations E-government Survey data [1] suggests that while e-government and e-governance are highly interrelated, if the strengthening of e-governance precedes the building of e-government systems, the latter is much more robust. The same data also shows that while strengthening e-government is easier for higher-income countries, it is still possible for all countries to advance their e-governance using slightly nuanced, albeit complementary e-strategies. When that happens, it is highly likely that e-government be enhanced ubiquitously in the long-run.

This paper describes these e-strategies. It starts with definitions of e-government and e-governance with particular focus on the mutually inclusive operationalization criteria used in the United Nations E-government Survey. Then, it presents a global comparative assessment of each criterion, which culminates in a threefold e-strategy cluster, which can potentially bridge e-government and e-governance more closely together. These e-strategy clusters are: *Static Supply-based* (SS); *Dynamic Demand-driven* (DD); and *Interactive Integration* (II) Strategies. The paper concludes that success in building e-government and e-governance requires more than technological sophistication and/or change management. It demands a shift in the mindset of public administration towards citizen-centric service delivery.

2. A SYMBIOTIC RELATIONSHIP: E-GOVERNMENT AND E-GOVERNANCE

Government is defined broadly as "a bureaucratic body instituted to rule a populace by right of authority" (Wright 1977: 379)[1] and specifically as "deputies elected to any party holding ministerial posts at any time during the life of a legislature" (Chang et al.

[1] Wright, Henry. "Recent Research on the Origins of the State," in Annual Review of Anthropology 6 (October 1977): 379-397

2010: 185)[2]. Governance, in turn, is simply the "manner in which power is exercised in the management of a country's economic and social resources" (Weiss 2000: 796)[3]. Governance includes, in addition to the government, all other relevant co-actors, such as the civil society, grassroots organizations, private sector and citizens at large.

When the "e" component is added to government and governance, technology becomes imbued with the social to ignite a continuous process of change management in state, society and their relationship with one another. Government organization is overhauled to revive and connect its constituent agencies and to create a connected government. The front-end service delivery, the back-end organizational structure and the institutional underpinnings stop working in silos. Instead, they become integral parts of all government action *towards* serving citizens *through* one-stop/single window shops and using a multi-channel service delivery approach. E-government, as such, is not meant to steer or to row, but to serve.[4]

E-government evolves within a framework of line-of-sight connectivity among all government activities/products/services, which are now no longer produced by government alone, but in cooperation with other stakeholders. In such context, inclusive participation and citizen engagement in the design, planning and production of personalized, customized and targeted service become paramount.

E-governance is the performance of the government in ensuring such a process of service delivery. It is often defined as the application of ICTs to government processes to optimize the delivery of services and to bring Simple, Moral, Accountable, Responsive and Transparent (SMART) governance and government (Singh and Prashar 2005).[5] Accordingly, the strongest candidate to link solid e-government with successful e-governance is citizen-centric service delivery, which is e-enabled "customized service" delivered by PPPPs as opposed to bureaucratic take-it or leave-it type of "universal service."[6]

The complementary relationship between e-government and e-governance becomes obvious when one considers the proxies used for each one of them in the annual United Nations E-government Surveys. There, the success of building e-government systems is assessed through:

1) e-infrastructure—how robust is the technological basis;[7]
2) e-literacy—how digitally literate the population is;[8]
3) e-service—how effective, inclusive and citizen-centric online public service is.[9]

In the same survey, the strength of e-governance is assessed through:

1) e-information—the quantity and quality of information provided by e-government;[10]
2) e-consultation—the reciprocal dialogue between governments and citizens;[11]
3) e-decision-making—the extent to which e-government includes citizens in policy-making processes at all

[2] Chang, Eric C.C., Miriam A. Golden, Seth J. Hill. "Legislative Malfeasance and Political Accountability," in World Politics 62, 2 (April 2010): 177-219.

[3] Weiss, Thomas G. "Governance, Good Governance and Global Governance: Conceptual and Actual Challenges," in Third World Quarterly 21, 5 (October 2000): 795-814.

