

# Looking beyond ‘information provision’: The importance of being a kiosk operator in the Sustainable Access in Rural India (SARI) project, Tamilnadu, India

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**Abstract**—Development projects based on Information and Communication Technologies (ICTs) attract significant funding support. Many such projects are initiated on the premise that ICTs can play an important role in reducing acute information asymmetries in low-income regions. Advocates of ICT-based projects hope that the provision of information will lead to effective markets and economic development. However, is it in their role as information providers that ICT-based projects shape the most change? Based on my research on an ICT-based project called Sustainable Access in Rural India in Tamilnadu, I argue that change in this project was shaped less by the provision of information to an entire community than by the spaces for interaction that the project opened up specifically for female kiosk operators. In their role as intermediaries between the state and citizens, operators in this project started to see the state differently and were, in turn, perceived differently by the village community.

**Index Terms**—information asymmetries, kiosk projects, Tamilnadu, governance, gender

## I. INTRODUCTION

Access to telecommunication infrastructure has been an important development goal for development agencies since the late 1970s. The objective of such access, however, has changed over time: while the focus was on ‘communication’ especially telephony in the 1970s and 1980s, it shifted to ‘information provision’ in the 1990s.<sup>1</sup> The idea of information as a development tool derived significantly from research that suggested a link between access to information and economic development [4]-[9]. Information imperfections, the cost of providing information, and information asymmetries were perceived to be intimately tied to economic growth. A body of research within information economics argues that market failures associated with information

imperfections are typically more prevalent in low-income regions and countries [7],[9]. Information asymmetries, or the differences in what different individuals and agencies know, are also more likely to be acute in developing countries. Furthermore, these countries are also less likely to have the non-market institutions that can effectively ameliorate market failures resulting from imperfect information or information asymmetries [10]. Policies of economic growth that are based on the assumption of perfect information, therefore, are set up to fail in this scenario. The reduction of information asymmetries is seen as important in this context in order to improve economic decision-making and subsequently lead to effective markets and economic growth [11].

To the extent that the reduction of information asymmetries was an important concern for development agencies in the 1990s, information provision became the means by which to address that concern. Development agencies at the time were encouraged by the working of Information and Communication Technologies (ICTs) in higher-income regions of the world. They believed that ICTs could act as tools for information provision in low-income regions, leading to a subsequent reduction of information symmetries and the creation of a global Information Society [12]-[14].

Of all the initiatives that have been set up on the premise that information and ICTs play a role in development, telecenter projects are the most driven by the idea of reducing information asymmetries. Telecenters, also called multi-purpose community service centers or information kiosks, are supposed to provide shared access to ICTs in low-income communities that otherwise lack access to reliable communication infrastructure.<sup>2</sup> They vary in terms of their size and the facilities they offer, with some providing only basic telecommunications services such as telephony. However,

Telecenters can also function as community information centers, providing access to databases and receiving and posting information of general interest to local people (e.g., government notices, information on the spread of diseases, weather information, prices

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<sup>1</sup>For more on the link between telecom and development, see [1],[2],[3] on the Maitland Report of 1984 and its impact on development agencies as well as states.

<sup>2</sup>The ‘telecenter for development’ discourse was triggered by the appearance of ‘telecottages’ in rural Scandinavia in the mid-1980s [15],[16]. The ‘telecenter movement’ then spread to other countries in Europe and to Australia, Japan and Brazil [16]-[18]. By the mid-1990s, international development agencies and experts were advocating the use of telecenters as a development tool [1].

of farm products, educational opportunities). [18:3]

In the last decade, information kiosks have typically been set up as providers of information on market prices, weather, agricultural techniques, and government entitlement schemes [19]-[22].<sup>3</sup> The information provided by kiosks is often collated from a variety of sources and is provided in the hope that access to it will enable better economic decision-making and more efficient transactions.

There are at least three questions that need to be asked of kiosk projects and their fundamental premise that the availability of ICTs and the achievement of development goals are related. The first is whether information kiosks indeed reduce information asymmetries and make information accessible to all sections of a community. Research on information kiosk projects so far seems to suggest that access to information through kiosks is extremely uneven within a community for a variety of reasons [20],[21],[23]-[25]. The second question is whether access to information indeed translates to social and economic changes in a community. Research on this aspect of kiosk projects suggests that the relationship between information access and socio-economic change is not universal, and is mediated by a variety of historical, political, and cultural factors [19],[20],[25]. This paper focuses on a third question, asking whether it is in their role as information providers that kiosks shape the most significant changes.

