

# Characterizing E-Government in China

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## Abstract

*Although E-Government (E-G) is one public policy in China, it still has a long way to go in terms of diffusion across the country and interactive participation from citizens. It constitutes a double sided sword since it enhances the features that China needs to show to the world in international competitiveness and status, but also poses challenges to the Communist rule inasmuch as it has to be controlled. Therefore, E-G is both a political and a managerial issue: it is sensitive to the Chinese Communist Party but also leads to economical and administrative prosperity and efficiency. Some of the keys would be the development of the middle class, further penetration of the Internet, and more education about virtual tools in government issues and services.*

**Keywords:** *E-Government, China, Internet, ICTs*

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# Caracterizando el gobierno en línea de Chinal

## Resumen

*Aunque el “Gobierno en Línea” es una política pública en China, todavía tiene un largo camino por recorrer en términos de difusión a lo largo del país y de participación interactiva de los ciudadanos. El “Gobierno en Línea” constituye una espada de doble filo, ya que por un lado mejora las características que China necesita mostrar al mundo en cuanto a competitividad internacional y estatus, pero también constituye un reto para el régimen comunista pues debe ser controlada. Por lo tanto, el “Gobierno en Línea” es un asunto tanto administrativo como político: es sensible para el Partido Comunista Chino, pero al mismo tiempo lleva a una prosperidad y eficiencia tanto económica como administrativa. Algunas de las claves podrían estar en el desarrollo de la clase media, una mayor penetración de Internet y una mayor educación relacionada con herramientas virtuales en cuestiones y servicios gubernamentales.*

**Palabras clave:** *gobierno en línea, China, Internet, TIC*

# Caracterização do governo eletrônico na China

## Resumo

*Mesmo que o “Governo em linha” é uma política pública na China, ainda tem um longo caminho por recorrer em termos de difusão ao longo do país e de participação interativa dos cidadãos. O “Governo em linha” constitui uma espada de dois gumes, já que por um lado melhora as características que a China precisa mostrar ao mundo quanto a competitividade internacional e status, mas também constitui um reto para o regime comunista pois deve ser controlada. Portanto, o “Governo em linha” é um assunto tanto administrativo quanto político: é sensível para o Partido Comunista chinês, mas ao mesmo tempo leva a uma prosperidade e eficiência tanto econômica quanto administrativa. Algumas das chaves poderiam estar no desenvolvimento da classe média, uma maior penetração de internet e uma maior educação relacionada com ferramentas virtuais em questões e serviços governamentais.*

**Palavras chave:** *governo em linha, China, Intenet, TIC*

With the emergence of a “civil society” in China and its role in public administration, E-Government (E-G) constitutes a tool that is already helping and boosting new ways to manage the country. The implementation of Information and Communication Technologies (ICTs) in China is leading to an “administrative pluralism”, inasmuch as more agencies and organisms are participating in managerial issues and decision making processes. ICTs and E-G are having a positive impact in government issues: they improve transparency and efficiency in the country, and they are showing to the Chinese government all the benefits that come with the “informatization” and “virtualization” of procedures. Due to the advantages of the Internet, an online presence has become a good way for the Chinese government to improve its image, to introduce rational and transparent procedures and to develop online government resources, gradually improving the process of China’s institutional change.

However, the implementation of ICTs is also bringing complexity and contradictions between the desire to achieve prosperity (economically and socially speaking) and the control that the Chinese Communist Party (CCP) needs in order to maintain that prosperity. In other words, the CCP and the Internet shape and influence each other.

The Chinese government is aware of all these situations and in 1999 launched the Online Government Project (OGP), with the purpose of using ICTs to improve its structure and processes, overcome physical constraints and create an image of transparency, efficiency and new ways to provide services and participation channels to citizens. Xu and Astone give a comprehensive definition of E-G, taken from Salkever and Kharif:

E-Government is the use of ICTs by government agencies to transform relationships with citizens, business, and other branches of government. These technologies can serve a variety of purposes: better delivery of governmental services to citizens, improved interactions with business and industry, empowering citizens through access to information, and more efficient management of government. The resulting benefits include less corruption, increased transparency, greater convenience, revenue growth and/ or cost reductions. (2006, p. 1)

So far, the studies about of E-G in China are related mainly to the government control of the Internet and the development of China's ICTs infrastructure. Although academic production is growing, few documents talk about the impact of the Internet in Chinese government. Material from the first half of this decade tends to focus on the sociological impact of the Internet in Chinese population. The newer one has more statistical support and examples. However, they tend to focus on the impact on business, trade and economy, information policy, networking and improving bureaucratic procedures. This is the reason why this article wants to address the issue of what kind of development is getting E-Government in China regarding government issues.

