



Outsourcing the State? Public–Private Partnerships and Information Technologies in India

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Summary. — This paper examines public–private partnerships (PPPs) for development through the example of telecenters in two Indian states. How might a developmental state position itself with respect to civil society under a PPP model of service delivery? We find that each state’s political economy is reflected in its PPP strategy, but that in both states the emerging middle classes rather than the poor benefit most from ongoing telecenter projects. Outsourcing development services to private entities need not “privatize” the state but does alter the way in which citizens “see” the state. Service delivery through telecenters becomes a symbol of government efficiency and responsiveness.

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Key words — Asia, India, developmental state, Governance, information technologies, public–private partnerships

1. INTRODUCTION

Information and Communication Technologies (ICTs), such as computers and mobile phones, have emerged as the newest tools for the delivery of development services to rural areas. ICT and development (ICTD) projects cover many domains including health care, education, online government services (“e-governance,”) and the provision of commodity price information to small producers (Brewer *et al.*, 2005; Jensen, 2007; Madon, 2005). Substantial funding has been injected into ICTD projects around the globe: in 2006 the World Bank had a portfolio of \$3 billion in loans to ICT projects in over 80 countries, while USAID spent \$200 million in 2004.¹ As did the earlier (albeit different) Green Revolution and Appropriate Technology movements, the ICTD movement presents a technology-centered set of solutions to problems that beset developing countries. A particularly popular example of ICTD is the entrepreneur-run computer kiosk or telecenter that provides e-governance and education services in rural regions that previously lacked access to computers (Bell, 2006; Kumar & Best, 2006).

As part of a wave of good governance reforms in developing countries, ICTD telecenter projects are being implemented predominantly through public–private partnerships (PPPs). The goals of the good governance agenda are increased accountability, professionalism, and reliability in the delivery of public services. The reforms are being carried out through restructuring and (partial) privatization of state bureaucracies, decentralization of state power to local governments and non-state actors (Batterbury & Fernando, 2006), and the introduction of managerial practices to governance (Clarke & Newman, 2008). Supporters of this agenda argue that poverty alleviation and development can be achieved more effectively by “combating corruption, nepotism, bureaucracy, and mismanagement” (Nanda, 2006, p. 270).

Proponents of PPPs likewise argue that they increase efficiency and responsiveness in the delivery of hitherto govern-

ment-provided services (Lewis, 2000). PPPs have been advocated for healthcare services, water and sanitation, and infrastructure projects (Miraftab, 2004) in developing countries. In principle, the private sector would “provide higher quality goods and services at lower cost, and the government sector of public providers would shrink accordingly” (Linder, 1999, p. 36). At the same time, the public sector can “satisfy social pressures or the local needs of service provision” (Klijn & Teisman, 2000, p. 84). On the other side of these debates, some have criticized good governance agendas for their “neoliberal bias” of market-led development (Jenkins, 2002). Critics of PPPs maintain that these models “cover” for or border on pure privatization and replace the public sector’s ability to serve the public good (Miraftab, 2004).

Despite the growth of PPPs in the developing world and the considerable funding behind ICTD projects, actual partnership practices and the political and social impacts of the PPP-ICTD pairing remain under-investigated. The premise of the critiques of PPPs is that the private sector is the more powerful partner and the state² acts as little more than the guarantor of private interests. The premise of the supporters of PPPs is that the private sector will deliver services more effectively without excessive government interference. It is true that governments often partner with influential corporations to deliver public services or large-scale economic

* The authors would like to thank the project staff, households, and entrepreneurs of the ICT projects in Kerala and AP for assistance with this project. This material is based upon work supported by the National Science Foundation under Grant No. 0326582, the Technology and Infrastructure for Emerging Regions group, and Microsoft Research India. Thanks to Peter Evans, Laura Enriquez, Dan Kammen, Asher Ghertner, George Wittemyer and Jennifer Bussel AnnaLee Saxenian and our anonymous reviewers for comments on this work. Final revision accepted: March 18, 2009.

development projects. But in this paper we ask: what are the roles and responsibilities of each of the partners when the private sector actors are small-scale entrepreneurs? At the project level, who benefits from these partnerships and do they remake or reinforce existing social asymmetries? At a more macro level, does shifting the responsibility for providing development services to private entities alter the way in which citizens “see the state”³ (Corbridge, Williams, Srivastava, & Veron, 2005)? And how may the developmental state⁴ position itself with respect to civil society under a PPP model of service delivery?

We approach these questions through a critical examination of ICTD telecenters in the states of Kerala and Andhra Pradesh (AP), India. Development-oriented telecenters, mainly organized as PPPs, are increasing at a faster rate in India than in any other country (Madon, 2005). We focus on how the PPP-ICTD pairing gives the state a way to renegotiate its image before its citizens, and on the welfare impacts of telecenters on rural households and on entrepreneurs.

Our research is based on a combination of field methods such as interviews, participant observation, and short surveys, as well as secondary literature review and document analysis. Primary data collection took place on several trips to India over a period of 19 months from 2004 to 2006. We chose Kerala (a traditionally interventionist state) and AP (a less-interventionist but nonetheless developmental state) for our analysis because both have been at the forefront of the telecenter movement. Despite historical differences with respect to the relationship between state and civil society, both have implemented their telecenter projects using entrepreneur-centered models. Their ICTD initiatives display a range of emphases on the private *versus* the public sector and on social *versus* financial concerns. This makes them excellent cases through which to highlight variations and similarities in PPP structures and to correlate these with the outcomes of ICTD projects.

Our research indicates that PPP-ICTD projects are strongly impacted by the natures of the state and the private sector, and that the development benefits of these projects are mainly captured by the semi-rural emerging middle classes. Entrepreneurs are significant, yet vulnerable, stakeholders in telecenter projects. We find that PPPs must combine the credibility of the state and the service orientation of the private sector in order to provide better experiences for users. We argue that states are turning to the private sector as partners not only for the provision of services, but also to associate themselves with a liberal market order and the modernization process more broadly. In both Kerala and AP, the governments are eager to improve their image with the public and are trying to reshape themselves into market friendly and efficient entities. Everyday encounters with telecenter entrepreneurs have become a new mechanism through which the citizen sees, and so comes to construct, the state. Service delivery through ICTD kiosks is beginning to act as a symbol of responsiveness and as a tool to portray a new, more efficient government to citizens.

There are contradictions in this new representation of the state. We find that citizens simultaneously feel trust and disillusionment toward the government as an entity that they consider credible yet inefficient. The private entrepreneurs, too, distinguish themselves from, and at the same time ally themselves with, the government “brand.” We thus find, in contrast to some critiques of PPPs, that the state is not “privatized” in the process of developing these partnerships, at least when the private partners are small and home-grown entrepreneurs. Rather, a developmental state can outsource a portion of its

development agenda and yet retain considerable control over it.

We begin the paper with an overview of how and why ICTD projects developed through PPPs in India; this establishes the context for the specific cases of Kerala and AP. We then review telecenter strategies and projects within these states. This section is followed by a discussion of our research methods. Finally we discuss our findings by looking at: (1) how political economy influences the structure of PPPs; (2) the material benefits of telecenters for customers and entrepreneurs and the influence of PPP structure on these benefits; and (3) how the state negotiates the way it is seen by citizens through its telecenter projects.