Research on kiosk projects so far has largely tended to study social and economic change along the objectives specified by projects themselves. Since the objectives of a majority of projects focus on information provision services, there is little research on kiosk projects that looks beyond their functioning as information providers. Moreover, the objectives of projects are typically focused on their end users, saying little about the people (including kiosk operators (KOs)) involved in the setting up and everyday functioning of kiosks. Projects seldom talk about operators except in an instrumental way—for example, as an information provider, an intermediary between the state and citizens or mediating between an unfamiliar technology and a community. While this may well be one role fulfilled by the operator, operators are, after all human beings and not an extension of the ICT. Rather than passively transmit information, they understand and interpret it for themselves and for users. Furthermore, KOs do not merely mediate between the state and the citizen: they also consolidate their status in a community based on the position that they occupy as KOs. The changes in the lives of operators can thus provide rich insights into the ways in which kiosk projects shape change on the ground. Yet, this aspect of kiosk projects remains understudied since it does not fall within the list of intended project objectives.

In this paper, I look beyond the intended objectives of a kiosk project, focusing on the process of becoming and being a kiosk operator. For reasons outlined earlier, existing research on kiosk projects has seldom talked about KOs. Where KOs

have been studied, it has been with an eye to understand their role in the social or financial sustainability of kiosks [20],[22]. Yet, since operators are the people involved most closely with a kiosk, changes in their lives are likely to tell us a lot about the changes, intended or otherwise, that kiosk projects have been able to shape.

I study the case of the Sustainable Access in Rural India (SARI) project. SARI is a kiosk project based in southern India. It was set up in 2001 in the predominantly agricultural Melur *taluk* of Madurai district in the southern Indian state of Tamilnadu.<sup>4</sup> The stated mission of the project was

to improve the quality of life among the rural poor by creating new opportunities in education, health, economic development and community through the appropriate use of ICTs.

Over the years, information kiosks have been set up in 50 villages of the *taluk* with the help of a local micro-credit NGO called Dhan. Kiosks offer a variety of information provision services, including information on government schemes, procedures and entitlements. They are typically operated by women KOs who work closely with Dhan.

The rest of the paper is organized as follows. In the following section, I lay out Corbridge et al.'s idea of the unintentional creation of spaces in development projects that I use subsequently to understand change in the SARI project [26]. Following this, I describe the SARI project and how it has shaped change in the lives of women kiosk operators in the project, focusing on the increased interaction of kiosk operators with representatives of the state and other domains of activity, and on their changed status in their communities and families. Finally, I present my conclusions which suggest that while the kiosks have not brought about radical changes in the socio-economic conditions of their users, they *have* shaped significant changes in the lives of KOs. The limited social and economic changes brought about by the kiosks are not merely due to the “reduction of information asymmetries.” Instead, change is shaped by repeated interaction between KOs, project employees, and state functionaries. Through regular training, brainstorming and evaluation sessions, and opportunities to interact with bureaucrats, agricultural scientists, lawyers and health professionals, the SARI project provides operators a space to engage in activities that go beyond their traditional roles in their community, especially for women KOs. It is not the information or the ICTs, but the *process* of becoming and being an operator that shaped change in the SARI project.

## II. DEVELOPMENT PROJECTS AND THE UNINTENTIONAL CREATION OF SPACES

A vast literature in development studies argues that development projects seldom achieve the goals they set out for themselves. Scholars suggest that, in fact, development

<sup>3</sup>Most telecenters would offer a range of other services such as computer classes, internet browsing, text or voice chatting and DTP facilities.

<sup>4</sup>A *taluk* is the smallest unit of revenue administration in a district. Melur *taluk* in Madurai district consists of 83 villages.

projects end up strengthening dominant sections of a population and reinforcing existing relationships of exploitation [27]-[29].<sup>5</sup> Corbridge et al. understand the working of development projects differently [26]. While they agree that development projects seldom reach the goals that they set out for themselves, they disagree with the conclusion that projects always end up strengthening dominant sections of a society. They suggest, instead, that development projects may in parallel, create spaces for negotiation among marginalized sections of a population even when they do not intend to do so.