In order to approach the subject, this document will first do an introduction to the E-G initiative in China, its actors and frameworks. Then it will mention the goals and positive effects of E-G along with the limitations and problems it faces nowadays. The article will finalize with some conclusions and thoughts centered on the apparent fact that E-G is both a managerial and political matter. With the general approach intended by this short document, the author tries to show that China is developing interesting options but still has work to do, and since the country is not a democracy (as conceived by western standards), it has to be analyzed in a special way.

### **How E-G Has Developed in China**

Probably the first thing to consider about E-G in China is that, like economic development and social stability, it is applied and developed under "Chinese characteristics", meaning that the state has a very prominent role in the diffusion and use of its key tool, internet access, and because of that, every planning process and mobilization of resources and people is watched carefully by the CCP. Nowadays, E-G is an official public policy in China, the already mentioned OGP, which was presided by the "Three Golden Projects".

Although the OGP was officially a reality in 1999, by the end of the 1980s there were some clear efforts to use computer software for technical "office" procedures in government agencies. By 1983, the

central government started to design an automatized management system for national economic information, leading to the creation, three years later, of the National Center for Economic Information. By the end of 1990, economic information centers were established in 700 counties, 150 major cities, 14 cities and 28 provinces, as well as management information systems in areas such as land information, agricultural economics, pricing, international trade and technology import (Yang & Xu, forthcoming, p. 8). And by 1991, about 806 major databases were developed.

### *The golden projects shine*

Since the internet was used mostly for scholarly purposes, in 1993 the Ministry of Education set up CERNET, the China Education and Research Network, in order to connect education institutions of all types. The Ministry of Post and Telecommunications did the same with the creation of CHINANET and the Ministry of Electronics Industry created a corporation to control the applications of ICTs. However, the biggest step towards a real E-G came that same year, with the initiation of the “Three Golden Projects”: Golden Bridge, Golden Customs and Golden Card, which are fully functional today.

The first one, Golden Bridge, is related to the National Public Data and Information Network, compatible with the Postal Data Network and connected with the intranets of all central government agencies and provincial governments. The second one, Golden Customs, refers to the National International Trade Economic Information Project, created to promote the exchange of electronic data between the foreign trade sector, banks and customs service. And the third one, Golden Card, is the Bank Credit Card Payment System, which supports currency circulation through electronic account transfer.

Between 1999 and 2001, some government websites were opened and the OGP was officially launched. According to the OGP plans, by 1999, 30 percent of ministries and provincial governments were supposed to have their respective websites and online tools and, by the end of 2000, 60 percent of the departments of central and provincial levels were supposed to be online. Basically, its main expectations

were focused on building up national and worldwide confidence of the government's presence and commitment to the Internet, laying the base for E-G expansion and speeding up the acceptance and use of the information technology (Yang & Xu, forthcoming, p. 11).

*The OGP goes further*

The implementation of the OGP is supposed to have three steps: Enabling Technologies, Information Sharing and Paperless Government (Lovelock & Ure, 2003, p. 2). The hype surrounding this project had such an impact that the year 2000 was declared the "Year of Government Online" in China. In 2001, according to the GOP expectations, 80 percent of state organizations were online, hoping that in the following years all agencies, including embassies and consulates abroad, should be networked.

Later on, the OGP Service Center was established to work on several points. First, its guidelines provide installation and consulting services to local governments. Second, its propaganda center presents events related to the project, organized by central or provincial governments. Third, its bulletins concentrate on the publication of jobs and other government advertisements. Fourth, it provides services for installation of virtual platforms, security measures and other consulting and personal training. Fifth, its information presents laws and regulations available to citizens and other data banks. And sixth, its network delivers information from the provincial and local governments (Xu & Astone, 2003, p. 4).

In December 2001, the *Announcement about the 2001-2005 Planning Guideline for Government Informatization* made by the State Council called for the creation of three networks: the Government Intranet Network, the Intergovernmental Resource Network and the Government-Sponsored Public Information Network, as well as the Electronic Information Resource Stockpile; all of them to connect every central government agency and local government office in top levels.

To continue the development of a more comprehensive and organized E-G platform in China, by 2002 a *Framework for E-Government*

*Standards* was established to organize six key aspects: overall standard, application, application support, information security, network infrastructure and management. And that same year, President Jiang Zemin stated in his Congress Report that E-G was part of the administrative reform agenda.

Before continuing with the process, the OGP Service Center organized a meeting in 2003 to show its results. According to its statistics, in three years the number of government websites surpassed 10,000, online business and online approvals were gradually more implemented, with most of the central government agencies having their own website. After this report, the “Golden Projects” were expanded to 11 “Sub Golden Projects”: Golden Sea, Golden Macro, Golden Tax, Golden Intelligence, Golden Enterprise, Golden Agriculture, Golden Health, Golden Information, Golden Housing, Golden Switch and Golden Cellular. And in order to develop these sub projects, the government expanded the OGP initiative into other specific areas: “Enterprise Online”, to encourage industries to adopt the full use of internet technologies and provide more transparency; and “Family Online”, to encourage the use of network resources by families across China and bring the population onto the new communication platform (Lovelock & Ure, 2003, p. 8).