2. ICTD THROUGH PPP IN INDIA

The arguments for delivering ICTD services through PPPs are wide-ranging. Private sector firms, multilateral organizations, and state officials themselves claim that PPP models are becoming the norm for ICTD projects in response to stretched development budgets, the public sector’s inefficiency as the sole provider of services for the poor, and the loss of state power in a liberalizing global economy (Cerny, 1995; McMichael, 1996). NGOs that once saw themselves as a counter to the for-profit sector have accepted this strategy as a good way to improve the lot of the “common man.” PPP proponents emphasize the importance of treating the citizen as a customer (Clarke & Newman, 2008) instead of as a recipient of largesse from government representatives, who wield monopoly powers, and are often abusive or inattentive to citizens’ needs (Corbridge *et al.*, 2005, p. 78). These arguments are broadly supported by recent and influential advocates of solving the problems of the poor through market driven strategies (Desoto, 2000; Prahalad & Hart, 2002). All of these rationales have been sympathetically received, to a greater or lesser degree, within the flourishing Information Technology (IT) sector in India.

The Government of India (GoI), too, has embraced entrepreneur-owned telecenters as a key component of reform through e-governance⁵ (Madon, 2005, p. 402). The entrepreneurs who run the centers have market-based incentives to be efficient, are situated at the village or peripherally urban level, and in most cases are members of the communities they serve. As lay citizens, they have experienced the challenges of dealing with government bureaucracies. They are best suited, it is argued, to make e-governance and other services responsive to the needs of the local population.

We found two factors that led the state to pursue ICTD projects through PPPs in India. First, PPPs in general gained support in the 1990s in an international environment that strongly supported economic liberalization and less state intervention. In India this led to a partial dismantling of state controls in hitherto nationalized sectors and greater encouragement for private enterprise (Kohli, 2005). The shift gradually became entrenched in India’s development agenda for infrastructure, service delivery, and assistance to the poor—sectors that were once fully in the domain of the public sector. The 1990s thus saw an increasing acceptance of the private sector in development-related activities through PPPs—and all the more so with ICTD projects.

Second, India’s much acclaimed success in the IT industry prompted the state to distribute the benefits of ICTs more broadly through ICT and “D.” In the mid-1980s, the Indian government made a concerted effort to launch its software industry (Dedrick & Kraemer, 1993). Quickly IT became one

of India's fastest growing industrial segments⁶; the spectacular success of the IT sector was partly attributed to the loosening of government restrictions on the newly liberalizing economy. Nevertheless, few individuals within the country had access to these technologies. Our interviews with state representatives revealed that central and state governments became concerned that, while IT professionals gained exceptional levels of wealth, the benefits of IT were unevenly distributed and the rural-urban digital divide was growing. As a result the state developed strategies to bring ICTs to rural areas, extend connectivity across the country, and encourage local populations to participate in the growth of the industry. This equity-inspired move was bolstered by the belief that with more people educated in IT skills, the industry itself would flourish.

But why was the GoI so concerned with asymmetric benefits from the booming IT sector and with the digital divide? The accommodative nature of the Indian state contributed to the push for IT for development. The Indian state has been categorized as a "fragmented multi-class state" (Kohli 2005, p. 11). It commands authority, but tends to be internally disunited, caters to different interests within civil society, and is not in a position to define its goals too narrowly (Frankel, 1978; Kohli, 2005). The leaders of such multi-constituency democracies, the argument goes, are always concerned with broad-based political support. With ever-present tensions between equity and growth, and highly publicized economic benefits from the IT industry accruing to elite sections of the population, the state needed to accommodate its other (and larger) constituencies.

Based on discussions with IT leaders and government officials, we found that through ICTD projects the state was trying to make visible its attempts to accommodate the rural electorate. State officials claimed that by extending the benefits of IT and education to these groups, any resistance among the rural population toward the IT industry could be pre-empted. In the words of a senior official in the Ministry of Information Technology:

"Yes- there was a feeling that maybe it would be wrong to exclude people from the IT industry. After Chandrababu Naidu was voted out of office⁷ IT lost momentum it hasn't regained. Earlier everyone had unrestrained enthusiasm for IT. Now it is much more nuanced [and] people are much more careful...because, see, one of the reasons why e-governance was promoted was because they thought it was a way to pull votes in...When he [Naidu] lost they realized that it could [be] politically costly to be seen to be elitist and focusing on a technology that mainly benefits the rich in cities. Government people became more cautious."

The GoI's support for ICTD in general and for telecenters in particular has led it to initiate 100,000 Common Service Centers (CSCs) throughout the country. These multi-purpose access centers are supposed to provide citizens with high quality video, voice, and data content for education, e-governance, health, and entertainment⁸. CSCs are being implemented as PPPs based on cooperation among village or small-town entrepreneurs, private agencies, and state governments (DIT, 2006). A number of recent studies in the ICTD field have examined existing telecenter projects in India, focusing on needs (Blattman, Jensen, & Roman, 2003), impacts (Thomas & Parayil, 2008), governance (Madon, 2005), financial sustainability (Kumar, 2004; Kuriyan, Ray, & Toyama, 2008; Madon, 2005), and usage patterns (Kiri & Menon, 2006; Pal, 2007). Despite their distinctly mixed reviews on the benefits of these projects, there remains much optimism in the country about how rural telecenters can advance the goals of social and economic development. We now examine how this plays out in practice by turning to our two study areas: Kerala and AP.

3. ICTD THROUGH PPP IN KERALA AND ANDHRA PRADESH

Kerala is well known for its high levels of social development, unparalleled in developing countries⁹ (Parayil, 1992; Rammohan, 2000). The state has been responsive to populist demands, and the Left Democratic Front led by the Communist Party of India (Marxist) has a strong presence. At the same time the state has been criticized for its poor industrial development and persistent unemployment (Heller, 1999; Rammohan, 2000; Veron, 2001). Although historically viewed as a government suspicious of the private sector, in recent years the state has been working to overcome this image through measures to "modernize" the government and encourage private investment (Heller, 1999). The government has tried especially hard to promote its IT industry, with software exports growing by 27% from 2004 to 2005 under the Software Technology Parks Scheme (<http://www.stpp.soft.net>).

The Kerala state government's PPP-based telecenter projects emphasize "ICTs in all walks of life and to improve living standards" (<http://www.akshaya.net>). The government initiated the Akshaya project in 2002 to establish over 5000 networked multi-purpose community technology centers, thus eventually providing education and governance services through ICT access to the entire population. It also aimed to "make at least one person in each of 650,000 families in the state e-literate" through an e-literacy or basic computer training course subsidized by the government (<http://www.akshaya.net>).

We conducted our research in the Malappuram district where the Akshaya project was originally piloted. Here the state established 630 internet-enabled computer centers, each meant to serve 1000 households, and each run by individual entrepreneurs selected and trained by the state. These entrepreneurs were mainly rural individuals from lower middle class backgrounds. The role of the state was to establish connectivity; select, train, and facilitate loans for the entrepreneurs; and subsidize the e-literacy training. The entrepreneur's role was to establish the kiosk, purchase the equipment, provide government services, and operate a sound business. The state maintains a close relationship with the kiosk entrepreneurs and tries to be responsive to their needs and requests.