I use Corbridge et al.'s framework to understand kiosk projects. I ask what kinds of spaces the SARI project unintentionally creates for the members of a community. My focus within the community is on KOs and when I talk of spaces, I am particularly interested in the spaces offered by the process of state-citizen interactions that KOs are supposed to mediate. Here I take seriously Corbridge et al.'s suggestion that people "see the state" or make sense of it through their encounters with representatives of the state. Development schemes and projects that work on altering the frequency or nature of interaction between states and citizens have the potential to bring about a change in people's perceptions of the state and their ability to negotiate their relationship with it. While Corbridge et al. focus their analysis on state-sponsored and schemes, I extend their argument in the context of development projects more broadly and use the case of an NGO-run information kiosk project to make my argument.

The idea of "seeing the state" has already been used in the context of e-governance projects to suggest that such projects are able to change how citizens imagine the state, even if not always in the direction the state desires [30]. While the authors focus on the end user-citizen's perception of the state, my concern is slightly different. Looking at the mediated relationship between the state and the citizen in a kiosk project, I ask two questions: how do KOs "see the state" through their now frequent interactions with its representatives and how do citizens, in turn, see KOs while they perform their role of mediation. I argue that the increased frequency of interactions with local government representatives, bureaucrats and a range of domain experts have helped KOs see the state and negotiate with it differently. Their position as a KO has also altered how the community sees them and, as a result, their status in the community.

In summary, I study the SARI project to understand its unintended outcomes for KOs. More specifically, I seek to understand how the SARI KO's perception of the state changes through her altered interactions with it in her role as a KO, and how her status in her community changes because of the community's altered perception of her.

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<sup>5</sup>These scholars differ in the intentionality that they attribute to the development agencies deploying a project. Ferguson and Escobar see a hidden agenda behind the implementation of development projects[27],[28]. Li disagrees, arguing that development project personnel are mostly well intentioned but that projects nevertheless end up strengthening dominant sections in trying to balance the interests of various participants in a project [29].

### III. METHODS

My evidence is drawn from fieldwork conducted in two phases (April-June 2004 and March-April 2005) and follow-up conversations with project personnel in 2007 and 2009. Observing the project over several years provided an understanding of its working and evolution. It also helped me observe changes in the lives of KOs over a period of time.

Fieldwork in Melur *taluk* included participant observation, interviews (mainly unstructured) and data collection from user logs maintained by kiosk operators and at government offices. Interviews with employees of Dhan and SARI provided an understanding of the history and current features of the project. In addition, people at the Melur *taluk* office (users as well as employees), the sub-registrar's office, and the Melur municipality office provided information on the history and functioning of e-governance services in SARI.

Interacting with KOs provided rich information on the working of the project, especially its e-governance component and the role of Dhan. I also attended KO meetings and group canvassing sessions (explained later in the report) towards this end. While three kiosks were studied in detail, I visited more than 10 Dhan kiosks and talked to 20 Dhan KOs during the course of fieldwork. The choice of kiosks for detailed study emerged in part from these conversations. The study of individual kiosks included observing their functioning and collecting user data maintained by the kiosks. Talking to users and non-users in these village, particularly women, was important in understanding the social context in which the kiosk was located as well people's perception of the kiosk and the KO. Interacting with a KO's family provided an understanding of the KO's role and status in her family. Together, the conversations led to an understanding of the changes that the community and the KOs experienced in their everyday lives.

### IV. THE SARI PROJECT AND DHAN'S VILLAGE INFORMATION CENTERS<sup>6</sup>

When SARI was initiated in 2001, it was envisioned as a public private partnership, with funding from a private bank (ICICI), technical support from a private rural internet service provider (n-Logue)<sup>7</sup> and Dhan as the local implementation agency.<sup>8</sup> The district and local governments partnered with the

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<sup>6</sup>All material in the next few sections is based on [23],[24], [31]-[33] unless otherwise stated.

<sup>7</sup>n-Logue is a rural internet service provider that provides internet connectivity with a wireless in local loop (WLL) solution. The company works in small towns and villages in India by setting up a tower in a town from where it can connect to an internet backbone. It provides wireless connectivity to villages in a 25km radius. n-Logue provides connections to individuals and to kiosks set up by entrepreneurs with the help of a local service provider. n-Logue and the local service provider are paid monthly fees by kiosk owners.