#### *Statistics and institutionalization*

According to the State Council’s Informatization Office, by the end of 2005, there were 11,995 government websites (16.9 percent more than in 2004) and the number of government domain names “gov.cn” was of 23,752, an outstanding 45.5 percent more than in 2004. 81.1 percent of the governments at county level or above had their websites, 96.1 percent of central government agencies, 90.3 percent of the provincial agencies, 94.9 percent of the regional governments and 77.7 percent of the counties also had them (Yang & Xu, forthcoming, p. 15).

By the end of 2005, nine E-G documents about standardization, terminology, data elements, information exchange system and information catalogue system were published. But probably the most noticeable fact was the online operation of The Central People’s

Government of the People's Republic of China website ([www.gov.cn](http://www.gov.cn)) in 2006, which has simplified Chinese, traditional Chinese and English versions, and serves as the example to follow by all the other government websites.

Alongside the policy side, the institutional framework related to E-G has evolved significantly in order to organize the initiative and try to clarify functions and responsibilities. For that reason, the government established the State Informatization Leadership Team in 2001. And more recently, in 2008, the Ministry of Information Industry was created to regulate the manufacture of electronic and information products and demands, the communication and software industry, the growing ICT infrastructure, the expansion of ICT access, the pricing of ICTs, as well as the promotion of informatization of the national economy and social services, which include some E-G projects that strengthen the relationship between government and citizens. Some of the first successful cases came from the Department of Civil Affairs, which had a forum called "Attending to Civil Affairs in 2006" to develop social assistance systems and strengthen the social welfare system; and the city of Tianjin's Administrative Approval Service, created to do systematic follow up to online application procedures.

### **E-Government's achievements**

E-G success is linked to internet and technology penetration in China. According to the China Internet Network Information Center (CNNIC), the number of computers online in the country went from 8.9 million in 2000 to 59.4 million in 2006, the number of online users increased from 22.5 million to 137 million in the same period of time, and the number of Chinese websites increased by 21.4 percent from 2005, being 843.000 in total, and specifically 11.995 gov.cn domains. The United Nations E-Government Survey 2008, stated that by 2007, China already had 162 million internet users, a 12.3 percent of its total population. The survey projected that by 2008 more than 200 million Chinese citizens would be active online and the number of IP addresses would reach 135 million.<sup>1</sup>

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<sup>1</sup> See Wang (2008, pp. 2 and 4) and United Nations E-Government Survey (2008).

### *Successful cases and areas*

Statistics provided by the State Council's Informatization Office in 2006 show that E-G had a booming during this past decade, with more government websites, more public participation channels, more online procedures, more information sharing and coordination between agencies, more security in online procedures and the success of some of the golden projects such as Golden Tax and Golden Customs (Yang & Xu, forthcoming, p. 17). Websites like the one of the Ministry of Foreign Commerce (<http://english.mofcom.gov.cn/>) can be considered very successful cases because of the cooperation it shows between the ministry and other institutions, and even between the different internal departments of the ministry itself.

There are other successful areas, like the use of Intranet networks, which also shows a better coordination between official agencies and inside official agencies. One example is the National Population Information Network, which as part of the OGP, aims to provide police units nationwide with personal data on all citizens above the age of 16 and has helped in improving the success rate of specific issues like the recapturing of escaped prisoners.<sup>2</sup> Another successful case is the taxation system in China. According to Xu and Astone (2006, p. 7), 60 percent of county tax authorities are computerized and 75 percent of taxes are collected via internet.

In the infrastructural side, there is the example of the “Digital Beijing”, specifically the project “Zhongguancun Digital Park” ([www.zhongguancun.com.cn](http://www.zhongguancun.com.cn)) that serves as a hub to reorganize and simplify administrative procedures into a centralized system, which include government to business issues (G2B) like licenses, reports and statements; and government to citizens services (G2C). However, one detail makes this place and its website less than ideal: the lack of an English version (although the link exists, it is not functional yet). The city of Shanghai is also doing the same. By June 2009 it was announced that China Telecom and the Zhangjiang Group signed

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<sup>2</sup> See Xu and Astone (2006, p. 7), for a table indicating the total number of recaptured prisoners and the number of recaptured prisoners via intranet.

an official contract to build the first digital park of the city, located in Pudong area. This shows a spillover effect of the Digital Park initiative, which also has been developed in the cities of Xi'an, Chengdu, Jiaxing and Dalian.

Funding government websites was a big problem only four years ago, but today it seems to be gradually overcome by official efforts. Xu and Astone (2006, p. 5) state that the website [www.gov.cn](http://www.gov.cn) was partly supported by advertisements from foreign business companies, as well as Chinese ones, which was (and still is) coherent with the government's view of the economic development as the country's priority. However, a recent follow up to the website shows no sign of external advertisements from private companies, which means the financial sustainability of the website and the increasing domestic funding to E-G.