[4] For additional, yet parallel definitions of e-government, see Anderson, Dennis and June Suh-Cho. "The Role of Public Service in Achieving the Millennium Development Goals" presented at Workshop 3: E-Government Development and Knowledge Management in Government of the United Nations Public Service Day and Awards Ceremony. United Nations Department of Economic and Social Affairs. Barcelona, Spain: 21-23 June 2010.

[5] Singh, Raj and Sanjeev Prashar. "An Andhra Odyssey: From Inline to Online Citizens," in Proceedings of the 3rd International Conference on E-Governance ICEG2005. Lahore, Pakistan, 2005: 109-118.

[6] For more, see Taylor, J.A., and A.M.B. Lips. "The Citizen in the Information Polity: Exposing the Limits of the E-government Paradigm," in Information Polity 13 (2008): 139-152.

[7] Collected by the International Telecommunications Union (ITU), it includes indicators on Internet usage, diffusion of personal computers, main telephone lines, mobile phone usage, fixed broadband subscribers, etc.

[8] Collected by the United Nations Educational, Scientific and Cultural Organization and supported, where necessary, with data from the United Nations Development Programme's Human Development Report, it combines two indicators: adult literacy rates, and combined primary, secondary and tertiary gross enrollment ratio.

[9] It is measured through four benchmarks, specifically on national governments' capacity to (i) provide basic information services online; (ii) use multimedia technology to interact with citizens; (iii) offer public services via the Internet and solicit feedback on matters of public interest; and (iv) connect public service functions and consult citizens regularly on public policy matters.

[10] It includes assessment on whether the national portal provides information on e-inclusiveness/participation, employment opportunities, and the presence/absence of citizen charters, service-level agreements, etc.

[11] It includes assessment of the quantity and quality of public consultation blogs, online surveys and polls, chat rooms and instant messaging, web logs, list servers and newsgroups, feedback forms, etc.

phases, including planning, design, implementation, monitoring and evaluation.[12]

Cross-fertilization among the above components of e-government and e-governance gives us the DD-SS-II e-strategy clusters. The clusters and their composites are the driving force of government transformation needed in the information era. The transformation includes structural and institutional underpinnings of what a government is and how it operates, including critical decisions on the allocation of human and financial resources. It also goes beyond to cover the skill-building and training of government officials and public employees towards citizen-centric mindset and attitude.

The first line of cross-juxtaposed criteria, **Static Supply-based (SS) strategies**, composed of *e-infrastructure*—the first essential layer of technology in building e-government, and *e-information*—also the first step in developing a country's e-governance, are the bricks and mortars of e-systems. Technology, such as telecommunications, broadband, open source software, is a necessary, yet an insufficient component of e-government. Display of clear and relevant information online is also a must to ensure transparency. Yet, like technology, putting government information online hardly generates e-government defined as citizen-centric public service delivery. Together, both technology and information are static and government-driven, hence fall short of ensuring a productive two-way communication with stakeholders.

If a given government inserts technology and uploads and updates relevant information online regarding its workings, services and products, while citizens are unaware or incapable of making use of it, e-government is then considered to have failed. There is, thus, a need for educating citizens on using the Internet and other ICT tools while making access available, easy and multifaceted. Mobile technology, Internet kiosks, vulnerable community enhancement programmes and centers are some examples of promoting e-literacy of populations.

Once mature, *e-literacy* can then transpose the initial SS strategies to the domain of the **Dynamic Demand-driven (DD) strategies**, given that the adequate *e-consultation* techniques, such as opinion polls, survey and questionnaires, and other feedback mechanisms accompany the transition. At this second critical juncture, e-transformation begins with a cautiously interactive government, which is now asking citizens' input *ex post*, while still leading the process.

The SS and DD strategies are blended together and upgraded to the third cluster of **Interactive Integration (II) strategies** with the dyad of *e-service* and *e-decision making*. E-service is more than offering public services seamlessly and in line with citizens' post-production/post-consumption feedback. It is about creating, and constantly improving and diversifying services *together with* those who are served. E-decision-making, therefore, refers to new and inclusive platforms of collaborative thinking, planning, implementing, monitoring and evaluating all governance-related issues. In such context, government is still in the driving seat, but now, it has acquired an empowering co-pilot: citizens who play the role of a GPS.

The three e-strategy clusters and their constituting proxies are shown in Figure 1.