As in Kerala, the state Government of AP (GoAP) has also played an active role in guiding the state's economy. However, AP was quicker to embrace the private sector and to accept economic liberalization (Dev & Ravi, 2003; Rao, 2003; Suri, 2004). With Naidu as Chief Minister (1995-2004), AP became the first state in India to embark on a restructuring program in accordance with the guidelines of the World Bank and IMF (Reddy, 2002). With the reforms came a decrease in subsidies, a decline in public investment, and increased investment for the IT industry¹⁰ (Pinto, 1999). The AP government is recognized for the success of its IT industry, with software exports growing by 65% from 2004 to 2005 under the Software Technology Parks Scheme (<http://www.stpp.soft.net>).

In 1999, the GoAP established 265 privately run centers, called e-seva, in the capital city, Hyderabad. In these centers citizens could electronically access a range of government services. The state has since extended these services to rural citizens through three separate projects called Rural e-Seva, Rural Service Delivery Points (RSDPs), and Rajiv Internet Village Centers (Rajiv) in several districts including West Godavari and Medak. These rural centers were intended to replace traditional forms of citizen-government interactions, which

were considered inefficient and onerous, with more modern, transparent, and responsive systems (IITB, 2005). They deliver government-to-citizen and citizen-to-citizen services such as online filing of complaints, online registration for government programs, issuance of certificates, and other government information.

Most similar to the Kerala-based Akshaya model in its structure, Rural e-Seva¹¹ was initiated by the district-level government in direct collaboration with telecenter entrepreneurs. There is considerable interaction between the centers and the district government in project implementation. As with Akshaya, the entrepreneurs consist largely of individuals from lower middle class backgrounds. The state government has a somewhat hands-off approach toward the other two projects. The RSDPs were implemented by AP Online, an intermediary company jointly formed by the GoAP and Tata Consulting Services (TCS).¹² TCS acts as liaison between the government and the individual entrepreneurs who own and operate their telecenters.¹³ In the Rajiv Project the GoAP has two partners: (1) Bharat Electronics in partnership with Reliant Information, a private company and (2) Times, a state level NGO. The 8000+ Rajiv centers are thus also structured with intermediaries between the entrepreneurs and the state¹⁴; these intermediaries provide the entrepreneurs with a variety of business services, make connections with the government and other businesses, and actually pay the AP government Rs. 6,000/year¹⁵ for access to e-government services. Although all three AP projects share the goals of efficient and transparent delivery of services, the actual business models vary considerably.

4. RESEARCH METHODS

We conducted 31 interviews with state employees within the GoI, AP and Kerala, using a semi-structured interview protocol. These were key informant interviews; through snowball sampling, we interviewed senior state officials, union leaders, and lower level officials who had been involved with, planned or implemented telecenter projects at each level. The interviews explored the respondents' views of each state's telecenter strategy; appropriate roles of state and private sector in development; development priorities for the state; impacts of the IT sector on India's economy; and the role of ICTs in "development." Several officials were interviewed on multiple occasions over a three-year period in order to understand how the projects (and their views) were changing.

Through published reports and discussions with experts, we identified the most prominent IT companies within each state and in India.¹⁶ From this list, we were able to interview 21 company officials, including several industry leaders. These semi-structured interviews focused on the connections among the IT industry, overall economic growth, and specific ICTD projects. Interview themes included the role of the private sector in development in India, factors influencing the growth of IT, the role of government in IT, and equity issues around the benefits of the IT industry.

We conducted one-on-one-structured surveys with 100 entrepreneurs from the four ICTD telecenter projects (Malapuram district, Kerala, $n = 50$; Medak, AP, $n = 20$; and West Godavari, AP, $n = 30$). These surveys gathered information on revenues, costs of telecenter operation, numbers of customers, and background characteristics of the entrepreneurs themselves. Our sample of entrepreneurs was non-probabilistic, comprising those who were available during the survey period, willing to be surveyed and whose telecenters were functional.

We conducted extended key informant style interviews with 16 additional entrepreneurs from the four different projects. These entrepreneurs expressed enough interest in the research to make themselves available throughout the three-year period; most were interviewed multiple times. The interviews were complemented with participant observation and informal interactions with entrepreneurs in their telecenters and at their homes with their families. In the telecenters of each project, we also observed entrepreneurial behavior and usage patterns, and engaged in informal conversations with the users. Through these interviews and surveys with entrepreneurs, we explored their role in the PPP and their positions with respect to the state.

Household surveys were conducted for summary statistics on telecenter user characteristics and patterns of use. These interviews explored users' backgrounds, their expressed needs, political awareness, perceptions of past development programs and the private sector in development, access to ICTs and constraints to access, and overall knowledge about ICTs. 127 randomly selected households were surveyed from the service areas in each location with active telecenter projects. In addition, we interviewed telecenter users and non-users in each district, using an open-ended interview protocol, to understand the distributional impacts of the projects. Finally, we analyzed the literature and policy documents on PPPs, ICTD, and development and on the modern Indian state.

Our research is thus based on a combination of field methods with content analysis and document review. Our multiple methods approach allowed us to triangulate the information from diverse sources so that we could interpret our findings with confidence. While there is always variation in participant responses, our independently ascertained views of entrepreneurs, telecenter users and state representatives were frequently compatible with one another. Throughout the paper, we illustrate our findings using quotes that represent commonly expressed sentiments in their respective contexts.

5. TELECENTERS AND THE STATE IN KERALA AND AP

(a) *Political economy and the structure of PPPs*

Our research in Kerala and AP identified three dimensions along which PPPs for ICTD projects can be differentiated. First, there are significant differences in the operational roles of the private and public sectors within these partnerships. Although Kerala and AP both follow an entrepreneur-centered approach to telecenters, Kerala's Akshaya project builds in a large role for the state in the implementation process. The state works with entrepreneurs to develop their telecenter services, provides content and connectivity, and oversees the training of these individuals. The strong and continuing government presence reflects Kerala's history of state-led development and involvement in rural welfare programs. The state's acceptance of a PPP model in the first place was a response to long-standing critiques of prioritizing social development over economic growth, and of excessive government interference in the economy.¹⁷

The AP government supports multiple models for the provision of the services that were formerly provided by the state. Its three projects compete for customers and the GoAP itself is not involved in the details of project implementation. Two out of the three projects have intermediaries between them and the state government, so the entrepreneurs have low levels of interaction with the state. The government makes its

services available to these mediators so the telecenters can provide customer facilities such as bill payments and other governance services. Rural e-Seva is the exception to this outsourcing model, though it, too, must compete for customers against the other projects. Rural e-Seva entrepreneurs do receive government support, albeit from the district rather than the all-state level, in the form of implementation, training, and project management.

Second, the extent to which each project emphasizes social goals such as education and poverty alleviation *versus* efficient service delivery influences the target client base of its kiosks. It is along this dimension that the two states seemed most different from each other. In Kerala, the state sees the telecenters as development interventions and remains committed to its tradition of promoting social welfare. A senior government official stated:

“This is absolutely a development project. We take it as development or empowerment of the ordinary man. We’re not really looking at it as a business model for the entrepreneurs... I also believe that if a member of a family becomes e-literate, the demand for the services will increase.”

Kerala requires the telecenters to meet both social goals for the poor and financial goals for the entrepreneurs. It subsidizes an e-literacy training phase to make computer education accessible and affordable for all. It assists entrepreneurs to repay their loans; it does this partially by paying entrepreneurs for each household whose member attends the e-literacy training.