By examining the website [www.gov.cn](http://www.gov.cn), one can see that the links inside deliver basic information about data banks concerning public goods in the areas of economy, agriculture, transport and telecommunications, finance and banking, environment, industry, tourism and education, in addition to other facts such as politics, culture, science and technology, sports, religion and ethnic affairs. Besides this, more regulations and laws are gradually published on the site. Although all these facts constitute big steps for the Chinese government, it is evident the lack of deep statistics. The best thing the website does is redirecting the interested "net surfer" to the website of the National Bureau of Statistics of China ([www.stats.gov.cn](http://www.stats.gov.cn)).

The United Nations E-Government Surveys of 2008 and 2010 are probably the most comprehensive and influential tools about benchmarking E-G initiatives around the world. In terms of citizen inclusion, infrastructure development and absorption capacity of citizenry, the 2008 Survey showed that China was behind other Asian countries like Singapore, Korea, Japan and Malaysia, but that same document showed that China moved from the 74<sup>th</sup> place to the 65<sup>th</sup> in the E-G general ranking, in a period of five years (among the 192

countries analyzed in the survey) (Wang, 2008, p. 2; United Nations E-Government Survey, 2008, p. 32).

The United Nations Survey comes with a very clear group of definitions regarding E-G. Among them, probably the most pertinent one for this article is E-Participation, explained as the empowerment of citizens and their inclusion using online tools. The concept of E-Participation is formed by three components: E-Information, which is when governments use online tools to provide information that encourages and empowers citizen participation; E-Consultation, when governments use online tools like surveys to organize dialogues, get feedback input from citizens; and E-Decision Making, which is when governments are committed to empower citizens to get involved and take into account the citizens' opinions using online tools. The 2008 survey showed a great improvement in E-Participation, ranking China in the 20<sup>th</sup> place (tied with Bhutan and Austria), coming from the 50<sup>th</sup> in 2005, thanks to the use of online polling, citizen participation, multimedia tools and the dissemination of policies and guidelines mainly through the website [www.gov.cn](http://www.gov.cn).<sup>3</sup>

### *Adjusting to global trends: domestic reforms*

Since China wants to be at the same level of global leaders, the country is benefiting from the international trends of “connected governance”, “knowledge management” and “back office management”, being this last concept related to those areas that support front line delivery of issues related to finance, human resources, information technology, administrative support, legal services, marketing and communication. All of these trends are pushing China to rethink the way the country is managed, and getting the government to work on administrative reforms, reflected in various points. One is the creation of concrete entities like the Ministry of Industry and Information. And the other one is the promulgation of new laws and regulations that make procedures easier (like acquiring licenses) or more transparent (like disclosing governmental information).

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<sup>3</sup> For specific information about China's indexes in each category and the performance of other countries, check the tables made by Wang (2008, pp. 2-4), based on the UN E-Government Surveys 2003, 2004, 2005 and 2008.

Concrete examples of these administrative reforms can be seen in the Beijing Municipal Public Security Bureau (which has launched online ID applications for its residents and wants to integrate voice, data, video frequency and supervision systems to its network), the Shanghai Government website [www.shanghai.gov.cn](http://www.shanghai.gov.cn) (that offers the usual information alongside online services and consulting), and the Guangdong provincial social security information online system (Lovelock & Ure, 2003, p. 4).

Finally, there is the political will of reform shown by the Chinese Government, in events like the *17<sup>th</sup> Congress of the CCP*, where there was an emphasis on the importance of promoting scientific and democratic decision making, enhancing E-G and strengthening social administration and public service (Wang, 2008, p. 9). The *State Informatization Development Strategy (2006-2020)* can be considered another political example of the importance of E-G as a central strategy, which sets goals about infrastructure, innovation and optimization of ICTs, security, a more information-oriented economy and society, new industrialization models, policies, processing systems and diffusion among the public. The strategy is aimed specifically to improve public services, reinforce social management, strengthen comprehensive regulations and reinforce macroeconomic monitoring with the use of E-Government (Yang & Xu, forthcoming, pp. 35-36).

Concerning more citizen participation, public debate has also been benefited by the (cautious) impulse of online tools. The People's Daily newspaper website hosts the *Strong Nation Forum*, which serves as a space to exchange ideas and discuss them. Even though it constitutes a nice starting point for civil society and its online presence, People's Daily is the main government's means of communication. So, the actual opinions and discussions appearing in this virtual space could be conducted and not be "real enough" or truly representative of people's thinking. Nevertheless, it has to be credited as a concrete link between the people and the highest officials in charge. For example, on June 2008, Prime Minister Hu Jintao exchanged thoughts with ordinary citizens through this forum. This kind of episodes helps to

promote the use of internet between people and make citizens more aware of the existence of E-G tools.