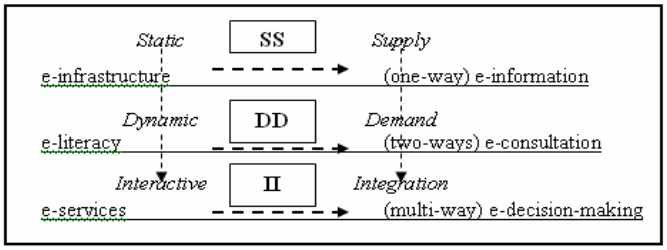


Figure 1. Linking e-Government with e-Governance

3. A GLOBAL COMPARATIVE ASSESSMENT ON E-GOVERNMENT AND E-GOVERNANCE

As shown by the above snapshot of reciprocity between e-government and e-governance, one would think that the high-achievers in either category would overlap. The results of the 2010 United Nations E-government Survey demonstrate otherwise. While the top twenty countries in the e-government development index are advanced industrialized countries, many countries among the top e-governance performers are middle-income countries. These results are shown in Table 1 below.

Table 1. Top 20 in E-government and E-governance

E–Government Development Index Top 20 Countries		E–Participation Index Top 20 Countries	
Country	*Index*	*Country*	*Index*
Republic of Korea	0.8785	Republic of Korea	1.0000
United States of America	0.8510	Australia	0.9143
Canada	0.8448	Spain	0.8286
UK and Northern Ireland	0.8147	New Zealand	0.7714
Netherlands	0.8097	UK and Northern Ireland	0.7714
Norway	0.8020	Japan	0.7571
Denmark	0.7872	United States	0.7571
Australia	0.7863	Canada	0.7286
Spain	0.7516	Estonia	0.6857
France	0.7510	Singapore	0.6857
Singapore	0.7476	Bahrain	0.6714
Sweden	0.7474	Malaysia	0.6571
Bahrain	0.7363	Denmark	0.6429
New Zealand	0.7311	Germany	0.6143
Germany	0.7309	France	0.6000
Belgium	0.7225	Netherlands	0.6000
Japan	0.7152	Belgium	0.5857
Switzerland	0.7136	Kazakhstan	0.5571
Finland	0.6967	Lithuania	0.5286
Estonia	0.6965	Slovenia	0.5143

According to Table 1, Lithuania, Kazakhstan and Malaysia, all middle-income countries, which are among the top e-governance performers. This means not only that they have made significant

[12] It includes assessment on the effectiveness of online discussion forums, archives of past discussions, government officials' responsiveness to query and comments, online petitions, etc.

progress in terms of e-information, e-consultation and e-decision-making but also that they have understood that e-transformation is about making all these processes and e-government as a whole citizen-centric. On the other hand, these countries have not made to the top twenty in the e-government development index, meaning that they still have progress to make in terms of technological and human capital and service delivery enhancement.[13] What can explain the higher success of these countries in e-governance? How can other developing countries simulate their experiences in building their own e-systems?

Two possible ways to solve this puzzle is by (i) undertaking an in-depth study of e-development processes in these and other developing countries, preferably with regional comparisons as to why their strategies have succeeded while their counterparts' have not; and/or by (ii) taking a closer look at the first-level statistics, i.e., how each one of the three e-strategy clusters (SS-DD-II) fares globally, and where Lithuania, Kazakhstan and Malaysia stand. While the scope of this paper precludes the first type of qualitative study, the second choice of a comparative analysis of descriptive statistics seems propitious. The following is such an analysis aiming to give a snapshot of global e-trends with focus on how developing countries can jump-start their e-development.

3.1 Cluster I: Static Supply-based Strategies (SS) of e-Infrastructure and e-Information

It was not long ago that e-government was equated with deployment of advanced technology in government.[14] Some referred to it as mere "virtualization of public administration" through a new managerial, or e-business, approach to government.[15] A standard recipe for e-government included the following steps of action: (i) Governments hired consultants to create a plethora of static websites for ministries and agencies. (ii) These websites, left unconnected to each other, were built around the specific function of the concerned government entity as opposed to citizen needs. (iii) Then, layers of technology were coated onto these government structures and functions. (iv) Finally, the first-time information upload online was not maintained current with regular updates.[16] This chain of actions demonstrated the necessity, and at the same time, the insufficiency of SS strategies in building robust and responsive e-government.

