E-government of China: Performance, Problems and Prospects

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This paper is an effort to delineate the past achievements, present problems and future prospects of e-government in the People's Republic of China. In Part I, based on the flagship series sponsored by DPADM /DESA /UN --The United Nations e-Government Survey, China’s fine performance is summarized and illustrated. In Part II, various problems, latent or manifest, are discussed in terms of governmental mechanism and e-government application. Part III looks forward to a bright prospect for China’s e-government development, and tentatively anticipates some priorities that China may pursue.

I

China commenced its e-government endeavor around the turn of the century. Although a Joint Session for National Economic Informatization was established as early as in 1993, it is not until 1999 when the government online projects swept through the whole country that China kicked off its e-government construction in a real sense.

In 2000, the 15th Congress of the Communist Party of China (CPC) convened its 5th session; formally put forward a strategic policy of “bringing along China’s industrialization with informatization”. The next year witnessed the re-organization of the Leading Group for National Informatization, which ambitiously formulated its first nation-wide informatization program with much priority on e-government development. Still next, this policy was further emphasized during the 16th Congress of CPC in 2002, along with a set of specific goals and concrete measures. After that, the e-government development in China reached a fast track.

In less than a decade, China has made steady progress in its e-government construction. An over-all national e-government framework has taken shape, more
than 200 million citizens are now active online, the number of IP addresses reaches 135 million, “CN” domain names hit a record of 9 million, and, with the launch of the Central Government portal “www.gov.cn” in 2006, and the Tibetan Autonomous Regional Government portal “www.xizang.gov.cn” in 2007, governments at various level in China have all established their own websites.¹

These achievements have caught the admiration of the outside world, and found expression in many important publications, notably in the flagship series--the United Nations e-Government Survey sponsored by the Division of Public Administration and Development Management, Department of Economic and Social Affairs (DPADM/DESA), the United Nations.

Of all the e-government benchmarking efforts now in the vogue,² The United Nations e-Government Survey stands out as the most comprehensive, innovative, influential and enlightening. It contains four volumes as of 2008, namely, UN Global E-government Survey 2003, UN Global E-Government Survey 2004: Towards Access for Opportunity, UN Global E-Government Readiness Report 2005: From E-government to E-Inclusion, and, The United Nations e-Government Survey 2008: From e-Government to Connected Governance.³ These volumes have contributed tremendously to the steady growth of e-government efforts the world over, and helped much in bridging the digital divide. As Chief Haiyan Qian of the Knowledge Branch of DPADM put it when she was interviewed by a reporter from China Radio International, whereas ICT has created new opportunities to tackle socio-economic development, “it has also generated a new challenge for countries where technological capability and human resources are not sufficiently developed.” Hence, she remarked, this innovative survey was conducted “to help the developing countries to raise their capacity in this respect.”⁴

As the largest developing country among the 192 member countries in the United Nations, China’s fine performance in e-government naturally receives favorable feedbacks. In Table 1, which is adapted from the above series and in terms of citizen inclusion, infrastructure development and the absorption capacity of citizenry, we can see that China improves greatly in its overall performance in e-government readiness rankings through years 2003-2008. In Asia, Republic of Korea, Japan, Singapore and Malaysia take the lead and belong to the group of “first 35 countries,” and China belongs to the “next 35 countries,” but China has admirably moved its place from 74⁴th to 65⁴th within a short period of 5 years.

Table 1: China’s Overall Performance in E-Government Readiness Rankings

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>0.5017</td>
<td>65</td>
</tr>
<tr>
<td>2005</td>
<td>0.5078</td>
<td>57</td>
</tr>
<tr>
<td>2004</td>
<td>0.4356</td>
<td>67</td>
</tr>
<tr>
<td>2003</td>
<td>0.416</td>
<td>74</td>
</tr>
</tbody>
</table>
Table 2 shows the five stages of service delivery by selected Asian countries in the 2008 Survey. Here, utilization is defined as services provided as a percentage of the maximum services in a category. China has almost completed its “enhance” phase, and is obviously moving from the phase of “interactive” to that of “transactional” and “connected.” Its relatively high score in “connectedness” has much to do with its centralized power structure, in other words, its “connectedness” is more of a vertical than a “horizontal” nature.