The bottom line is that, since economic development and reform are arguably the cornerstones of CCP's legitimacy, Chinese E-G is very related to them, and most of E-G's efforts are focused on ICT infrastructure, technology, internet access demands, industry and economy information, since all of them help the country to be more competitive and get closer to developed global leaders. Yang and Xu state that E-G is designed to stimulate economic development and its impact is reflected in economic data, taking into account that "China's government websites are often financially supported (at least partially) by advertisements from foreign and domestic companies such as Microsoft, Cisco and IBM (and that) China's websites have relatively higher percentage of business-oriented links, (paying) less attention to enhancing citizenship than to disseminating information and responding to business needs" (Yang & Xu, forthcoming, p. 9).

### **Problems and limitations**

By looking at the dates and times of the proposals concerning E-G, the first thing noticeable is that they all are very new and just in a process of adjustment and trial. Concrete statistics about government efficiency, effectiveness, transparency and citizen participation are not available yet, only for certain specific dates, such as how many clicks had www.gov.cn the first day it went online and so on. Plus, E-G still reaches few people, considering that not all of the 338 million of Internet users identified by the CNNIC for 2009 know about E-G tools. Using CNNIC statistics from 2003, 2005 and 2006, Kaifeng and Xu state that probably 1 percent of the population has thorough knowledge of E-G. Specifically, the statistics show that 34 percent of the internet users do not know, never used or seldom used government websites (Yang & Xu, forthcoming, p. 22).

#### *Trial and error: organization and power*

Since the country seems to be finishing an "experimental" phase, the institutional organization needs more tuning and reforms. As Wang says "China has established its E-G promotion agencies at various

levels, but with different titles, functions and responsibilities” (2008, p. 6) and they all belong to different levels of government and have different administrative functions. This need for a better coordination and communication between government agencies is related to the need of a better flow of resources and allocation of responsibilities, reflected in the lack of a unified information resource management system in China (p. 6). Tasks are not clearly specified and with the appearance of the Ministry of Information Industry there might be an overlapping of functions, probably causing bureaucratic clashes and conflicts of power.

With the previous point comes the monopoly of information from the top leaders of the CCP and the hierarchical legacy of Chinese culture. Accessibility of information needed by E-Government implies giving up this monopoly. However, this shows a contradiction between some of the intentions of the government through E-G (like giving people more access to government procedures) and what really happens, since some high ranked officials do not want to give away a portion of their power over information.

Regarding service delivery, the United Nations E-Government Survey 2008 shows that there are five stages to achieve: emerging, enhance, interactive, transactional and connected. At the first one China got 100 percent, at the second it got 76 percent, at the third one 52 percent, at the fourth one only four percent and at the fifth one 26 percent. Even though the first two are considerably high, the weakest points are in the third and fourth ones, meaning that there is still a lot to do regarding actual connection between Government and citizens, and that implementation and application of E-G in China is not going the “ideal” way.

#### *Mistrust and difficulties to update websites*

This low connection between Government and citizens is proved by a domestic investigation conducted by the Chinese Academy of Social Sciences (CASS). Based on 502 surveys filled in by students of the China National School of Administration in 23 provinces, the investigation concluded that among all the completed E-G projects: items

for public service accounted less than 3 percent, items for decision making were less than 8 percent, investment in software was less than 30 percent and the rate of hardware usage in some departments was less than 5 percent. The investigation also showed that users generally gave negative reviews, saying that their needs were not covered (Wang, 2008, p. 7). The research also helped to demonstrate the mistrust that Chinese internet users still have towards online tools. For example, the presence of a contact e-mail address on a website did not necessarily mean that the government would respond quickly to any inquiries.

Looking at the Ministries websites, there is not uniformity in their development. Probably for security reasons, the Ministry of State Security does not have its own site (or at least it was not found online), the website for the Ministry of Housing and Urban-Rural Development is not accessible, and 13 of the 24 ministries websites did not have English versions, including ironically the Ministry of Industry and Information Technology. Other organizations directly under the State Council which deal with sensitive topics apparently do not have their own websites, like the State Administration of Religious Affairs. And 9 of these 16 organizations do not have English versions as well. Not to mention that 3 of the 4 administrative offices under the State Council lack English websites, including the Overseas Chinese Office and the Research Office.

This implies that it is still difficult to create and maintain websites for all the government agencies in the country, especially considering the size of the bureaucracy in China and the political constraints that they all face. Therefore the country seems to need a scientific and complete E-G project performance evaluation system to follow up the investment already made. This system should encourage innovation and reduce costs while trying to deliver good services (Wang, 2008, p. 6), which is not an easy task for any country. So, if websites are not updated and do not have versions in English, not only the Chinese population but also the foreigner who needs E-G services will not use online tools because they will simply not trust them and will take for granted that they are not useful.