Although Kerala state officials accept the role of the private sector in ICTD, they remain cautious about how these PPP models actually operate. Our interviewees believed that it was the role of the government to provide basic services and to direct the development agenda for telecenters. The question of whether the private sector can meet the needs of the average citizen remains an unresolved debate within the Kerala state government. As one senior official put it:

“I firmly believe that the state must not end up doing things which the private sector can come and do. But having said that, I think [that] in India a very dangerous model is evolving, or rather a not so healthy trend, where so-called private enterprise is emerging under the name of various things... like private partnerships. This is encroaching into the legitimate domain of the state. Because all said and done the state has [a] certain accountability.”

The GoAP, on the other hand, does not make a concerted effort to target poor users or to emphasize social goals.¹⁸ Nor does it subsidize the projects or attempt to ensure their financial sustainability. The government treats entrepreneur-run telecenters as service delivery vehicles for rural citizens and expects market forces to encourage citizens to choose whichever telecenters provide the best service. In the words of a senior state official:

“The AP government policy is to have competing channels of service delivery—not just have a monopoly with one telecenter model. We don’t want all of our eggs in one basket. We want the same service available to citizens through different mechanisms. That way the channels must compete to be efficient and provide high quality services.”

Some AP officials expressed the belief that development would result as a consequence of the entrepreneurship unleashed through these PPPs. The majority of our interviewees within the AP government, however, saw ICTs simply as technologies to deliver services with speed and transparency. They were not meant to facilitate social equity, despite the rhetoric of empowering the common man under which ICTD projects were implemented. These officials recognized that they would exclude groups from the benefits of their programs since not all citizens can be “customers”:

“In development, you are always looking at the downtrodden. That is not necessarily the case for this project. It will be [the] middle class, upwardly mobile, who are in need of these telecenter services. The people who have got the patience to go to a school. To read and write... the fellow who does not have electricity won’t come to the telecenter to pay for electricity bill... We don’t try to include everyone.”

The relative power of the partners in the PPP is the third dimension that differentiates the four projects from one another. Although it has been claimed that PPPs cover for the dominance of private interests (Miraftab, 2004), we find that in both Kerala and AP significant power remains with the state. The private sector in these telecenter projects consists of small entrepreneurs without much voice or coordination. In both states they are mainly local men and women, between 20 and 35 years of age, and with a range of educational backgrounds (from secondary school to university degrees). Many have never left their hometowns and several are first-time business owners.

In Kerala, the state directs the overall goals of the Akshaya project, and, in many cases, our entrepreneur interviewees felt they were as much participants in a state-led development project as they were owners of their individual businesses. They felt pressure to adapt to the overall development goals of the state, though they had flexibility in creating their own business strategies. The state’s concern for equity conflicts at times with the entrepreneurs’ ability to maintain financial sustainability (Kuriyan *et al.*, 2008).

In AP the private partners include the mediating companies that coordinate and manage the small-scale entrepreneurs. But even they are dependent on the state for provision of backend government services and for permission to use government databases. Entrepreneurs in the RSDP and Rajiv projects must always go through intermediaries to request new or changed services. Many think that they cannot make major decisions about the services they offer, but need to wait for the intermediaries to determine their business strategies:

“I can’t do this without Times (the intermediary company); they are a mediator between the government and me. I can’t do it on my own. I need Times to deal with the government with their rules, with getting permission from the government to use their services...”

In the case of Rural e-Seva, as with Akshaya, the entrepreneurs are still the weaker partners in the PPP, but they have mechanisms in place to interact directly with some level of the state. They can express their concerns directly to the district government and can also expect a direct response. But in all four projects the private sector is, in effect, participating on the terrain of the state. These PPPs cannot be characterized as the privatization of the state.

(b) *Benefits of telecenters for customers and entrepreneurs*

We now examine who appears to be benefiting from the projects and to what extent this is influenced by differences in how the projects were structured. ICTD advocates have claimed that telecenters have the potential to deliver essential services to the rural population (Brewer *et al.*, 2005) and also act as social spaces for citizens (Salvador, Sherry, & Urrutia, 2003). Our research finds, however, as have other studies from India (e.g., Thomas & Parayil, 2008) that the benefits are mainly captured by the semi-rural emerging middle classes (see Figure 1). Most telecenter users in Kerala and AP are men with secondary school education or higher who earn well over \$262/year,¹⁹ the average *per capita* income for rural India. Following (Kashyap & Raut, 2007), the majority can be characterized as middle or high income, not just by their wealth but also by their lifestyles and aspirations. Even in the case

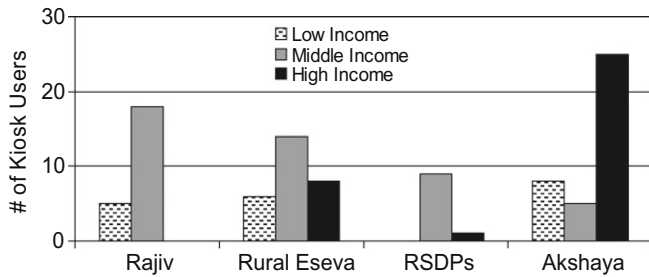


Figure 1. Income background of users of telecenters by ICTD project. Categories are based on stated income as well as lifestyle characteristics (following Kashyap & Raut, 2007). Source: Survey data of 127 households in Kerala and Andhra Pradesh over six months in 2006.

of Akshaya, despite state efforts to target the poor through e-literacy training, these individuals are usually not willing (or able) to pay for telecenter services on a continuing basis (Kuriyan *et al.*, 2008). Because entrepreneurs expected to be financially sustainable, the services they offer are more geared toward the emerging middle classes. As one low-income woman stated, “I took the e-literacy course. But I know that it will not benefit me by studying for 10 days. ... For me—it is not useful and I cannot pay to study more.”

It has previously been argued that the provision of services to paying customers as opposed to entitled citizens leads to the exclusion of particular social groups (Clarke & Newman, 2008). Our research corroborates this insight, and, at least for now, challenges the commonly-cited premise that the rural poor are significant users and beneficiaries of telecenter services.

Evidence from the two states indicates that, although not explicitly targeted as beneficiaries, entrepreneurs are significant and vulnerable stakeholders in telecenter projects. Figure 2 shows the median profit/loss as well as the wide variation in profits for entrepreneurs in the four study projects. Since our entrepreneur sample was non-random, we present only summary statistics to illustrate our findings.²⁰ Rural e-Seva and Akshaya are the two projects in which the median profit for entrepreneurs is positive at \$134/month and \$5/month, respectively. In the case of the other two AP projects—RSDPs and Rajiv Villages—the median net revenue per month is negative (−\$22 and −\$36 respectively). Data

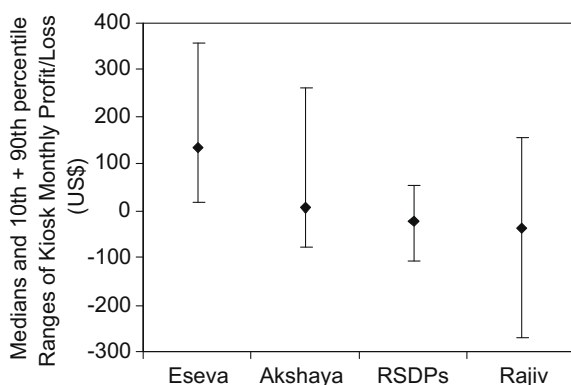


Figure 2. Median and 10th and 90th percentile ranges of entrepreneur telecenter monthly profit and loss. Source: Survey data of 100 entrepreneurs in Kerala and AP in 2006. ($n = 50$ Akshaya, $n = 20$ Rural e-Seva, $n = 20$ Rajiv, $n = 10$ RSDPs). (Figures converted from Indian Rs to USD at conversion of \$1 = Rs 44.5 January–May 2006).