Table 2: Scores by Stages, Selected Asian Countries 2008

<table>
<thead>
<tr>
<th>Country</th>
<th>Emerging</th>
<th>Enhance</th>
<th>Interactive</th>
<th>Transactional</th>
<th>Connected</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoKorea</td>
<td>100</td>
<td>93</td>
<td>76</td>
<td>50</td>
<td>59</td>
<td>73</td>
</tr>
<tr>
<td>Malaysia</td>
<td>100</td>
<td>84</td>
<td>65</td>
<td>35</td>
<td>26</td>
<td>60</td>
</tr>
<tr>
<td>Philippines</td>
<td>100</td>
<td>76</td>
<td>52</td>
<td>14</td>
<td>22</td>
<td>46</td>
</tr>
<tr>
<td>China</td>
<td>100</td>
<td>76</td>
<td>52</td>
<td>4</td>
<td>26</td>
<td>45</td>
</tr>
<tr>
<td>Mongolia</td>
<td>88</td>
<td>73</td>
<td>33</td>
<td>7</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>88</td>
<td>42</td>
<td>42</td>
<td>6</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Cambodia</td>
<td>63</td>
<td>23</td>
<td>21</td>
<td>7</td>
<td>4</td>
<td>18</td>
</tr>
</tbody>
</table>


When we come to the sphere of “e-participation,” meaning e-information, e-consultation and e-decision making, China has had an even better performance. As indicated in Table 3, together with Republic of Korea, Singapore, Japan and Viet Nam, China becomes one of the five Asian countries which join the “Top 35.” China has made “significant strides,” wrote the Survey 2008, China is among those “that publish findings/results of citizen opinions, including e-opinions, on websites.” “The national portal of China http://www.gov.cn/ supports citizen participation and conducts online polling…The site uses audio and video multimedia tools to disseminate information, policies and guidelines.”

Table 3: E-Participation Index 2008: Asian Countries in “Top 35”

<table>
<thead>
<tr>
<th>Country</th>
<th>2008 Index</th>
<th>2008 Ranking</th>
<th>2005 Ranking</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoKorea</td>
<td>0.9773</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.6364</td>
<td>10</td>
<td>2</td>
<td>-8</td>
</tr>
<tr>
<td>Japan</td>
<td>0.6136</td>
<td>11</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>0.5227</td>
<td>16</td>
<td>63</td>
<td>47</td>
</tr>
<tr>
<td>China</td>
<td>0.4773</td>
<td>20</td>
<td>50</td>
<td>30</td>
</tr>
</tbody>
</table>


Similarly, the rapid growth of infrastructure in China during this decade also catches the attention of the United Nations, as is well illustrated in Table 4. Such growth rates, says the Survey 2008, imply that before the end of this decade, China will have more
internet users within its borders than the United States. “This type of foundation of infrastructure and active users creates tremendous potential for the expansion of e-government models in the realms of online service delivery and more transformative dimensions of the Chinese public sector.”

### Table 4: Internet Usage and Population Statistics

<table>
<thead>
<tr>
<th>Year</th>
<th>Users</th>
<th>Population</th>
<th>Percentage</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>22,500,000</td>
<td>1,288,307,100</td>
<td>1.7 %</td>
<td>ITU</td>
</tr>
<tr>
<td>2003</td>
<td>69,000,000</td>
<td>1,288,307,100</td>
<td>5.4 %</td>
<td>CNNIC</td>
</tr>
<tr>
<td>2006</td>
<td>137,000,000</td>
<td>1,317,431,495</td>
<td>10.4 %</td>
<td>CNNIC</td>
</tr>
<tr>
<td>2007</td>
<td>162,000,000</td>
<td>1,317,431,495</td>
<td>12.3 %</td>
<td>CNNIC</td>
</tr>
</tbody>
</table>


In sum, China has made solid progress in embracing ICT technologies for e-government in the past years, and has won due respect all over the world. The e-government survey series by the United Nations recorded this phenomenon. It had this piece of comment in 2005: “China’s e-government policy and strategy is an example of a best practice. It has taken an incremental approach to e-government service delivery with concurrent advances in infrastructure and development and access outreach.”

### II

It is not peculiar of China that achievements are accompanied with problems in the process of development. Of these problems, some are manifest, long standing, deep rooted, getting more and more complicated, others are still latent, but will certainly loom large because they are connected to reforming government itself. In both cases, they are problems to be solved, rather than caused, in China’s e-government endeavor. In this sense, they are challenges to be accepted, difficulties to overcome, if China means to go a step further.

Indeed, problems present themselves in a variety of ways. For instance there are obvious digital gaps between eastern and western regions, urban and rural areas, man and woman; there is serious imbalance between IT input and output, between horizontal and vertical connectedness; there is contradiction rather than complement between front- and back office; and there are institutional overlapping, bureaucratic inefficiency, etc. For purpose of clarity in narration, and keeping in mind the ideal of “connected governance” as proposed by the recent UN e-government survey, this paper would discuss the problems China are now confronting in terms of governmental reform, and e-government application.
Problems in Terms of Reform

For historical reasons, China implemented “planned economy” for a long period of time and formulated a set of governing systems and mechanisms accordingly. There have been remarkable changes since 1978 when the policy of reform and opening-up was initiated, but to a certain extent, some deep-rooted problems remain unsolved. Improper institutional setups, unreasonable functional overlapping, complicated and redundant process of administrative approval, inefficient workflows and lack of transparency, to name just a few, these have become the bottlenecks for further development of e-government in China.