*Improvement halted*

According to the United Nations E-Government Survey released in 2010 (which studies 192 countries again), China's world E-G development ranking fell from the 65<sup>th</sup> to the 72<sup>nd</sup> spot and logically its E-G index decreased as well: it went from 0.5017 in 2008 to 0.4700 in 2010. Although it has to be mentioned that the survey clearly states that this decreasing tendency seems to be global, inasmuch as it shows that the world average index fell from 0.4514 in 2008 to 0.4406 in 2010.

The 2010 survey also confirms that China is still not in the top 20 countries of E-Participation, a feature that showed great improvement between 2005 and 2008. The survey shows that the quality of E-participation websites in China is relatively low (of 45.61 percent), that websites also have a low level of E-consultation (of 39.9 percent) and a mediocre level of E-Information (of 37.50 percent). Amazingly, the E-Decision Making component shows a high score of 62.50 percent. This can be justified mainly because there seems to be a dual growing interest inside the country: one, the increasing awareness of Chinese "netizens" to participate in public affairs using online tools; and two, the notorious use that Chinese government officials do of some virtual channels like forums and chat sessions to get ideas and suggestions from the citizens.

It is probably the E-Decision Making item that helps China to be in the 32<sup>nd</sup> place of the E-Participation Index of the survey, unarguably the best performance and the best spot that the country has among all the indexes that are used in the Survey. In order to exemplify this successful feature, the survey mentions the case of several administrative rules that have been changed or eliminated after feedback obtained from "netizens", and the case of the State Bureau of Anti-Corruption, which has used online tools to use "netizens" input in their corruption investigations.

The numbers provided by the survey also put China way behind its neighbors. Not surprisingly, South Korea obtained the highest E-G development index value (0.8785) of the world, and more Asian

countries were on the top 20 of the list, including Singapore in the 11<sup>th</sup> place (0.7476), Bahrain in the 13<sup>th</sup> (0.7363) and Japan in the 17<sup>th</sup> (0.7152). Nonetheless, in the continental level, Asia occupies the middle position, located in third place with a 0.4424 index, being Europe the first one, with a 0.6227 index, and the Americas occupying the second place with a 0.4790 index.

The survey also shows that China's online service levels are very asymmetric as well, showing that there are some stages in its process of "virtualization" that are relatively developed but others not developed at all. The country has a good performance in emerging information services (with a score of 79 percent), rather mediocre features in enhanced information services (with a score of 34 percent) and connected services (with a score of 36 percent) and a worrying result concerning transactional services (with a very low score of 2 percent).

#### *Asymmetry in infrastructure*

In the infrastructure area, the development of ICTs in China shows a very high degree of inequality, which leads to regional differences and the "Digital Gap" between the eastern and western regions, urban and rural areas<sup>4</sup> and even between men and women.<sup>5</sup> CNNIC 2006 statistics show that in 2006, internet penetration rate increased from 13 percent to 15.7 percent in the east region, from 5.7 percent to 7.4 percent for the central region and from 6.0 percent to 7.4 percent for the west region. Comparing provinces, the highest internet usage happened mostly in the urban administrative regions of Beijing, Shanghai and Tianjin Municipalities, followed by Guangdong, Zhejiang and Fujian Provinces, and the areas with lowest rates were Guizhou, Tibet and Yunnan Provinces (Yang & Xu, forthcoming, p. 27).

This problem exists also between Mainland China and Hong Kong and Taiwan, areas that have developed attractive E-Government

<sup>4</sup> CNNIC 2006 statistics show that internet penetration is 6.5 higher in urban areas than in rural ones.

<sup>5</sup> According to the CNNIC, there is an unequal gender distribution of internet users. In 2000, 69.6 percent were male and 30.4 percent were female. And the situation in 2006 improved but not to complete balance: 58.3 percent male and 41.7 percent female.

tools from a long time ago and have created a good number of “netizens”. As Xu and Astone mention, “the reason for this lies not only in construction and content of websites but also in the various level of interest cybercitizens have in the Internet and the different degrees of infrastructure available to access the Internet” (2006, p. 7) that these special Chinese areas already have and more importantly, have encouraged to use.

The United Nations E-G 2010 Survey addresses this issue in an index called “Telecommunication Infrastructure”, composed by items like estimated internet users per 100 inhabitants, main fixed telephone lines per 100 inhabitants, mobile subscribers per 100 inhabitants, personal computers per 100 inhabitants and total fixed broadband per 100 inhabitants. Unfortunately, China does not show good results, occupying the 89<sup>th</sup> spot, just a bit above the mid range area. And it is surprising when this index is compared with the one showed in the 2008 Survey, where China was in the 36<sup>th</sup> place of the ranking.