When the countries with the highest score in e-infrastructure (Internet usage, diffusion of personal computers, main telephone lines, mobile phone usage, fixed broadband subscribers) and in e-information (citizen charters, service-level agreements) are compared, we see that only a few countries with the most sophisticated technology make it to the top in both categories simultaneously. As shown in Table 2, these countries are Bahrain, Australia, Canada and Netherlands. The table also shows that the majority of top countries in e-information are developing countries—Argentina, Kazakhstan, Colombia, Mexico, Chili, to name a few.

These results show that the most sophisticated technology may not always be necessary for countries to improve their e-information to the public. Innovative ideas, committed leadership, resolve in implementation and the mentality change in public administration from quick technical fixes to organizational change are pivotal in improving e-systems and processes. The data also suggests that e-information and e-infrastructure work: Mobile technology in e-transformation e-systems.

Table 2. Static Supply-based Strategies

E-infrastructure

Rank	Country	Index value
1	Switzerland	0.7687
2	Netherlands	0.7666
3	Sweden	0.7522
4	United Kingdom	0.7164
5	Luxembourg	0.7138
6	Denmark	0.6988
7	Monaco	0.6961
8	Germany	0.6955
9	Norway	0.6830
10	Canada	0.6799
11	United States	0.6449
12	Iceland	0.6395
13	Republic of Korea	0.6390
14	Singapore	0.6386
15	Estonia	0.6273
16	Finland	0.6240
17	Australia	0.6011
18	France	0.5954
19	Bahrain	0.5855
20	Ireland	0.5739

To give an example, Kazakhstan used open data sources to create user-friendly websites in line with citizens' needs and concerns. The crisis-response website created by the national government in response to the recent global financial and economic crisis displayed interactive maps with indications on where investments were made along with detailed project descriptions and action plans. Making minimal use of technology, yet using innovative solutions with citizen concerns in mind, Kazakhstan had the second highest score worldwide in e-information in the UN Survey's 2010 rankings.

[13] We should keep in mind that successful e-governance also requires high e-government development. Lithuania is ranked in the 28th, Malaysia in the 32nd and Kazakhstan in the 46th place in e-government development index of the 2010 Survey.

[14] See Dovifat, Angela, Martin Bruggemeier and Klaus Lenk. "The Model of Micropolitical Arenas—A Framework to Understand the Innovation Process of E-government Projects," in Information Polity 12 (2007): 127-138.

[15] See Bekkers, Viktor. "E-government and the Emergence of Virtual Organizations in the Public Sector," in Information Polity 8 (2003): 89-101.

[16] Qian, Haiyan. Speech delivered at the International Conference on E-government and Administrative Simplification organized by the Organization for Economic Cooperation and Development-Korea and the Government of Brunei Darussalam: May 2010.

E-information

Country	Score (Max 8)	Ranking
Australia	8	1
Japan	7	2
Kazakhstan	7	2
Mexico	7	2
Republic of Korea	7	2
Argentina	6	6
Bahrain	6	6
Canada	6	6
Chile	6	6
Colombia	6	6
Kuwait	6	6
Libya	6	6
Netherlands	6	6
Spain	6	6
Albania	5	15
Belgium	5	15
Croatia	5	15
Egypt	5	15
Grenada	5	15
Mauritania	5	15
Mongolia	5	15
Nicaragua	5	15
Pakistan	5	15
Peru	5	15
Uruguay	5	15

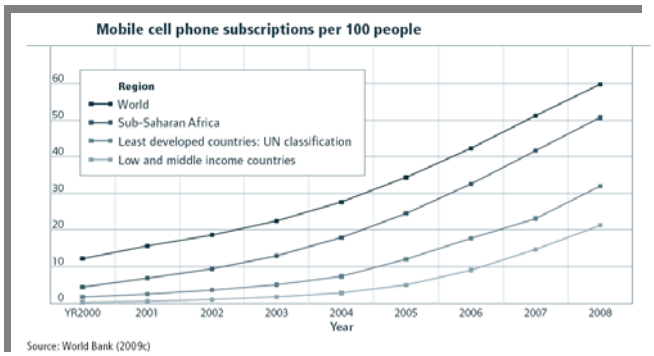
3.2 Cluster II: Dynamic Demand-driven Strategies (DD) of e-Literacy and e-Consultation