<sup>8</sup>The SARI project group wanted to leverage Dhan's knowledge of local needs in setting up kiosks. However, n-Logue and Dhan were unable to agree on a model of operation for the kiosks, with n-Logue favoring an entrepreneurial model and Dhan a donor funded model. As a result, n-Logue and Dhan set up two distinct brands of kiosks in the *taluk*. I focus on Dhan

project, helping offer e-governance services. The list of services on the SARI e-governance website at the start of the project was as follows :

1. Provision of information regarding government schemes, including
  - a) Eligibility criteria and procedures for application. For example, eligibility criteria for Old Age Pension (OAP) Schemes, women's welfare schemes, loans from the District Industries Centre, and admission to courses in various government colleges as well as the procedure to apply for a driving license.
  - b) Application forms for schemes. These could be downloaded, filled in, and printed out for submission. Some applications could also be emailed to the concerned officer.
2. Facility to apply for government certificates by email. This involved the following government offices and certificates:
  - a) The *taluk* office for birth, death, income, community, nativity, and legal heirship certificates
  - b) The sub registrar's office for guideline valuation of property, encumbrance certificates, and certified copies
3. Facility to send petitions and complaints by email to the Chief Minister, the Collector, and the Block Development Officer.
4. Provision of market prices of agricultural produce at the nearest government-run market yard.

The SARI kiosks run by Dhan were called Village Information Centers (VICs) and consisted of a room equipped with a computer, peripherals, and internet connectivity. KOs operated the centers and were paid a monthly stipend by Dhan. Six years after the initiation of the SARI project, 50 VICs were in operation and none had closed. VICs offered a variety of services including e-governance (along the lines described above), computer classes, games, photography, video conferencing, internet browsing, and online consultation with doctors, agricultural scientists, and veterinarians. Dhan VICs also acted as resource centers for an adult literacy program. In addition, a few operators would put up the daily news and a list of events in the village at the local bus stop, or other locations where villagers usually gathered. A similar service was being planned to display information such as weather forecasts, and market prices that farmers were likely to find useful.

VICs generated an income by charging a user fee for accessing the services they offered. However, they were not focused on breaking even, and were funded partially by Dhan. KOs had to hand over the earnings of the kiosk to Dhan, which then paid the electricity bill, rent, internet charges, and a stipend to the operator. No kiosk was able to meet all these costs with its revenues even five years after the start of the project. The long-term plan, however, continued to be that once an operator was able to meet all these expenses, s/he could run the kiosk independently, though Dhan would be

willing to provide operators any support they might require.

Dhan positioned its kiosks as community assets rather than as commercial enterprises. It expected the KOs to make their centers socially sustainable, encouraging members from different sections of the community to view the center as a place where they could find information that was relevant to their lives. To this end, operators organized village-level meetings with residents, elected members, and employees of the local government. These meetings were supposed to raise awareness about the VIC, and attract suggestions for new services from attendees. Operators also worked with the local government in village-level data collection and in the compilation of village-level records.

## V. BECOMING AND BEING A KIOSK OPERATOR

Kiosk operators were and continue to be pivotal to Dhan's model. Since Dhan's programs typically focus on women and the members of its self-help groups are all women, Dhan's initial goal was to recruit only women operators for the kiosks. But when the SARI project was started, many families were not willing to let the women in the family go out of the villages—for a short-term KO training to start off with and, later, everyday for work.<sup>9</sup> As a result, not even half the operators were women at the start of the project. However, with time, more women joined as operators. In 2004, 19 of the 37 operational kiosks had women operators; by 2005, 29 of the 37 operators were women.

There were a variety of reasons why more women joined as operators with time. Dhan project personnel made an aggressive effort to recruit women by talking to their families. The presence of a few women operators convinced other women and their families that being a KO was safe. The women KOs also acted as role models for other women. The long drought that hit the Madurai belt between 2001 and 2004 meant that women did not have much work in their fields and had time on their hands. The drought also made the chance to earn an income seem more lucrative to the family, even if it involved women going 'out' to work for salaried positions, which was uncommon in the region.<sup>10</sup> In some cases, the woman operator's stipend would even be the only steady income for a household, given the lack of agricultural income in that period. At the other end of the gender ratio, the attrition among male operators was high and they gave up their jobs as KOs to join other positions that paid better. For all these reasons, a majority of Dhan-SARI KOs were women three years after the project started.