### *The people factor*

There are two key points for the achievement of a better E-G application in China and they are related to human resources and human capital. The first one is the need for more technical and managerial training in E-G to government officials. And the second one is the need to popularize the easy and frequent use of computers and ICTs in a wider population, since still only few people can access online resources because of their level of education and income. Statistic research by the CNNIC in 2006 proves that internet penetration rates varies extremely between education groups: 84.8 percent of the people with superior education use internet, while 20.5 percent of the people with high school education does, and not surprisingly, just 1.8 percent of the people with education below high school use internet. Internet access is still less affordable in China for low income population in urban areas, but this situation is more dramatic in rural areas, and clearly Chinese internet users are mainly well educated middle class people.

This last item is linked to the “Generational Gap” between the younger generations of leaders, who use new technologies, and the elder ones, who still follow “conservative” approaches and processes. The CNNIC 2007 statistics show that the *internet penetration* rate is the highest in the 18-24 age group (28.6 percent), high in the 25-30 age group (17.1 percent), low in the 31-35 (10.1 percent), lower in the 36-40 age group (6.6 percent), and very low in the 41-50 age group (3.9 percent). Statistics from the years 2000-2006 also show that the most *internet users* are in the 18-24 age group, being the people below 18 years old and between 31 and 35 the next groups, fluctuating between 15 percent and 20 percent. The 36-40 and 41-50 age groups fluctuated between 5 and 9 percent during the same period of time.

In the United Nations E-G 2010 Survey, the people factor is represented in the Human Capital Index, composed by adult literacy rate and the combined gross enrolment ratio for primary, secondary and tertiary schools. China’s performance is even lower than in the Infrastructure Index, ranking in the 98<sup>th</sup> place and showing the deficiencies the country has in education coverage and quality, plus the disparity in the level of income among its inhabitants.

### *Shape versus content*

Most analysts agree that many government websites do not provide online services or participation opportunities because less attention is given to government-citizen relationship, transparency and inter-governmental coordination. Basically what can be found and done in Chinese government websites is mere “information browsing”, based on “government messages” (77.5 percent) and “policy and legislation” (21.3 percent). Actual interaction, consisting of online consultation, suggestions and complaints, only sum 3 percent of the use of government websites (Wang, 2008, p. 7). These websites are criticized to offer “good” and “biased” documents and few reports about mistakes and challenges. In a research made by Lollar, most of the 29 provincial and metropolitan websites analyzed had service guidelines (to get marriage licenses, passports, birth certificates, car registrations, driver’s licenses and medical and life insurances) but actually only five had few executable services, being these the

official websites of the governments of Beijing, Shanghai, Tianjin, Guangdong and Hebei (Lollar, X. L, 2006).

British scholars Ian Holiday and Yep Ray developed in 2004 a survey to 616 Chinese central, provincial and local government websites. Their research showed that these websites offered things such as mission statement, list of legal responsibilities, supervised departments, list of divisions, press releases, news, and list of publications. However, very few provided options to download PDF files (2 percent), order publications online (1 percent), email named officials (9 percent), updates (6 percent), current activities (29 percent), annual reports (9 percent), briefings (11 percent) or chat rooms (5 percent).<sup>6</sup>

In the study made by Lollar (2006), the results show a decent improvement but not a total generalization of the usage of online tools to bring people closer to their governments. 72 percent of the sites had governor's o mayor's mail boxes, 27.5 percent had chat rooms, 37.9 percent had government hotlines, 44.8 percent had online surveys and 48.2 percent had English or minority language versions (p. 38).

Regarding multimedia features and transparency, Lollar examined the same 29 provincial and metropolis government websites. In the multimedia area, the study found out that most of them did not incorporate audio or video clips and that only Shanghai Municipality, Shanxi Province and Guangxi Province had these multimedia features (Lollar, 2006, pp. 33-37) In the transparency and openness aspects, Lollar's study used five indicators: contract bidding information, public employment information, officially approved price of public goods and services, grievance boxes and accusation boxes. The results were that 41 percent of the websites offered information for the first indicator, 10 percent for the second one, 27 percent for the third one, 20 percent had grievance boxes and 41.3 percent had accusation boxes; showing an overall mediocre performance.<sup>7</sup>

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<sup>6</sup> More data and similar researches by other scholars are included in Yang and Xu (forthcoming, pp. 19-22).

<sup>7</sup> Check Lollar (2006) for detailed information about the provinces and cities analyzed and a full look at statistic tables.

*Political control and supervision*

Probably the real question is that Chinese government is concerned about the consequences of the use of these tools, because it cannot be completely predicted the extent of their impact if website interaction is applied fully in the country. This is the main reason why the CCP controls the Internet. The dilemma is clear since the CCP knows that the Internet can help China's reform and modernization, but also is aware of the threat that the Internet poses to political stability. China wants a balance between information about economic development and the security that internal political stability needs. The country seems to promote the growth of internet but applies censorship and control to online content and the political use of ICTs, in order to "manage" what the people know and prevent any information that is counterproductive or damaging to social harmony (being "harmony" a key cultural idea for Chinese government and Chinese population).

