



Linking ICTs to rural development: China's rural information policy

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ABSTRACT

The issue of rural communication development has been conventionally examined under labels such as universal service, digital, divide, broadband deployment, and E-Government, which generally fall into two seemingly distinct categories—*access* and *applications*. In China, these concepts are currently incorporated into a single program, if not a single term—“Village Informatization Program” (“VIP”). The VIP upgraded the objectives of previous telephone and television “Village Access Projects” (“VAPs”), an upgrade which is intended to provide “comprehensive information services” in rural areas. The execution of the VIP regime has been faced with challenges. The lack of explicitly defined objectives and institutional arrangement has led to regulatory confusion and has compromised the outcome of initiatives taken by central department and regional/local governments which are more often independent in actions. China is therefore faced with the imperative of formulating the VIP regime which is to assimilate to China’s unique institutional context. This article first reviews the current status of the VIP regime before moving on to the discussion of establishing an integrative and sustainable VIP regulatory regime in China. Then, the current regulatory regime is characterized based on which reforms are suggested—in which is highlighted a *layer-based localization* regulatory solution, which delineates provincial/local roles from central roles based on a stratified incentive policies and governance arrangement. Possible applications in other countries are discussed in the conclusion.

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1. Introduction and background

The deployment of information and communication technologies (“ICTs”) in rural areas has long been regarded as a catalyst for rural development (Hudson, 2006; ITU, 2007). Thus far, the issue of rural communication development has been examined—as conceptualized in both theory and practice—under umbrellas such as universal service (Blackman, 1995; Milne, 1998), digital divide (Compaine, 2001; Norris, 2001; Xia & Lu, 2008), broadband deployment (Strover, 2003; Sawada et al., 2006), and E-Government (Thompson, 2002; Seifert & Chung, 2009). The examination of these subjects has generally fallen under two broad yet seemingly distinctive categories: *access* (e.g., universal service, digital divide, and broadband deployment) and *applications* (e.g., E-Government).¹ In China, however, these concepts are currently institutionalized into a single program, if not a single term—“Village Informatization Program” (“VIP”). The VIP is meant to be a national initiative intended to “informatize” China’s rural communities by:

- Improving rural *access* to communications infrastructures, including telephone, television, and the Internet; and

- Providing *applications* of so-called “comprehensive information services,”² including township government websites, information services stations,³ and agriculture-related websites and e-commerce portals.

As far as *applications* are concerned, China has now conceptually expanded beyond the conventional E-Government concepts to include an even broader array of public information services—“comprehensive information services.”

However, given China’s unique historical context, the integration of *access* and *applications* in China’s rural communications policy has been more of a practical coincidence than based on a rigorous and intentional theoretical deliberation. Historically, the agriculture industry and its workers (i.e., farmers or villagers) have existed under extremely unfavorable conditions in comparison with their urban counterparts. Over the past three decades since the opening-up policy in the late 1970s, China has witnessed an exponential economic growth. Nonetheless, the development of the farming industry and

² Thus far, China’s government has been unable to provide a lucid conceptualization or explicit definition of “comprehensive information services.” Nonetheless, for the purposes of this article, “comprehensive information services” may generally refer to information services provided, via mainstream communications media and technologies (such as telephone, television, Internet, and probably also print media), to meet rural information needs related to production processes as well as political and societal participation.

³ The information services station is a township or village level facility designed to provide access to information services via the Internet and other media.

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¹ For a recent review on the parallel lines of literature on the digital divide (*access*) and E-Government (*applications*), see, e.g., Helbig et al. (2009).

Table 1
Rural digital divide in China.

	Wireline telephone (per hundred inhabitants) ^a	Television (per hundred households) ^b	Personal computer (per hundred households) ^c	Internet (per hundred inhabitants) ^d	Personal disposable income (RMB/year) ^d
Urban	39	135	47.2	27.3	13 786
Rural	15	84	2.73	7.1	4140
Gap (urban:rural)	2.6	1.6	17.3	3.8	3.3

Sources: Data calculated based on relevant statistics issued by the Ministry of Information Industry and the State Bureau of Statistics, CNNIC (2008), and Zhang (2006).

^a Data of 2008.

^b Data of 2005.

^c Data of 2006.