Training public administrators, government representatives and citizens on the myriad means of using ICTs are indispensable to successful e-government and e-governance. After all, information becomes valuable only so much as it is understood and properly interpreted by the interlocutor. Furthermore, if e-services offered by the government are to be adjusted in line with citizens' changing needs, citizens themselves must be consulted, to say the least. If not e-literate, people cannot be full participants in e-consultation. Governments today must ensure that their citizens, including the poor, the marginalized and the vulnerable, are e-literate.

Generally, lower cost access to education, health information and services, socially targeted resource management strategies and improved access to market opportunities are some of the policy options that governments consider in promoting e-literacy. Specifically, governments can consider building e-community centers and e-kiosks for citizens, particularly at remote parts of countries, providing extensive training for public administrators at all levels, creating e-policy committees to focus directly and exclusively on ICT training, and spreading mobile technology at affordable costs

Mobile phones are fast growing and highly promising transformational devices connecting governments with citizens, particularly in developing countries. They are also emerging and highly effective developmental tools. It has been calculated that a 10% increase in a developing country's mobile-phone penetration adds 0.6 percentage points to the economic growth rate.[17] Their spread and contributions to ICT-led development are particularly remarkable in the Least Developed Countries (LDCs). A mobile phone can dramatically improve living standards by saving wasted trips, providing information about crop prices, summoning medical help, and serving as a conduit to banking services.[18]

As shown in Figure 2 below, mobile cell phone subscriptions have jumped from almost null to over 50 percent of the population in Sub-Saharan Africa. Many of them have also started introducing mobile-services. In Rwanda, for instance, m-health services are delivered even to the remotest parts of the country. They include updated information on HIV/AIDS, monitoring of anti-retroviral drug administration, patient data management and care.



Support of mobile access

Feature	Number of countries	Percent
Site supports WAP/GPRS access	24	13
Site offers service to send alert messages to mobile phones	25	13
User can apply for registration or application by mobile phone	14	7
Users can pay registration fees, fines, etc. by mobile phone	17	4

Figure 2. Mobile Technology in e-Transformation

The 2010 United Nations E-government Survey data shows that many countries have undertaken to strengthen their e-literacy and e-consultation simultaneously. Below is Figure 3, which shows the Survey's top performers in DD strategies this year. lists are as follows:

[17] Leonard Waverman, chairman of the economics faculty at London Business School.

[18] Bloomberg Business Week. "Upwardly Mobile in Africa." September 2007.

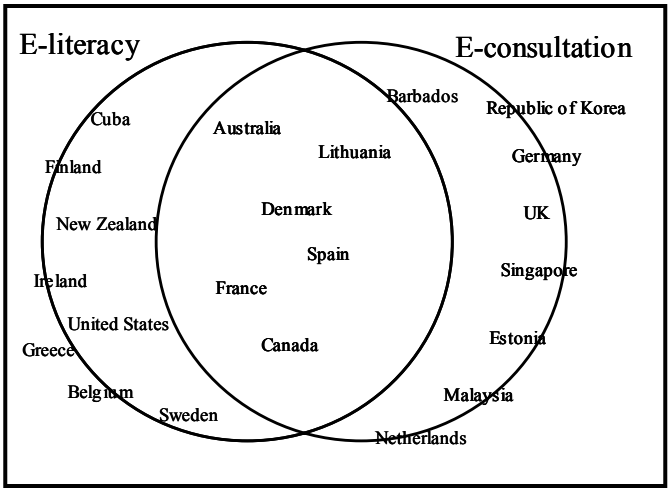


Figure 3. Dynamic Demand-driven Strategies

In contrast to SS, the DD strategies of e-literacy and e-consultation are mostly used by developed countries. This demonstrates that the enhancement of education and training as well as the development of e-consultation mechanisms are ongoing phenomena, and not a one-time undertaking of capacity building. Figure 3 also suggests that there are a few developing countries, which have made their way to the top at this level of analysis.