This topic is very complex not only because of the government measures but because of Chinese self censorship (a feature that also has cultural roots). Chinese people are used to control themselves; they know what is and what is not allowed. This is proved with the fact that more than 100 internet executives (both Chinese and foreigners) signed a voluntary self-censorship pact in 2002 to revise and remove information "harmful to state security or social stability". It seems that topics such as market growth, urbanization and technology get more E-tools and online access than political freedom. In their research, Kaifeng and Xu have a very precise way to show this dilemma, stating that E-G with Chinese characteristics would have three main purposes: accelerate administrative reform, promote economic development and, more relevant for the topic of this article, increasing the supervising capability of the government (Yang & Xu, forthcoming, p. 6). E-G is a way to let people participate but also a way to oversee that same population: who speaks, what is said, when it is said. For this purpose exists the controversial Golden Shield Project, better known as the Great Firewall, which blocks access to forbidden sites and proxy servers and filters the content of accessible sites and e-mail.

To finalize this section, it would not be objective to omit that Chinese officials actually recognize three main problems concerning the application of E-G in China: the first one, a weak interaction between government and citizens; the second one, the limitation in intra-government information sharing; and finally, the low utilization and reputation that government websites still have (Yang & Xu, forthcoming, p. 14). Not to mention that there are still some issues related to trust in online procedures. Apparently for Chinese population, privacy needs to be strengthened in order to assure that information goes safely and correctly. Chinese government also has the same concern, since secret information exchanged via Intranets and internet connections between agencies needs to be more secured.

## Conclusions

Internet penetration was less than two percent in 2002 (Xu & Astone, 2006, p. 8), but the development of ICT infrastructure during this past decade has made it easier for the government to develop attractive options, and easier for the citizens (in urban areas specifically) to get internet access. The OGP initiative has improved transparency from the government and interest from citizens. And with new cyberspaces like forums, chats, direct e-mailing and bulletin boards (BBS), E-G has started to offer new opportunities for engaging people in political activities. However, China is still a long way from a proper service and citizen-oriented E-G.

It seems that there is more emphasis in construction than in application and deepening. The number of government websites and the amount of information has increased but the real successful cases are limited and the websites are mostly informational and not service related or interactive. Most of the websites give “biased” information and not efficient executable services. There are also two facts that have to be taken into consideration. One, there is no perfect website yet, inasmuch as some government websites have a group of nice features but lack of other important ones. And two, a still small population uses E-G today, mainly urban and middle class citizens who have a certain degree of education and a relatively good level of income.

One of the “Chinese characteristics” of E-G is that although it promotes transparency and technical legitimacy, it should not be considered as a path to complete democracy. The Chinese Government and State still have prominent roles in the diffusion of internet access and its use, whether it is commercial or political. As Xu and Astone (2006) say “A country can, for a certain period, have them without necessarily having to gain moral legitimacy or become democratic [...] the internet will help the Party to reduce tensions and will make surveillance over subordinate agencies possible. Also, the emergence of a digital world in China will enhance the political bureaucracy of the government” (p. 9). This is a clear sign that E-Government is both a managerial and political issue, because it seems to be inevitable that the technical legitimacy that comes with E-G tools benefits democratization at some point, so E-G and Internet in general still have to be controlled in order to keep harmony.

The main challenges that China faces regarding E-G so far could be: the creation of a nationwide, more public service and citizen oriented model; the enhancement of its ICTs; the building of better managerial and information systems; the encouragement to use Internet and get use to its “culture” in order to reduce all the “gaps”; the better coordination between government agencies related to E-G; the need for more and real information sharing; the need for more interaction among different E-G systems; the establishment of a clearer legal framework and the establishment of a real assessment system.

It is important to remember that the main driver of China in every aspect, including the development of a virtual network, is not government institutions *per se*, but economic prosperity. So, all the political rights and freedoms that can rise from the penetration of the Internet and the use of E-G tools are in second place to economic growth. E-G serves China’s socio-economic development. And the evolution of E-G in China seems to depend on the administrative reforms on the first place, and the political one on the second place.

Internet has promoted the flow of information, more sources of information and the interest of citizens in information. Cyberspace

is a good nest for the development of civil society and the maturing of the growing Chinese middle class. Social groups are able to use the Internet and are trying to influence the government, but these efforts are not collective and strong enough in China and a politically autonomous civil society has not surfaced yet.

It remains very clear in China that economic growth does not go hand to hand with political liberalization. But the evolution of these “Chinese characteristics” can help create a new country. Will this model be sustainable in the future? Will the online tools back fire the government’s intention to keep control, taking into account that the society is getting richer and a new civil society / middle class is on its way to develop? These topics can be discussed in further papers and interdisciplinary work.

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