Institutional Setup

How to improve the institutional structure, and then strengthen the linkages among different government agencies at all level? This is a vital question China must answer. One illustration of this point is that China has established its e-government promotion agencies at various levels, but with different titles, functions and responsibilities. At the state level, the National Informatization Office is responsible to the State Council, while at the provincial or municipal level, the e-government promotion bodies with various names of “informatization office,” “informatization centers” or “e-government centers” etc., are held responsible to, respectively, the provincial or municipal administrative office, the commission of development and research, or the department of science and technology. Of these organizations, some belong to the local governments, others are only affiliated to the governments without any administrative function.

Management System

How to enable a better flow of resources and allocation of responsibilities to promote the delivery of public services? This is another challenge China must meet. For instance, apart from a lack of CIO system, there’s also an obvious lack of a unified information resource management system in China. Instead, data collecting are conducted by various sectors without coordination, data storage without standard, data management without supervision, and data delivering without efficiency. Decades of effort in data construction resulted in, unfortunately, a practice of “information monopoly” and the existence of a lot of “information isolated islands.” If it is agreed that the rich information resources are of public nature and should be shared by all, regardless of sectors or regions, then the question of who will take the lead and how to manage these resources must be answered.

Operational Mechanism

How to improve the internal workings of the public sector by reducing costs and transaction time? This is also a serious problem to be solved towards connected
governance. Indeed, there is an urgent need to establish a scientific, comprehensive e-government project performance assessment system, so as to trace and assess the outcome of the enormous investment in e-government projects every year, encourage innovation, and achieve maximum cost savings and improved service delivery.

**Problems in Terms of Application**

The essence of e-government lies in the use of ICT and its application by the government for the provision of information and public services to the people. The aim of e-government is to provide efficient government management of information to the citizen, better service delivery to citizens, and empowerment of the people through access to information and participation in public policy decision-making. It would be doubtful, after all, if any e-government initiatives boasted successful on the one hand, without bringing benefits to the society, profits to the business and better services to the general public on the other.

According to the hypothesis of “Five Stages of e-Government Evolution,” China is largely in the midst of Stages II-IV, i.e., it is beginning to move from the phase of “interactive” to that of “transactional” and “connected” as indicated in Table 2. Such being the case, the importance of application is bound to grow, especially when we consider China is a developing country with limited resources, and take into account this statement: “The real benefit of e-government lies not in the use of technology per se, but in its application to processes of transformation.”

The problems of application in China’s e-government development may be roughly described as follows:

**Construction vs. Application**

Too more emphasis has been laid on construction rather than on application, too more inputs have gone to hardware than to software. Therefore, there were inevitably duplicated and isolated e-government projects, blindly initiated at the outset, but became obsolete and abandoned afterwards. The reasons are complicated. An incorrect understanding of e-government and “performance in the term of office” on the part of the officials is only one of them.

**Full Usage of Data**

The long-standing contradiction between data-cornering and data-sharing seriously blocks the way towards “connected governance” which is a systematic approach to collection, reuse and sharing of data and information. E-application should cover more spheres both in width and in depth.
**Potential of Government Portals**

Statistics show that a vast majority of the thousands of government portals in China at present mainly engaged in information delivery and publicize. “Information browsing” accounted for a large percentage, consisting of “government messages” (77.5%) and “policy and legislation” (21.3%). “Online service” accounted for a very small percentage, with only 2.5% citizens ever conducted tax service or enterprise registration online. “Website interaction” seemed trivial by accounting for only 3%, including online consultation, suggestion and complaints, etc. So, there is a long way to go from this initial stage of “information delivering,” to a close combination of the government portals construction itself on the one hand, with the systematic back-office re-organization or integration of the government on the other.  

**The Upbringing of Independent IT Industry along with E-government Projects**

It is noticeable that the national e-government engineering contributes insufficient impetus to the development of independent IT industry in China. In 2007, for instance, national products accounted less then 40% in the catalog of hardware and software procurement of China’s major e-government projects. Moreover, these products mainly fell into the category of lower or medium end, in other words, the nuclear products, either hardware or software, are monopolized by foreign enterprises. In terms of amount of money, the independent hardware accounted only for 18%, of which networks accounted for 33%, storage equipment 3%, servers and computers 12%, security equipment 42%.  