Lithuania is a case in point. Although Lithuania is placed among the lowest achievers in its own region of Northern Europe in terms of e-government development, it is ranked at the 19th place globally in terms of both its e-human capital development and its e-governance comprehensively. This suggests that Lithuania has used to the full the power of e-literacy component of e-government and the e-consultation techniques of e-governance to go full speed with its e-transformation.[19]

3.3 Cluster III: Interactive Integration Strategies (II) of e-Services and e-Decision-Making

The proper combination of SS and DD strategies can help countries make the leap from the *technical skeleton* of e-systems to the *social content* of e-transformation. Yet, to have longevity and the flexibility to adapt to today's fast changing financial, social, political and economic conditions, the key is not so much the proper blending of strategies as it is the adoption of a whole **new mindset**. The 2010 United Nations E-government Survey maintains that the new mindset consists of pursuing citizen-centric service delivery and decision-making, implementing and monitoring processes. It is about **Interactive Integration** for harnessing e-government and e-governance to modern government operations and services.

E-service delivery indicator of the United Nations E-government Survey assesses governments' capacity to (i) provide basic information services online; (ii) use multimedia technology to interact with citizens; (iii) offer public services via the Internet or mobile devices, and solicit feedback on matters of public interest; and to (iv) connect public service functions and consult citizens regularly on public policy matters. Understood as such, e-service delivery is intrinsically citizen-centric. E-decision-making goes a tad deeper and assesses the effectiveness of online discussion forums, archives of past discussions, government officials' responsiveness to query and comments, online petitions and voting, where applicable. There are many ways of connecting with citizens through e-service and e-decision-making. Some of these tools and mechanisms are summarized in Figure 4 below.

Connected presence

Feature	Number of countries	Percent
Single sign-on	31	16
Electronic identity management and authentication	33	17
One-stop shop	130	68
Information in machine readable format	74	39
Interaction with Head of State	61	32

Connecting to citizens

Feature	Number of countries	Percent
Citizens can request personal information about themselves	21	11
Users can tag, assess and rank content	7	4
Users can initiate proposals	16	8
Users can personalize the website	12	6
Government has committed to incorporating e-participation outcome in decision making	22	11

Web 2.0 tools used in e-decision-making

Feature	Number of countries	Percent
Online discussion forums	32	17
Archive of past discussion forums	27	14
Government officials respond to citizen input	16	8
Government officials moderate e-consultations	8	4
Online petitions	17	9
Online voting	17	9

Figure 4: Interactive Integration Strategies

The 2010 United Nations E-government Survey finds that middle-income countries in particular have made significant advances in their online service provision. This development, which comes despite high-income countries' strong e-infrastructures, is once again illustrative of the power of soft variables in e-transformation. Some examples of such soft variables are: (i)

[19] Barbados is another case where in-depth qualitative analysis of e-consultation development strategies would be beneficial.

visionary government leaders who are committed to the transformational role of ICTs in public governance and administration; (ii) private sector actors willing to invest in the field; (iii) comprehensive e-policies putting citizens at the centre of the public service, (iv) collaborative production of e-services through open source data, where non-state actors contribute to processes for providing better targeted, more innovative and lower cost products; and (v) better communication, coordination and integration among public agencies.

The Survey also finds that the Asia-Pacific region dominates in both the e-service and e-decision making categories. These results are well reflected in the overall success of e-governance in the region compared to the rest of the world. As shown in Figure 5 below, according to the findings of the United Nations E-government Survey, Asia is placed second after Europe in best e-governance in the world in 2010.