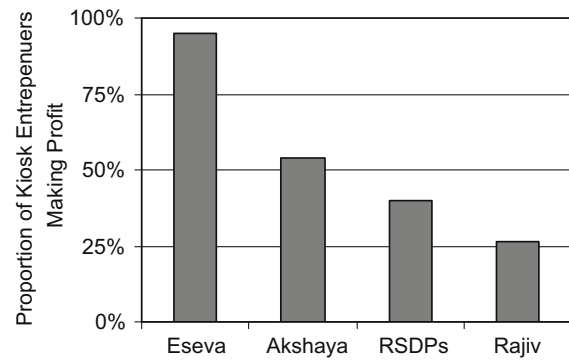


Figure 3. Proportion of telecenter entrepreneurs in each project who are making a profit. Source: Entrepreneur Survey ($n = 100$), Kerala and AP ($n = 50$ Akshaya, $n = 20$ Rural e-Seva, $n = 20$ Rajiv, $n = 10$ RSDPs).

from which Figure 3 is compiled show that 95% of Rural e-Seva and 54% of Akshaya entrepreneurs earn a monthly profit. In RSDPs and Rajiv fewer than 50% break even.

From our survey data we cannot isolate the impacts of individual factors that could cause entrepreneur net revenues to be positive or negative. The extent to which the telecenters are in truly rural locations (Table 1), the menu of services offered by the centers, and the income backgrounds of the telecenter customers (see Figure 4)²¹ all influence profitability. But thus far, the financial benefits for the average entrepreneur in any of these ICTD projects are minimal. In many instances participation in a telecenter project is actually detrimental for a small entrepreneur (Figure 2). Despite Kerala’s efforts to train entrepreneurs and subsidize their initial costs through the e-literacy training, even the Akshaya project has but a slim majority of its entrepreneurs making a profit.²²

We note that in our study projects it is where the state continues to monitor and engage with entrepreneurs that the telecenters are (modestly) profitable. In Rural e-Seva and especially Akshaya the state is not receding, but is actively involved in promoting, regulating, and training the entrepreneurs. At the same time these entrepreneurs have more leverage *vis-à-vis* the state, while still being the junior partner, than do those running RSDP and Rajiv centers. Evans (1995) argues that developmental states industrialized most rapidly when they maintained close yet autonomous ties to entrepreneurs. Our research finds a micro-level reflection of this “embedded autonomy” (Evans, 1995, p. 12) in AP and Kerala’s ICTD efforts.

(c) State renegotiating how it is seen by citizens

The political anthropology literature examines the state as it is imagined, constructed, and conceptualized (Comaroff, 1998; Gupta, 1995; Scott, 1998), as well as how it becomes “socially effective through particular imaginative and symbolic devices” (Ferguson & Gupta, 2002, p. 981). Gupta argues that it is “the quotidian practices of bureaucrats that tell us about the effects of the state” on the lives of ordinary people (1995, p. 376). Traditionally, local government offices are where rural Indians encounter these quotidian practices, and therefore where many of their images of the state are formed (Corbridge *et al.*, 2005). In the new, part-public part-private telecenters, it is the entrepreneur and not the much-maligned bureaucrat who becomes the everyday face of the state. We argue that, through the promotion of ICTD, states are trying to change their image and thus their relations with civil society.

Table 1. Characteristics of Telecenter entrepreneurs. Source: Entrepreneur Survey (n = 100), Kerala and AP

Characteristics of entrepreneurs	% Rural e-Seva entrepreneurs	% Rajiv entrepreneurs	% RSDPs entrepreneurs	% Akshaya entrepreneurs
<i>Levels of education</i>				
Up to 8th grade	5	20	–	–
Up to 12th grade	43	20	58	18
University	47	53	42	64
Certificate course	5	7	–	18
<i>Gender</i>				
Males	74	87	93	86
Females	26	13	7	14
<i>Location of Kiosk</i>				
Rural	68	73	93	62
Urban	21	13	–	18
Peri-urban	11	13	7	20

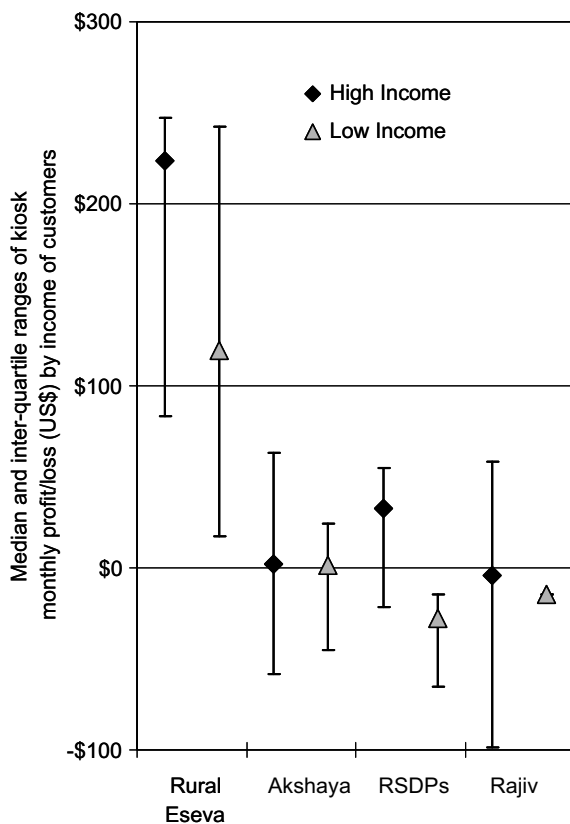


Figure 4. Telecenters targeting high income customers yielded greater profits, as shown by the median and 25th and 75th percentile ranges of telecenter model monthly profit/loss, categorized by customer income levels (high income—black diamonds versus low income—gray triangles) (Wilcoxon Signed Rank $Z = -5.0$, $n = 4$, $p = 0.063$). Source: Entrepreneur Survey ($n = 100$), Kerala and AP. This figure shows that entrepreneurs within each project who provided services to predominantly high income customers earned a median monthly profit that was higher than those serving mainly low income customers. In Rural e-Seva, for example, entrepreneurs who provided services to predominantly high income customers earned a median monthly profit of \$224 while those serving mainly low income customers earned a median monthly profit of \$119. In Akshaya, similarly, entrepreneurs serving high income customers earned a median monthly profit of \$2 compared to \$1 for those serving predominantly low income customers. The incomes of the customer base were defined by entrepreneurs.

As discussed earlier in the paper, in the course of our research government officials were explicit that the benefits of

IT were needed to reach rural areas in order to reduce the urban-rural divide. But they also openly discussed the need to change the way in which they treat, and the way in which they are perceived by citizens, especially in a liberalizing economy. There was a general consensus that the state needed to behave more like the private sector in service delivery. Officials in both states said that one way to change their image was to partner with private entrepreneurs who have economic incentives to provide good customer service.

Citizens in India typically perceive the state, its servants, and its services as being of poor quality, slow, and inefficient. In contrast, telecenters represent a new form of government service delivery that is fast, hassle free, and in theory accessible to the “common man.” Citizens save both time and money in their government transactions. The very appearance of the centers helps states to counter traditionally negative images; as one official in AP said:

“The appearance is totally unlike a government office. The ambience created is more of a private sector feeling—it has a uniform ambience built across all the service centers across the state—same design, same color. You have a feeling that you have not walked into a government office, but you’ve walked into something the private service sector would run. The beauty is that it starts at 8 in the morning and closes at 8 at night.”