**Alarming Figures**

The Chinese Academy of Social Sciences recently conducted an investigation on the e-government implementation and application in China, and revealed alarming facts. Based on 502 investigation returns filled in by the students of China National School of Administration, who came from 23 provinces, cities or autonomous regions throughout China, this investigation concludes that among all the completed e-government projects: Items for public service accounted for less than 3%, items for decision making less than 8%, investment in software less than 30%, the rate of hardware usage in some departments less than 5%! In spite that great efforts were made in the promotion of e-governments on the part of the governments at various level, and, many departments or sectors believed that “they had met the need of the society,” but the users gave an unfavorable feedback. In answering the question of “the relation between completed e-government projects and the actual needs of the users,” many users chose as their first answer “Items of application were lag behind and could not meet the need of enterprises and individual users.” Interestingly, more interviewees in the west regions than that of the east regions were of this piece of opinion, though infrastructure in the former were far less developed.
III

Needless to say, China’s efforts in exploring its own way of e-government development will continue. A decade’s practice has witnessed remarkable achievements, including hard-earned experiences and lessons as well, laying a good foundation for future prospects. As United Nations e-Government Readiness Surveys stated, any ICT-led strategy needs to take into account the level of development, access to infrastructure and the skill level in the country. In that sense, connected governance initiatives need to be placed within the context of the e-development goals of national governments.\textsuperscript{12}

A Favorable Environment

Fortunately, there has been a favorable change of environment. The important concept of “connected governance,” “knowledge management,” and “back office management” is looming large internationally. Founded on the notion that the organization’s most valuable resource is the knowledge of its people, knowledge management comes at the core of government tasks--inseparable from strategy, planning, consultation and implementation. By bringing issues of connected governance to the mainstream of development thinking, Mr. Guido Bertucci, Director of DPADM/DESA/UN, confidently declares that the UN e-Government Survey “intends to stimulate thinking and debate around an important issue: that e-government has great potential for public sector transformation.\textsuperscript{13}

Domestically, a series of new laws and regulations have already made and will continue to make their influence felt.\textsuperscript{14} For instance, the “Law of the People's Republic of China on Administrative Licenses,” which began its long drafting process ever from 1996, and finally got approved by the National People’s Congress in 2003, is generally regarded as a “self-revolution” by the Chinese government on ground that it demands substantive changes either in the way of governance or in the way of management. It is noteworthy that the 33\textsuperscript{rd} Article of this law explicitly requires the administrative bodies to enhance e-government affairs.

Also, the recently promulgated “Provisions of the People's Republic of China on the Disclosure of Government” poses a severe challenge as well as a golden opportunity for e-government development. From now on, the government is obliged to take the initiative in disclosing its large amount of administrative messages, moreover, the citizens and enterprises are, in their turn, entitled to ask the government to disclose any messages they need to know. According to the provisions, government at various levels must do better to manage their rich information resources, develop their respective disclosure catalogues, and make public information known to all on a regular, transparent basis. It is foreseeable that the government portals in China will shoulder more important responsibilities.
**A Clear-cut Policy Direction**

Above all, the recently convened 17th Congress of CPC laid much emphasis on the importance of “promoting scientific and democratic decision making” and “enhancing e-government and strengthening social administration and public service,” thus indicating a clear-cut policy direction.15

In a nutshell, this Congress will exert a perpetual influence on China’s e-government development as a whole, for it has reached a consensus regarding the importance of, and the innovative ways to approach, China’s institutional reform. First, the target of institutional reform is fixed on building a service-oriented government which is operated under legal framework, bearing social responsibilities, striving towards integration and efficiency. In other words, many innovative informatization systems and demand-driven e-government mechanisms will emerge very soon. Secondly, institutional reform will be implemented under the principle of coordination and mutual balance among decision making, executive and supervision bodies. That means many of the established e-government departments will have to adapt themselves to the relative reformed institutions. Thirdly, the on-going “big ministry reform,” often deemed as an integral part of political system reform in China, will inevitably make an impact on the mode of e-government systems available. The forthcoming adjustment of power relations in central or provincial government, in both vertical and horizontal dimensions, presents a great opportunity towards the noble goal of integrated and connected e-government in China.

Coincidently, while this paper is being written, a new ministry—the Ministry of Industry and Information—was just created. It is mandated to integrate related functions originally exercised by, respectively, the Commission of Development and Reform, the National Scientific Working Committee, the Ministry of Information Industry, and the State Infomatization Office. A unified leadership in e-government construction is now in vision.

**Priorities in the Near Future**

In the near future, it may well be anticipated that China’s e-government efforts will focus on 4 aspects. First, public service will increasingly become the top priority of governments at various level, “a unified, people-oriented front-office plus an integrated and interconnected back-office” will become the goal to be pursued. Secondly, more concerted efforts will go to the construction of information resources, including management systems, and internet culture which is also an important part of social formation. Thirdly, there will emerge a new mode for e-government to serve better China’s socio-economic development, an important manifestation is to promote the integration of e-government with e-commerce and e-community. Finally, towards demand-driven and favoring-all, China’s e-government will play a greater role in
promoting the scientific and democratic decision making, improving the policy supporting system in terms of information, enhancing transparency and civil engagement.

Notes:


6 Ibid., p.103.