Other than its gender focus, Dhan did not look for specific traits in its operators. Most of its operators were former students of Dhan's Computer Training centre or VICs. Anyone who expressed an interest was taken on as an operator when possible and was then given provided training. Monthly meetings among KOs and Dhan employees were used as training sessions on the technical and social dimensions of running an IT kiosk. At these meetings, operators were also asked to set targets for the next six months. These targets were set in terms of numbers of users for each service rather than in terms of income earned. The review meetings examined why

kiosks for the purposes of this paper (One reason for this choice was that there were more Dhan kiosks than n-Logue kiosks which numbered about 10 by 2004. Even that number rapidly dwindled after 2004)

<sup>9</sup>KOs were posted at kiosks in villages other than the ones they lived in.

<sup>10</sup>Even women who worked for a wage, mainly worked as agricultural labor in the fields of other village residents or residents of nearby villages.

KOs had been able or unable to meet past targets. Besides monthly meetings, operators who came to collect government documents at the *taluk* level government offices for their e-governance customers usually dropped in to meet people at the Dhan office. Overall, the links between KOs and Dhan were very strong and proved central to the functioning of VICs.

Kiosk operators also knew each other very well. They attended meetings together and chatted online with each other almost everyday. Since operators were frequently transferred from kiosk to kiosk, they shared their experiences about a specific village or region. Monthly meetings also involved a lot of interaction with new operators who were taught the tricks of the trade by more experienced operators, sometimes through role-playing. Another arena where operators interacted with each other were group canvassing sessions in villages on Sundays. In these sessions, new recruits often trained with experienced operators to learn the art of canvassing. In such sessions, operators split into smaller groups, going door-to-door, introducing the new KO to village residents and explaining the services offered at the VIC.

Besides canvassing as a group, all operators were required to canvass for two hours in their own villages as part of their daily work schedule. As a result, KOs were well known in most villages. Besides daily canvassing and the occasional group canvassing, KOs also interacted with residents of a village through the establishment of kiosk advisory committees (KACs) that comprised village *panchayat* leaders, village level bureaucrats and representatives from different village groups. The goal of KACs was to establish the kiosk as a community asset rather than as a solely commercial enterprise. Holding an advisory committee meeting was one of the ‘events’ that a KO had to organize every month. An ‘event’ was one that brought people to the kiosk and examples of events over a month in various kiosks typically included women’s meetings, farmers’ meetings, and conducting practice classes for students who had failed the class 10 public examinations. The purpose of these events was once again to make people aware of the kiosk and its services.

Finally, KOs interacted with government employees and domain experts (agricultural scientists, doctors, lawyers etc.) as part of the services they offered. KOs dealt with government employees in order to obtain documents such as birth or death certificates (the most favored e-governance service,) and while submitting documents such as ration card applications to the government. KOs interacted with agricultural or veterinary scientists and lawyers when they organized consultations through teleconferencing at kiosks. They interacted with doctors and nurses as they organized patient appointments using email, and later followed up to ascertain whether kiosk users kept these appointments. At times, KOs would accompany a group of patients to the hospital for treatment in the event that the patients were unable to travel by themselves or had no one else to accompany them to the hospital.

The focus of Dhan’s VIC project was to make the VIC a place where residents of a village came in order to access any information they required, though with a focus on government

procedures, agricultural techniques, and employment opportunities. While they saw operators as critical, Dhan’s goals were nevertheless concerned more with kiosk users. Research on the usage of kiosks and kiosk services in the Dhan-SARI case indicates that kiosks have been unable to attract a large number of people for a variety of reasons including the location of kiosks, the affordability and relevance of services, and trust in older, familiar, and time-tested ways of accessing information, and other services [23], [24] and [31]. The project has also not been successful in drawing people from all sections of a community, with caste and gender being particularly significant factors in deciding who uses a kiosk and how. These studies suggest overall that while individual users might have benefitted to some extent from the services offered at the kiosk, particularly the service related to obtaining government certificates, the village community at large did not directly experience significant economic changes in their lives because of the kiosk. On the other hand, I suggest that operators in the project have experienced significant changes in their everyday lives.

## VI. CHANGES IN THE LIVES OF KIOSK OPERATORS

In this section, I examine changes in the lives of operators in the Dhan-SARI project. While the section will continue to draw on my interviews with project personnel and a number of kiosk operators, the focus in this section will be on the operators of three kiosks that I studied in detail. My detailed study was of three kiosks operated by women. I call these operators Lakshmi, Chinnaatha, and Sangeetha. All three were from “Backward Caste” communities. Lakshmi and Chinnaatha were both in their thirties. They were married and had children when I first met them in 2004. Both had been operators since the beginning of the project. Sangeetha was much younger, single, and an operator for just over six months. For all three women, being an operator was their first experience at paid work and at working outside home.<sup>11</sup> All three operators discussed the profound impacts of such work on their life within and outside their family and homes. Change along three dimensions appeared to be particularly significant in their descriptions: awareness of techniques and procedures in domains as varied as the state bureaucracy, an agriculture university, and a hospital; interaction with people involved in these domains as well as Dhan employees; and their status in their community and their family.

