

Towards Developing a Comprehensive Regime for Personal Information Protection in Networked Chinese Public Sectors

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Abstract

With the increasing sharing and reuse of personal information resources for better public services, the effective protection and management of personal information as organizational and individual assets as well as social resources is becoming more and more important in networked Chinese public sectors. Existing studies of personal information protection in China is mainly conducted from the legal perspective with a focus on the development of appropriate legislations and policies at the national level. There is little research on how specific legislations and policies can actually be implemented in an effective manner and what impacts such legislations and policies have on individuals, organizations and the society. To adequately address this issue, this study investigates the legal requirements for personal information protection based on the relevant laws, regulations and standards in China. It proposes a comprehensive regime for personal information protection in the networked public sectors in China. Such a regime takes the advantages of existing discipline-based approaches, legal requirements and control mechanisms for personal information protection. It can be used to facilitate the provision of public services in the networked Chinese public sectors through the adequate protection of personal information and the effective management of personal information.

Key words: personal information protection, public sector, networked environment

1. Introduction

Much research has been done in China on personal information protection. Such research is mainly conducted from the legal perspective with a focus on the development of appropriate legislations and policies for personal information protection at the national level in existing Chinese literature^{1,2,3}. There is little research on how specific legislations and policies can actually be implemented in an effective manner and what impacts such legislations and policies have on individuals, organizations and the society. As a result, there is an increasing demand for developing a comprehensive regime to adequately guide the effective implementation of various personal information protection legislations and policies at an organizational level in order to effectively protect personal information in today's digitalized environment^{4,5}.

This study proposes a comprehensive regime for protecting personal information in networked

Chinese public sectors. Having taken a multidisciplinary perspective for studying personal information protection, the study identifies the risk control demand in networked public services, the participatory legal regime demand in conformity with laws, and the integrative administrative regime demand for networked services in the public sector. With the adoption of a multi-methods approach including literature review and document analysis, this study investigates the perspectives, legal requirements and control mechanisms for personal information protection in China. Such an investigation leads to the identification of the legal requirements for personal information protection based on the relevant laws, regulations and standards in China. As a result, an integrated framework for personal information protection is developed for the public sector in China.

2. Demands for Personal Information Protection in networked Chinese Public Sectors

The enhancement of the capacity for providing quality information services in recent years in China is highlighted in various national plans^{6,7,8,9} for better public services to citizens. The sharing and reuse of personal information resources including personal information collected, processed and used by government bodies across departments, professional associations and regions is encouraged for the optimized allocation of public goods, the development of collaborative businesses, good governance and social management innovation, faster, easier and convenient one-stop public services. This leads to an increasing recognition of the importance of adequately protecting personal information for their shared use in conformity with the laws, regulations and policies in a networked environment.

There are few action plans and management mechanisms for the protection of personal information throughout the sharing and reuse of personal information. To adequately protect personal information, there is a demand for the risk control of personal information along the lifecycle of personal information throughout the process of collection, processing, storage and access in networked public services. Table 1 presents an overview of the demand for the risk control of personal information in various national plans in China.

Table 1 Demands for risk controls of personal information in national plans

Name of national plan	Purpose of information sharing and reuse	Risk control demands for personal information protection
The Twelfth Five Year Plan of National E-government , 2012	Social management innovation, collaborative business	Connected processes, systems and public services, benefit to people
Opinions on Promotion Information Consumption of China, 2013	Information consumption, new market and economy	Enhance personal information protection and information security to build a secured, trusted and well-organized information consumption market environment

Notice of Work Relevant to Fostering Implementation of Information Services Project Benefit to People, 2014	One stop public service, enhancement of capacity of information services and public service benefit to people	Information resources integration and sharing for collaborative business, supervision and services across different administrative levels and departments
National New Types of City and Town Planning, 2014	New types of information services, promote IT applications in urban planning management, intelligence of infrastructure, easier public service, modernization of industry development and refined social governance	Government information sharing and collaborative business across departments, professional fields and regions

An investigation of the laws which have concerns about protecting personal information from the most comprehensive Chinese legislation and regulation database (pkulaw.cn) shows that there are 29 laws relevant in China. Table 2 shows an overview of the legal requirements for personal information protection through the processes of personal information management along the lifecycle of personal information with respect to (1) collection (8 items), (2) registration (1 item), (3) security and confidentiality (26 items), (4) access and sharing (3 items), (5) exceptions to access and sharing (26), (6) disposition and custody (2 items), and (7) penalties (18).

There are disparate and separated approaches to personal information protection in China according to different laws. This is undesirable in today's dynamic and networked environment for providing citizens with quality public services. There is a need for developing a collaborative legal regime to integrate administrative systems, technology measures and different ways of penalty controls to security and confidentiality of personal information that can provide a holistic approach to adequately protect personal information. Such a comprehensive regime can cover all the processes and all the activities of information resources management along the lifecycle of personal information resources in conformity with existing laws.