^d Data of 2007.

rural communities has lagged far behind the general economic expansion, although farmers have been making a considerable contribution to the expansion by, among other things, working as inexpensive laborers. In other words, the rural population—roughly three-quarters (or 0.8 billions) of the total population of China—has been unable to share what the economic reform has to offer, and many of them are still living in deprived conditions. The disparity has emerged as a serious impediment to a relatively balanced economic development, and perhaps also, social stability. Since the 1990s, China's government began to attend to the “three agrarian issues” (“TAIs”)—a nationwide drive in addressing the developmental issue regarding “agriculture, rural villages, and farmers.” Specifically, between 2004 and 2009, the central government has issued consecutively six “Document-No.-Ones,”⁴ highlighting the TAIs in the construction of so-called “socialist new villages” (“SNVs”)⁵ (CPC Central Committee and State Council, 2004, 2005, 2006, 2007, 2008, 2009). These “Document-No.-Ones” aimed to bridge the rural–urban gap, of which the improvement of rural communications conditions has been an important and integral part.

Despite the recent debut of the VIP, government actions in improving rural communications can be effectively traced back to even earlier years. The earlier phase prior to the VIP was usually characterized by the telephone and television “Village Access Projects” (“VAPs”) since the 1990s. As a result of these VAPs, by the end of 2008 China's government had succeeded in connecting almost all of its administrative villages to telephone (with at least two telephone lines) and television services (with as few as several channels). To keep abreast with the recent objectives of the SNVs and so-called “national informatization strategy” (CPC Central Committee General Administrative Office & State Council General Administrative Office, 2006), in 2006 the central government upgraded the conventional universal access concept to the VIP to ensure “broadband to the village and information services to the household” (MII, 2006a,b; MOA, 2007a,b); this was a relatively vague objective, which is yet to be explicitly defined.

Thus far, certain achievements have been made under the VIP regime, at least in statistical terms. For example, in addition to expanding telephone and television services in rural areas, the numbers of agriculture-related websites and e-commerce portals, township government websites, and information services stations have also been increased.⁶ Nonetheless, the current VIP regime has also exhibited drawbacks and flaws. In the absence of explicitly

⁴ As a usual practice, in the beginning of each year, the Communist Party of China (“CPC”) Central Committee and State Council would jointly issue a “Document-No.-One” which highlights the government's priority of the year.

⁵ During the period between 1982 and 1986, the central government also issued consecutively agriculture-related “Document- No.-Ones,” which led to the formulation and reinforcement of the “Household-Responsibility-Contract” policy in the agriculture sector. As a result, rural labor forces were liberalized and productivity was greatly improved as a result of improved incentive of the farmers.

⁶ For example, by the end of 2008, the number of agriculture-related websites and e-commerce portals had reached 18,000; roughly 50% townships now each has an information services station (State Forestry Bureau, 2009).

defined objectives and effective organization, the nationwide VIP activities have appeared to be uncoordinated between departments and regions, many of which tend to follow independent objectives. The lack of coordination often leads to a paradox: the inadequate investment on the one hand and wasteful duplicate construction on the other. Moreover, even the information projects already completed tend to be low in utilization rate and poor in maintenance.

The root cause of this phenomenon arguably lies in the institutional metrics. In effect, the absence of an explicit and sustainable institutional arrangement has effectively led to regulatory confusion, if not a complete regulatory vacuum, in the nationwide VIP activities. The following questions therefore arise:

- What are the major problems and challenges underlying the current VIP regime?, and
- How should these problems be addressed so that a consistent and sustainable institutional arrangement might be achieved?

The remainder of this current article contributes to this scheme. Section 2 reviews the objective and institutional arrangement of the current VIP regime in China, including the characterization of regulatory structure, before moving on to the discussion of issues regarding the establishment of a consistent and sustainable VIP regulatory regime in terms of incentive policies and governance mechanisms (Section 3). Section 4 concludes the study.

2. Objective and institutional arrangement: Current status

As pointed out, rural–urban gaps or divides in China has been a longtime reality. Generally speaking, the level of major indicators in terms of residents' access to telephones, television, and the Internet services in rural communities in China tend to be roughly one-third as much as those in their urban counterparts; this mirrors a similar disparity pattern in terms of disposable personal income between two types of areas (see Table 1).⁷ The digital divide indicated in Table 1 can be even larger if regional disparity is also taken into account. Nowadays, being a rural dweller in China would typically mean accepting an extremely unfavorable status in almost all socio-economic aspects, including education, employment, and social inclusion. Clearly, the deployment of ICTs in rural areas has profound political, economical, and socio-cultural implications. Politically, the level to which rural communities are “informatized” has crucial bearing on citizen participation as well as the democratization process. Economically, rural informatization can promote trade and industrialization in the agriculture sector. Socially, rural informatization can advance community development and value recognition.

This section reviews two phases of informatization initiatives in rural areas by China's government—the VAPs and VIP—in terms of objective definitions and institutional arrangements. It will also be demonstrated that these two phases differ greatly from each other, despite their

⁷ According to Zhang (2006), in China rural communities lag behind the cities by roughly 10 years.

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