Several officials acknowledged that government officers often leave early, are not present during working hours, and are unaccountable. Both states now emphasize the businesslike and “common man friendly” aspects of their telecenter projects. State actors, especially in AP, argued that the reliability of these telecenters and of e-governance overall could only be achieved when they were run by the private sector. But both states insist that the government’s name and brand be associated with these telecenters. State representatives asserted that the credibility of the government was essential for the PPP-based implementation of government services. In the words of an official in the IT secretariat of AP:

“The image is that these private telecenters are the government. If you look at the transactions—there are millions a month. Probably 99% are government to citizen transactions... they are branded as government. That is why the credibility is much better. Because people will think twice if somebody else [who is private] wants to collect your electricity bill and pay taxes. People will think twice!”

The state is, in effect, using entrepreneur-run telecenters to renegotiate its legacy of inefficiency. By having the private sector deliver the services and branding the centers as the government, the state has found a concrete path to upgrade its image, and to receive credit for these changes without having to provide the services itself.

The state's ability to renegotiate its image through telecenter services depends, of course, on how telecenter entrepreneurs perform and on how they are seen by their clients. Our entrepreneur interviewees emphasized their ability to deliver services well through the PPP strategy. They claimed they could make their centers financially viable by providing flexible office hours, more courteous treatment for all customers, and an overall better experience for citizens than they had had at the local government office. However, these same entrepreneurs, who were not in fact state employees, admitted that they rely on being "seen" as the government when they collect electricity bill payments or issue government certificates. Entrepreneurs confirmed what state officials had said: that being thought of as the government or having government endorsement is necessary for citizens to trust the entrepreneur to conduct their government-related work. An entrepreneur in AP explained:

"If people think we are working under private people they won't come. I tell villagers that we got a loan from the government to establish this center. So it is a government center."

At the same time, it remains true that the government name does not conjure up images of good service. Several household interviewees pointed out that the private sector (i.e., the telecenter entrepreneur) treated all customers with a level of respect and courtesy. Our interviews revealed that ordinary citizens strongly resented the bureaucratic and rude manner in which government officials treated them. One woman, living below the poverty line, complained,

"At government offices, people are not helping me. Even when we go to a government office, they won't help us—people like us. Even if you have a small job, they will not give any amenities, like ration card. . . We have to do everything on our own. Here [at the telecenter] there is more respect for people."

Citizens also saw the process of traditional service delivery as slow and inefficient. A middle-income elderly man described going to a government office compared to going to a private telecenter to pay one's electricity bills:

"At a government office, a person has to wait 5–6 hours. A person uses Rural e-Seva now. Before they had to travel for many hours to many offices. [Now] instead of 4 hours, I use 10 min. We use [Rural] e-Seva for electricity bills and telephone."

In addition to speed and convenience:

"It is easier to deal with these private people than the government—if you have 2–3 private centers, definitely the private person will grab people by providing offers, private institutions, providing amenities. They give you water. You won't find water in a government office. They [the private centers] provide good amenities to you."

Ordinary, and especially low-income, individuals seemed to think that accessing government services *via* private entrepreneurs was easier and more pleasant than through an actual government office. In this sense, the government appears to have outsourced to the private sector the provision not just of services but also of convenience and higher levels of customer service.

Often missing in the scholarly work both for and against greater private sector participation in service delivery is the acknowledgement and analysis of the public's perception of themselves as clients and recipients of government services. In general, political economy approaches do not take seriously the role of people's sentiments as "responses to and commentaries on" their individual situations (Sayer, 2005, p. 36). We find that citizens simultaneously trust and are disillusioned by the government as service providers. For e-governance, citizens trust the credibility of the government

name. For basic education, citizens trust the government to provide safeguards and services for the poor. Yet they think that the quality of those services is low. They are generally unhappy with being rudely treated and having to negotiate an often-corrupt system. But while civil society in India may be unhappy with its government, it is equally skeptical of the private sector as the protector of the poor. The resistance to private sector participation in service delivery among some segments of civil society is rooted in the suspicion that this sector is solely concerned with profit making and is frequently corrupt (Vyas, Small, & De Riemer, 2003). Thus, just as state officials and entrepreneurs indicated, the citizens we interviewed confirmed that, despite a reputation for poor services, the government brand is considered accountable and credible, particularly for governance services.

If citizens "see the state" through the individuals who conduct the everyday business of the state, then, for telecenter users, the state is partly represented by telecenter entrepreneurs who provide a host of government services.²³ Interactions with the entrepreneurs contribute to citizens' sense of how, and for whom, government operates. In these telecenters, the lines separating state, market, and civil society become blurred, as telecenter entrepreneurs hold multiple positions as community members, businesspeople, and also representatives of the state in the delivery of government services. Both entrepreneurs and the state use this blurring strategically and to their advantage for branding. The state is not "rolled back" as such, but uses the blurring to reshape its image. The entrepreneurs use it to gain trust. Thus through their daily operations entrepreneurs create constructions of the state, which in turn give their own businesses legitimacy.²⁴

We find that through these ICTD projects a new form of government is being experimented with that attempts to combine the accountability of an elected government with the efficiency and customer service associated with the private sector. Doubts about the appropriateness and effectiveness of private sector participation remain, especially in Kerala; and doubts about the government remain in both states. The telecenter projects, the most prominent face of ICTD in Kerala and AP, are not (yet) delivering any form of "D" to the poorest. Nevertheless, our research shows that the attempt to portray a new form of government is beginning to influence at least some segments of the rural population. It is creating spaces in which these people have easier access to, and feel more comfortable with and better served by, the state—particularly as more government services come online and as entrepreneurs continue to act as mediators between citizens and their government. In this sense, our observations support those of Corbridge *et al.* (2005), who conclude that good governance agendas, for all their flaws, may nevertheless open up spaces for citizen participation and empowerment. This hybrid version of government could gradually alter the way in which citizens perceive the everyday state and also the state's vision of its role *vis-à-vis* its citizens.

6. CONCLUSION

This paper has examined the coupling of the public-private partnership model with ICTD efforts in light of how it affects entrepreneurs and households and enables a reshaping of the state in India. It addresses two main questions—whether PPPs reduce the ability of the state to serve the public good, and how citizens' perceptions of the state are affected when PPPs

are used to provide public services. The PPP literature is largely based on analyzing the relevance of the government when it partners with powerful private entities who implement major infrastructure or public service projects. We examined PPPs in the case of telecenters in Kerala and AP, where the private sector consists of small-scale home-grown entrepreneurs along with (in AP) larger companies who mediate between the state and the entrepreneurs.

We show that, for historical reasons, there is an affinity between ICTD solutions and PPP models in India. Critics of PPPs have argued that these models border on pure privatization and reduce the public sector's ability to serve the public good. We find that, with ICTD telecenters, a simple process of privatization or "outsourcing" of the state is not occurring. Instead, the state can stay engaged in project implementation and retain considerable control over its development agenda and strategy. In our two study states, the government remains a key player when it entrusts the private sector, particularly small entrepreneurs who are themselves ordinary citizens, with the responsibility of delivering public services.