Table 2 Legal requirements for personal information protection and processes of information resources management

Information Resources Management Processes	Legal requirements	Number of laws
Collection	Collection by fair and lawful means ;	8

	collection should be limited for specified business functions and law purpose; consent of the data subject.	
Registration	Lawful procedure of registration	1
Security and confidentiality	Professional duty; appropriate security safeguards and classified levels of security controls; authorization of access.	26
Access and sharing	Lawful procedure in accessing personal information; nondisclosure of personal information in access and sharing; consent of the information subject for lawful and functional use.	3
Exceptions to access and sharing	Disclosure, sell, and unlawful providing personal information are not allowed.	26
Disposition and custody	Data should be processed fairly and lawfully; security protection of personal information; personal information retained only to fulfill the stated purpose. Irrelevant information needs to be securely destroyed.	2
Penalty	Order to correct; pecuniary penalty; administrative sanction; criminal punishment.	19

An investigation of the laws, regulations and policies relevant to personal information protection specific to a networked environment from the pkulaw.cn shows that there are no specific laws available with a special regard to the networked environment. Four relevant regulations and policies^{10,11,12,13} can be found in this regard.

The importance of protecting personal information in networked public services is getting increasingly recognized in China in recent years. There are many regulations and policies that are designed for business and industry sectors, network services providers, relevant enterprise units, manufacturers and working staffs in China. Table 3 provides an overview of the regulations and policies related to the protection of personal information in the provision of networked public services. The public sector, however, is inadequately covered under such regulations and policies. This shows that there is a demand for the development of a participatory regime for personal information protection to include networked Chinese public sectors for the provision of networked public services.

Table 3 Regulations and policies concerned with personal information protection for networked services

Name of regulations and policies	To whom and where	Types of personal information for protection
Decision on the Standing Committee of the National People's Congress on Strengthening Information Protection on Networks, 2012	Network service providers, other relevant enterprises units and staff	Citizen's electronic personal information
Provisions on Protecting the Personal Information of Telecommunications and Internet Users, 2013	Telecommunication services managers and internet information services providers	Users personal information
Notice of the Ministry of Industry and Information Technology on Strengthening the Network Access Management of Mobile Intelligent Terminals, 2013	Mobile intelligent terminals production enterprises	Users personal information
Administrative Measures for On line Trading, 2014	Network products managers, relevant service managers and the work staff	Consumer's personal information

3. A comprehensive regime for personal information protection

There are five disciplines involved in the personal information protection in China including law^{14,15,16}, economics^{17,18}, sociology^{19,20}, information technology^{21,22,23}, and information resources management^{24,25} as shown in Table 3. In different discipline, why and how personal information should be protected is different for different concerns. To adequately protect personal information, there is a need to develop an integrated framework which can make use of the advantages that individual discipline-based approaches offer in the networked environment.

A meta-synthetic analysis of the applications and the scope of personal information protection under different disciplines reflect the multi-dimensional levels of protection and management controls including national, professional or industrial, societal, systems and services levels. These different levels of protection and management controls are complementary with each other as a comprehensive organic whole. Table 4 presents an overview of the discipline-based analysis of personal information protection with respect to the why and how questions in the Chinese literature.

Table 4 Discipline-based analysis of personal information protection

Disciplinary perceptions	Disciplinary concerns about protection (why)	Disciplinary approaches to protection (how)	Levels of protection concerns	Sources
Law	Protect privacy right,	legislation for protection	National	Zhou, 2006

	respect personality and human dignity.	of privacy right, right to be informed, tort, etc.		Kong, 2009 Shi, 2012
Economics	From business perspective, customer's personal information are important strategic asset of business. From user's perspective, consent of access to personal information needs a balance between information leak and the economic benefits from the services.	code of professional society, industry best practice, protection of customer's asset, balance between property rights and the civil rights	Professional or Industrial	Wu, 2007 Li, 2009
Sociology	Maintain social order to protect human dignity and civil rights and to avoid misconduct and negative impacts. Behavior of information collecting, storage and access should be in conformity with moral rights and ethics norms as well as code of conduct. Balance of easy access and use of personal information and the privacy protection on line.	awareness of obligations for personal information protection and the ethics.	Societal	Jing,2010; Zhou, 2013
Information technology	Internet provide convenience and new opportunities of creating new services and new products through access to personal information and the same time bring challenges to security of services and products. For economics and emerging technology benefits.	security management, IT artifacts for protection or control of information privacy, protocols, IP password, real-name authentication ,etc.	Systems	Tao, 2007 Xia, Wang, Zhou, 2007; Ding and Ding, 2012
Information resources management	Avoid leak and violation of personal information that bring harms to mind and interests, for public interests, public	entire life control of personal information through collection, storage and access, Collaborative regime	Services	Ji, 2011; Wu, Y.,2014

	administration, and national security.	between providers, developers and information subject	services system and	
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There are four polices and one standard as shown in Table 5 that provide three directional controls for personal information protection in networked services in China. The three controls include (1) the risk control by classification of personal information into personal general information and sensitive information; (2) the security control by classification of personal information into electronic personal identity information and electronic personal privacy information; (3) the user control by classification of personal information into user identifiable information and user information. Though the applications of polices and standards are specific to the business and industry sectors, they are universal to networked services including networked public services, which have broader implications to networked public sectors.