### A. Awareness and increased interactions

Conversations with operators indicated that working as KOs introduced them to domains and techniques that they were not familiar with earlier. They saw this as a profound and positive change. In an interview in June 2004, Lakshmi described this change in the following way:

Earlier, I couldn’t talk to strangers. Now I talk to

<sup>11</sup>All three operators were from families that did not own much land and hence worked on that land themselves rather than hiring people to cultivate it. Lakshmi and Chinnaatha worked on their own land, but had never worked on land owned by others for a wage. Sangeetha had just completed schooling and had not worked as much in the fields.

people at the *taluk* office and my seniors at Dhan. I meet great doctors. I can teach a class of students and I know that I can do it well. I am in touch with so many fields: agriculture, veterinary, government. There's nowhere else that I could have learnt so much. I am much more confident of myself today, I am bolder than I was. I used to feel really bad that I was not studying further after marriage, but now I feel good that I can earn, I can work.

Observing operators in action supports this statement. To obtain a birth certificate for a user in 2004, for example, operators would email a computer clerk at the *taluk* office on behalf of a customer. The KO would be intimidated by email once the certificate was ready. She then proceeded to the *taluk* office to collect it. The process, therefore, involved an awareness of certain government procedures as well as interactions with government employees. This was especially significant for women who typically did not undertake these interactions alone, if they undertook them at all, prior to their employment as operators. As KOs, these women were now able to transact with government employees, including negotiating the occasional demands for bribes.

It is important to note here that "information" about government procedures is only one part of what the KOs are talking about. It is through their repeated visits to the *taluk* office and interactions with the functionaries that KOs learn the ropes of obtaining a certificate. They understand who to meet, the good times to approach a functionary, how to ask for a favor such as a quick around, how much to bribe, and when not to bribe. That the KOs had understood the working of the office became clear when the internet connection at the *taluk* office was discontinued in mid-2004. The KOs continued to deliver government certificates, except that now they made a trip to the office to place an order, several to enquire if the certificate was ready and another to pick it up. They dealt with demands for bribes that increased now that the KOs were acting on behalf of citizens without the stamp of approval that e-governance had been granted. That KOs dealt with an altered state of affairs and were able to deliver certificates, albeit with some delay, was a sign that they had learnt how to negotiate with functionaries.

As part of their duties, KOs were also supposed to be aware of current government schemes so that they could explain these schemes to village residents. Dhan pointed these out at meetings. But operators also explored schemes on their own. In the summer of 2004, for instance, Chinnaatha discovered details of the government's ration card scheme while browsing the Internet. She then went on to discuss this with other operators and also to provide assistance in applying for the scheme (such as print outs of application forms and photographs for the application) at the kiosk.

In its initial stages, the SARI project had also provided a forum for interaction between operators, the District Collector, and other high-level bureaucrats. In the first months of its operation, the project was strongly supported by the Collector and also offered a wider range of services, such as lodging

complaints and petitions that were dealt with by top-level bureaucrats. This allowed for meetings between KOs and bureaucrats regarding the working of the e-governance component of the SARI project. While these meetings did not last once the Collector left, they continue to be a source of great pride to the KOs who participated in them and to those whose kiosks were visited by these government officials.

At another level, Dhan has been working to increase the interaction between their operators and members of the local and *taluk* level government. Towards this end, the *Panchayat* President and the Village Administrative Officer (VAO) (who are arguably the most important government functionaries at the village level) were invited to be a part of the village Kiosk Advisory Committee (KAC). The goal was to increase their involvement and stake in the kiosk. The KAC was supposed to meet regularly to discuss the activities of the kiosk and to obtain feedback from all its members. A forum like the KAC gave women operators an opportunity to interact with the president and VAO more than they would otherwise have, given that the president and VAO were male in the three cases of my focus. Chinnaatha complained that she hardly got to meet the president of her village and that he did not involve himself in the affairs of the kiosk. By making him a part of the KAC, she hoped that he would spend a definite amount of time each month talking about the problems of the kiosk. Where she would have had to go to meet him personally earlier, with the KAC she could meet him at a public forum. The President and VAO also grew to recognize the KO.