We find that the histories of each state lead to variations in its PPP strategies and in the relative importance given to social *versus* efficiency goals. In our study, the more interventionist strategies have (modest) positive impacts on entrepreneurial success. But both the interventionist and the more outsourcing telecenter strategies seem to have similar distributional outcomes. The literature suggests that while PPPs may compensate for the inefficiencies of the public sector, the equity

impacts of PPPs on low income populations are highly varied (Miraftab, 2004). Our research on ICTD kiosks confirms that the benefits of many projects are mainly captured by the semi-rural middle classes, and suggests (as shown in Figure 4) that the skew in favor of higher income groups is exacerbated by the need for telecenter micro-entrepreneurs to break even. Even in accommodative states such as India, it seems politically infeasible to pursue a direct strategy of serving the poorest through these part-public part-private telecenters. The Government of India's national CSC (or 100,000 telecenter) project could well perpetuate this bias by focusing on technology and financial services that cater to the middle classes rather than to the poor.

The good governance agenda implemented via PPPs is based on an idealized representation of the modern state run on business principles. We find that citizens' institutional trust in, but also disillusionment with, government creates a space for the state to renegotiate its image by outsourcing service delivery to ICTD telecenters. These PPPs also create a space for entrepreneurs to gain the trust of citizens by strategically using the state's name and brand. In a developmental state such as India, the state can thus use service delivery through ICTD as a powerful political symbol of responsiveness and as a policy tool with which to portray a new more efficient government. Over time, and if these PPP-ICTD projects scale up, this symbolic (and partly real) responsiveness may enable Indian states to begin shedding their image of bureaucratic lethargy, and to be seen as more user-friendly by their citizens.

NOTES

1. http://siteresources.worldbank.org//dec.usaid.gov/partners/ict/USAID_ICT_Report_May2004.pdf.

2. The term "state" encompasses multiple levels of government, from the capital to district offices.

3. Rather than look at the way the state might see its citizens (c.f. James Scott in *Seeing Like the State*, 1998), Corbridge *et al.*, 2005 examine how citizens view government agencies in India.

4. The developmental state is defined as one that maintains autonomy but is not insulated from the broader society. It is embedded in a set of social ties that bind the state to society and provide institutional channels for negotiation of goals and practices (Evans, 1995).

5. E-governance aims to improve traditional administrative processes by using ICTs to provide greater reliability, transparency, scalability, and customer service.

6. Since 1998, the IT industry has grown tremendously, with its contribution to the Indian GDP increasing from 1.4% in 1998-99 to 5.2% in 2006 (GOI, 2004). The number of IT and IT-enabled services professionals employed in India grew from 284,000 in 1999-2000 to 1.29 million in 2005-06. IT employees were estimated at 2 million for 2007-08 (DIT, 2007).

7. In 2004, AP's Chief Minister Chandrababu Naidu, who had been a prominent figure in supporting the growth of the IT industry, lost his bid for reelection. A popular criticism in the press about Naidu's term was that he did not "extend the benefits of the IT industry" to the rural majority.

8. Individual state initiatives such as the telecenter projects in Kerala and AP will be incorporated loosely into this national scheme, though they

were started earlier and independently in their respective states. States will retain autonomy in the implementation of the telecenters.

9. As an example, Kerala's literacy rate is 91% compared to 61% for the Indian average, 70% for the South Asia average and 99% for the US.

10. This was the first time the World Bank took a specific interest in an Indian state as opposed to approaching the central government.

11. The Rural e-seva centers' most popular services include the provision of income and caste certificates, payment of electricity bills, and online applications. The project began under the leadership of the district Collector who acted as a champion in facilitating services and garnering citizen support. The National Informatics Center trains the entrepreneurs. There is much interaction between the centers and the district government in the implementation. The entrepreneurs purchase their own equipment, provide services, and run the centers. The government facilitates the loans, provides the entrepreneurs with government buildings as centers, and provides general support.

12. The AP government owns 11% of the company and Tata Consulting Services owns 89%.

13. RSDP telecenters are owned by individual entrepreneurs who converted their existing telephone booths into places where citizens can pay bills and access e-governance services. There used to be 800,000 telephone operators in the villages of the state. RSDPs were initiated across the state in the East Godavari, Guntur, Krishna, and West Godavari districts. At present, 926 RSDP telecenters are in a "working state" (GoAP interview, September 2006).

14. The Rajiv project aims to bring the "government closer to the people by providing electronic based delivery within the reach of citizens living in rural areas". Telecenter services include electricity bill payment, public

examination results, and processes to lodge complaints with the government; as well as payment of cell phone bills, matrimonial services, and computer literacy. There is no startup subsidy for the entrepreneurs. Each entrepreneur must pay the company an initial investment for the provision of services and necessary equipment. The entrepreneur's role is to provide services and maintain their center and equipment.

15. \$1 = Rs 44.5 January– May 2006.

16. These included companies such as Infosys, Tata Consulting Services, (then still respected) Satyam Computer Services, Suntech, and IBS.

17. When the e-governance program, Friends, which provides government services via private sector partners in urban areas, was first established in Kerala in the late 1990s, there was great public outcry that the government was “privatizing” its services. For the Akshaya project, which also allows private individuals to deliver government services, there was less opposition. The explicit social goals within the entrepreneurial model were key to the widespread acceptance of the program.

18. In the case of Rural e-seva, marginalized groups were originally targeted as entrepreneurs. However, this occurred at a district government level. The AP state government did not make specific efforts to mandate a social agenda in its telecenters.

19. This figure is based on data from India's National Sample Survey Organization from 2000 to 2001 and adjusted using the all-India average metropolitan Consumer Price Index for 2006. (Monthly Consumer

Price Index of Metro Cities, <http://des.delhigovt.nic.in/PCU/metro-month.htm>).

20. The literature on kiosk revenues has shown that Indian kiosk operators may not provide robust self-reports as to their profits or losses (Veeraghavan, Singh, Toyama, & Menon, 2006). Our surveys, however, were supplemented by many hours of observation and informal discussions with several of the surveyed entrepreneurs, thus reducing the probability of intentional “errors”.

21. In order to categorize profitability by income group, we created a ratio of the difference in the number of high versus low income customers as a proportion of the total number of customers ($(N_{\text{High income}} - N_{\text{Low income}})/N_{\text{Total customers}}$). High- or middle-income customers and low-income or below-poverty-line customers were defined as such by the entrepreneurs themselves. We calculated the median profit for each income group for all the projects.

22. Of the original 630 centers, only 430 remained as of 2006.

23. We recognize that telecenter entrepreneurs are not the only intermediaries between citizen and state, just the newest ones. They are, however, different from long-standing intermediaries such as NGOs or local “big men” in that they are at once the state and yet not the state.

24. In this sense entrepreneurs are not replacing local government officials. Rather, they can be seen as supporting local bureaucrats, with their domain knowledge on for example health or agriculture, by introducing additional capabilities (Rajalekshmi, 2008).