Table 5 Control methods for personal information protection

Types of personal information protection control methods	Methods for personal information protection control	Sources
Risk control	Classification of personal information into two categories for different levels of control: (1) General information: personal information that are not sensitive information (2) Personal sensitive information: personal information that can bring negative impacts to identifiable information subject once it is leaked or revised, such as identification card number, telephone number, nationality, political attitude, religions, DNA, fingerprint, etc.	Personal Information Protection Guidelines for Public and Commercial Service Information System of Information Security Technology, 2012
Security control	Identification of electronic information that can identify personal identity and privacy for security control.	Decision on Strengthening the Network Information Protection, 2012
User control	Identification of user's and consumer's personal information in the processes of the provision of internet services for security control, such as user name, birth date, identification card number, address, telephone number, account number, password, and other	Provisions on Protecting the Personal Information of Telecommunications and Internet Users, 2013;

	information that combined together to identify users and consumers, their time and place of access of the services.	Administrative Measures for On line Trading, 2014
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Converging the above multi-disciplinary perceptions and multi-dimensional levels of personal information protection controls as shown in Table 4 with the multi-directional control methods from polices and standards in Table 5, Figure 1 presents a participatory governance framework to cover various methods of adequate controls as an integrative new whole for the protection of personal information.

The proposed framework takes advantages of diversified personal information protection approaches as a collaborative and comprehensive regime. Five disciplinary approaches are integrated as complementary: (1) the protection control as legal requirements from legislation under perception of law; (2) the security control as moral rights and ethics from social obligations under perception of sociology; (3) the risk control as benefits for both customers and business from professional code under perception of economics; (4) the user control as properties of products from information systems under perception of information technology; (5) the protection and management control throughout the life of personal information as efficient and effective public services through effective government information resources management.

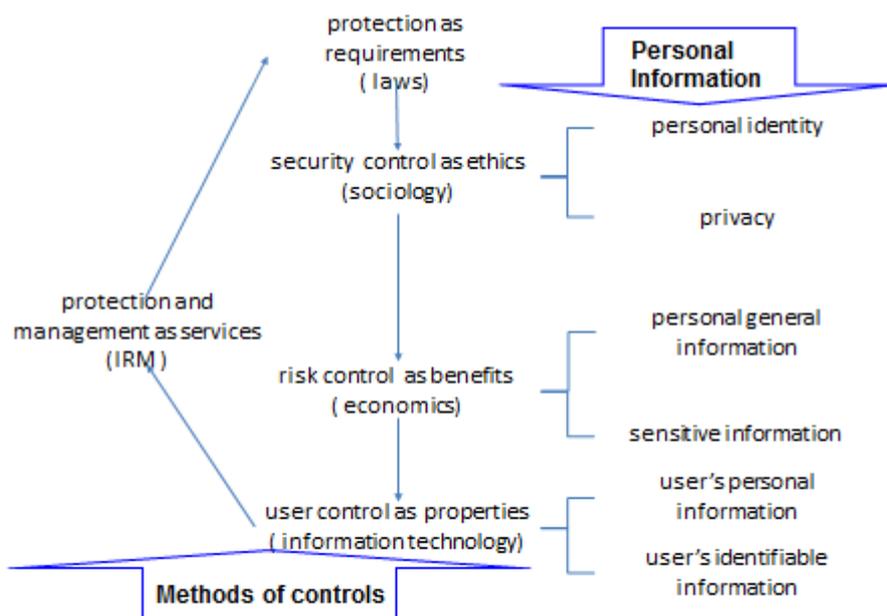


Figure 1 A comprehensive regime for personal information protection

4. Conclusion

This study rationalizes the demands for a holistic approach to develop a comprehensive regime for personal information protection in the networked Chinese public sector. Three demands are identified including the demand for the risk control for personal information protection in their sharing and reuse in networked public services, the demand for a participatory regime in conformity with legislation, and the demand for an integrative administrative regime with a special regard to networked services.

The study proposes a comprehensive regime for personal information protection in networked public sectors based on a holistic review of multidisciplinary perceptions of personal information, multi-dimensional levels of personal information protection controls and multi-directional control methods. The regime consists of three key aspects including (a) an adequate classification of personal information for risk control with respect to multitude perceptions of personal information preservation, (b) a participatory personal information protection legal regime for personal information protection along the entire life-cycle of personal information and the processes of personal information resources management in conform with the legal requirements, and (c) an integrative personal information protection framework to balance the protection and the secured sharing and reuse of personal information for the enhancement of networked public services.

The study defines personal information as organizational and individual assets for protection as well as social resources for innovation of social management and better public services. It takes the advantages of existed disciplinary approaches, legal requirements and control mechanisms for personal information protection as a complementary and integrative organic whole. It contributes to networked Chinese public sectors for personal information resources protection and management along the life of government information and throughout the processes of government information resources management. It can be used to facilitate the provision of public services in the networked Chinese public sector through the adequate protection of personal information and the effective management of personal information. This paper is limited to only on the development of a conceptual work, justification studies by surveys, interviews and web sites visits have been done and will be discussed in another paper.

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