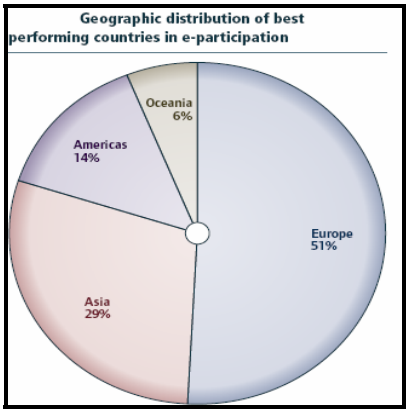


Figure 5: Regional Comparison of e-Governance

Figure 6 shows the close association between e-government and e-governance for the top Asian performers in 2010. It suggests that e-governance might have played a major role in strengthening e-government as most of the listed countries' 2010 e-governance scores were higher than their e-government scores except for Singapore. Singapore's higher e-government versus e-governance score can be explained by its recent focus on technology- and innovation-intensive e-government programmes following its early start with human capital intensive developmental strategies.[20] As for Kazakhstan and Malaysia, which have not made to the top 20 in e-government this year, we see a promising start in their high e-governance scores. There is, in other words, high likelihood that we see their e-government rankings significantly improve in the coming years. As for now, Malaysia and Kazakhstan are placed in the 32nd and 46th places, respectively in the e-government development index.

[20] See Yeo,Philip. Special Advisor for Economic Development, Office of the Prime Minister, Singapore. "Case Study on Singapore" presented on the occasion of the 9th Session of the Committee of Experts on Public Administration. New York: April 2010.

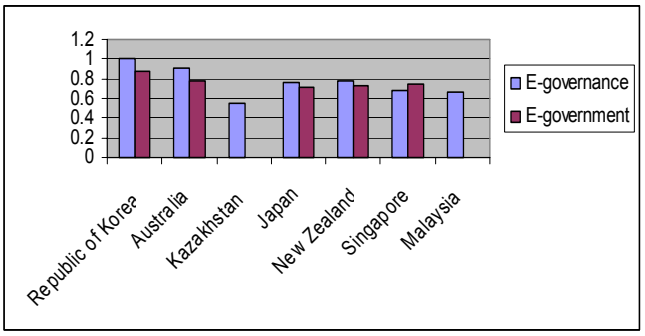


Figure 6: e-Performance of Top Asian Countries as of 2010

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Malaysia, as a top performer in Asia, has also made to the top 20 in the e-governance index. This is proof of the great weight of effective and citizen-centric e-service in contributing to the quality of e-governance. In recent years, Malaysia has chosen to focus more on building its citizen-centric e-services—although ranked in the 16th place in online service development and 6th in the overall e-government development index in the developing world, Malaysia did not make it to the top 20 in the e-decision making category. It occupied the 8th rank in the e-consultation category.

According to the United Nations Survey (both 2008 and 2010), China seems to have opted to prioritize its e-decision-making, and is placed among the top twenty globally in this highest sub-category of e-governance. In China, people can e-mail their governors or mayors directly at most areas. Officials as high as at the ministerial level have used e-chatting tools to connect with thousands of citizens virtually and listen to their concerns. That said, there is still considerable progress to make. A majority of citizens still use e-government in China to locate static information rather than actively interact with their government representatives. In 2009, 91 percent of e-services used by Chinese citizens were for searching information as opposed to 1 percent for sending emails to officials--sending complaints or asking for advice. China also needs to work on its e-literacy: 59 percent of non-users of Internet give the reason of lack of skills for not doing so.[21]

4. CONCLUSION

This paper has maintained that the three clusters of strategies, namely the Static Supply-based, Dynamic Demand-driven and the Interactive Integrative (SS-DD-II), can act as important bridge builders between e-government and e-governance. Based on the

[21] China Internet Network Information Center. The 25th Statistical Report on Internet Development in China. January 2010.

findings of the 2010 United Nations E-government Survey, it has shown first, that as of 2010, middle-income countries have made significant progress in terms of both e-government development and e-governance. This is particularly important since previous research associated progress in these spheres with economic wealth. Second, it has found that particularly Asian countries, both developed and developing, have made remarkable progress in e-governance, particularly in e-decision-making, as well as in e-government, particularly in online service delivery. Thirdly, it has corroborated that while technology is necessary to build strong e-government, it is not sufficient. Countries with limited means for sophisticated e-infrastructures can still aspire to achievements in e-governance and in e-government.

Last but not least, this paper has reiterated the finding of the United Nations E-government Survey that any initiative to build and strengthen e- government and e-governance must focus one hundred percent on making citizens the co-*creators* and the co-*owners* of public services--and not simply the recipients. This is going beyond supply chain management and resource planning in building e-government. It is making citizen participation the locus of public policy at all phases towards both effective governance and governments.

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