REFERENCES

- Batterbury, S., & Fernando, J. (2006). Rescaling governance and the impacts of political and environmental decentralization: An introduction. *World Development*, 34(11), 1851–1863.
- Bell, T. (2006). *Village computing: A state of the field reflections on the village computing consultation*. November: Grameen Foundation.
- Blattman, C., Jensen, R., & Roman, R. (2003). Assessing the need and potential of community networking for development in rural india. *The Information Society*, 19(5), 349–364.
- Brewer, E., Demmer, M., Du, B., Ho, M., Kam, M., Nedecchi, S., et al. (2005). The case for technology in developing regions. *IEEE*.
- Cerny, P. G. (1995). Globalization and the changing logic of collective action. *International Organization*, 49(4), 595–625.
- Clarke, J., & Newman, J. (2008). What's in a name? New labour's citizen-consumers and the remaking of public services. *Cultural Studies*, 21(4–5), 738–757.
- Comaroff, J. (1998). Reflections on the colonial state in south africa and elsewhere: Factions, fragments, facts, and fictions. *Social Identities*, 4(3), 321–361.
- Corbridge, S., Williams, R., Srivastava, M., & Veron, R. (2005). *Seeing the state: Governance and governmentality in India*. Cambridge: Cambridge University Press.
- Dedrick, J., & Kraemer, K. (1993). Information technology in India: The quest for self-reliance. *Asian Survey*, 33(5), 463–492.
- Desoto, H. (2000). *The mystery of capital: Why capitalism triumphs in the west and fails everywhere else*. New York: Basic Books.
- Dev, M., & Ravi, C. (2003). Macroeconomic scene: Performance and policies. In C. Rao, & M. Dev (Eds.), *Andhra Pradesh development: Economic reforms and challenges ahead*. Hyderabad: Center for Economic and Social Studies.
- DIT. (2006). *Union cabinet approves setting up of 100,000 rural common service centers*. Press Release Government of India, September 21, 2006. <<http://www.mit.gov.in/default.aspx?id=661>>.
- DIT. (2007). *Annual report*. Ministry of Information Technology, Government of India.
- Evans, P. (1995). *Embedded autonomy. States and industrial transformation*. Princeton: Princeton University Press.
- Ferguson, J., & Gupta, A. (2002). Spatializing states: Towards an ethnography of neoliberal governmentality. *American Ethnologist*, 29(4), 981–1002.
- Frankel, F. (1978). *India's political economy, 1947–1977. The gradual revolution*. Princeton: Princeton University Press.
- GOI. (2004). *India: E-readiness assessment report 2004*. Department of Information Technology, Ministry of Communications and Information Technology.
- Gupta, A. (1995). Blurred boundaries: The discourse of corruption, the culture of politics, and the imagined state. *American Ethnologist*, 22(2), 375–402.
- Heller, P. (1999). *The labor of development: Workers and the transformation of capitalism in Kerala*. India, Ithaca: Cornell University Press.
- IIITB. (2005). *E-governance report*. Bangalore: IIITB, Kiran, GR.
- Jenkins, R. (2002). The emergence of the governance agenda Sovereignty neoliberal bias and the politics of international development. In V. Desai, & R. Potter (Eds.), *The companion to development studies*. NY: Oxford University Press.
- Jensen, R. (2007). The digital provide: Information (technology), market performance, and welfare in the south indian fisheries sector. *The Quarterly Journal of Economics*, CXXII(3).
- Kashyap, P., & Raut, S. (2007). *The rural marketing book*. Delhi: Suddha Offset Press.
- Kiri, K., & Menon, D. (2006). For profit rural kiosks in india: Achievements and challenges. *Information Technologies for Development*.
- Klijin, E., & Teisman, G. (2000). Governing public-private partnerships: Analysing and managing the processes and institutional characteristics of public-private partnerships. In S. Osborne (Ed.), *Public-private partnerships: Theory and practice in international perspective*. London: Routledge.
- Kohli, A. (2005). *State directed development: Political power and industrialization in the global periphery*. Cambridge: Cambridge University Press.
- Kumar, R. (2004). Echoupals: A study on the financial sustainability of village internet centers in rural Madhya Pradesh. *Information Technologies and International Development*, 2(1), 45–73.

- Kumar, R., & Best, M. (2006). Impact and sustainability of e-government services in developing countries: Lessons learned from Tamilnadu, India. *The Information Society*, 22(1), 1–12.
- Kuriyan, R., Ray, I., & Toyama, K. (2008). Information and communication technologies for development: The bottom of the pyramid model in practice. *The Information Society*, 24, 93–104.
- Lewis, D. (2000). Building active partnerships in aid-recipient countries: Lessons from a rural development project in Bangladesh. In S. Osborne (Ed.), *Public-private partnerships: Theory and practice in international perspective*. London: Routledge.
- Linder, S. (1999). Coming to terms with the public-private partnership. *American Behavioral Scientist*, 43(1), 35–51.
- Madon, S. (2005). Governance lessons from the telecenters in Kerala. *European Journal of Information Systems*, 14(4), 401–416.
- McMichael, P. (1996). *Development and change: A global perspective*. Thousand Oaks: Pine Forge Press.
- Miraftab, F. (2004). Public-private partnerships: The trojan horse of neoliberal development. *Journal of Planning Education and Research*, 24(1), 89–101.
- Nanda, V. (2006). The good governance concept revisited. *ANNALS AAPSS*, 603, 269–283.
- Pal, J. (2007). Examining e-literacy using telecenters as public spending: The case of akshaya. In *Proceedings of the 2nd IEEE/ACM international conference ICTD 2007*.
- Parayil, G. (1992). The green-revolution in india – A case-study of technological-change. *Technology and Culture*, 33(4), 737–756.
- Pinto, A. (1999). Andhra Pradesh: Politics of opportunism. *Economic and Political Weekly*, 4(September), 1999.
- Prahalad, C. K., & Hart, S. (2002). Fortune at the bottom of the pyramid. *Strategy and Business*, 26(first quarter).
- Rajalekshmi, K. (2008). E-governance services through telecenters: The role of human intermediary and issues of trust. *Information Technologies and International Development*, 4(1), 19–35.
- Rammohan, K. T. (2000). Assessing reassessment of Kerala model. *Economic and Political Weekly*, 8(April).
- Rao, H. a. D., M. (Ed.). (2003). *Andhra pradesh development: Economic reforms and the challenges ahead*. Hyderabad: Center for Economic and Social Studies.
- Reddy, G. K. (2002). New populism and liberalisation: Regime shift under chandrababu naidu in AP. *Economic and Political Weekly*, 2(March).
- Salvador, T., Sherry, J., & Urrutia, A. (2003). Less cyber, more café. Design implications for easing the digital divide with locally social cyber cafes. In *Information systems perspectives and challenges in the context of globalization* (pp. 323–337).
- Sayer, A. (2005). *The moral significance of class*. Cambridge: Cambridge University Press.
- Scott, J. (1998). *Seeing like a state: How certain schemes to improve the human condition have failed*. New Haven: Yale Agrarian Studies Series.
- Suri, K. (2004). Andhra pradesh: Fall of the ceo in arena of democracy. *Economic and Political Weekly*, 18(December).
- Thomas, J., & Parayil, G. (2008). Bridging the social and digital divides in Andhra Pradesh and Kerala: A capabilities approach. *Development and Change*, 39(3), 409–435.
- Veeraghavan, R., Singh, G., Toyama, K., & Menon, D. (2006). Kiosk usage measurement using a software logging tool. In *Poster at international conference on information & communication technologies for development, May 2006, Berkeley, USA*.
- Veron, R. (2001). The “new” Kerala model: Lessons for sustainable development. *World Development*, 29(4), 601–617.
- Vyas, R., Small, P., & De Riemer, K. (2003). The private public divide: Impact of conflicting perceptions between the private and public health care sectors in India. *International Journal of Tuberculosis and Lung Disease*, 7(6), 543–549.

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