All three operators emphasized the role of training sessions and frequent meetings with the Dhan project staff and fellow KOs in the changes they experienced. Such sessions and meetings provided yet another forum for interaction for KOs, and proved especially critical for women operators. For Lakshmi, Chinnaatha and Sangeetha, for example, their employment with Dhan was the first time that they traveled alone from their homes to the Dhan head office in Madurai, or to other villages. It was the first time in their adult lives that they interacted closely with a group of people who were neither from their family, nor from their village. Further, Dhan's training sessions provided KOs a unique forum where they obtained computer and service-related training and also voiced their suggestions and concerns about their work. Sessions on using different software applications, fixing simple hardware problems, devising and deploying services, and canvassing in a village offered KOs social resources that they could use both in and outside their lives as KOs.

Overall, then, the Dhan-SARI project exposed operators to a wide variety of techniques, skills and procedures in a range of domains. It also created or increased interaction among KOs, between KOs and the village community, between KOs and Dhan project staff, and between KOs and bureaucrats. By affecting the frequency and nature of encounters between KOs and functionaries of the state at different levels of the hierarchy, the SARI project shaped how KOs "see the state." Building on Corbridge et al., I suggest that these encounters have allowed KOs to learn how best to negotiate with the state in order to achieve their users' and their own ends [26]. In

their role as mediators between the state and citizens, KOs also established social and political connections within the state.

My focus so far has been on the unintended changes brought about by encounters between KOs and the state, especially in the ways that KOs perceived the state. However, KOs also experienced changes in how the community perceived them and in their relationships within the community and their families. These changes too were not intended by the SARI project and I examine them in the next section.

### *B. Status in community/family*

Being a KO for Dhan changes a woman's status in her village community significantly. The village community typically comes to know the KO by name. In fact, kiosks are more closely identified with their KOs than with Dhan. People who need a birth certificate urgently seek out KOs and hand in the details. To be recognized in this way within the village community was important for the operators I spoke to. They were proud of being referred to as the 'girl/woman to go to for certificates' or the 'girl/woman with the computer.' The symbolic value of the computer also cannot be underestimated and played an important role in shaping how a KO is regarded. As an operator, a KO handled a device that few in the village knew how to operate. At the same time, this was a device to which much aspiration is attached. As a consequence of these factors, women operators have gradually begun to be seen as role models in their villages. Where convincing women to be KOs or even to attend computer classes was an uphill task when the project started, families now feel that an aspiration to be a KO is both safe and feasible for their daughters. In talking about her own work as a KO, Lakshmi emphasized that the continued presence of kiosks and women KOs has been responsible for this change in mindset to an extent, and has helped attract more female students to the kiosk, a few of whom may later continue as KOs. Being a KO has thus changed the way an individual is viewed by her community and this seems an especially significant shift for women KOs. It has given KOs a status and credibility in the community that they can potentially leverage.

Women operators also talked about changes in their relationships within their family. Not all changes made them feel better off than before, but they admitted that the changes were considerable. There was an economic dimension to the change. Women operators had an income, and this was the first time that the three I interviewed were engaging in work that directly paid them a monthly salary. The ways in which women KOs used their salaries was different for different operators and shaped especially by their marital status. The married operators talked invariably about the significance of their income for the educational and other choices it made available to their children. They talked about sending their children to private, English-medium schools. The income also proved critical in meeting household expenses in the conditions of drought that were prevalent for the first three years of the SARI project. While most KOs said their

husbands and the joint families they lived with appreciated the extra money, their stories of other kinds of family support differed considerably.

Sangeetha who was single had a very different story to tell than Lakshmi and Chinnaatha, who were married and lived in their husbands' villages and with/close to their husbands' extended families. Sangeetha said she received complete support from her parents in her work, even though they retain some anxiety about her movements outside her village. Lakshmi and Chinnaatha had very different accounts. Support varied and came from different quarters in their lives.

Lakshmi said that her husband and parents-in-law were initially unhappy with her working but are now proud of her. Her husband, who is a carpenter and works from home, helps with some housework. Lakshmi continues to do most of the housework albeit on a schedule that accommodates her work at the kiosk. Lakshmi is also unsure how long she can continue with her work as a KO since her parents-in-law are getting old and require more assistance in their everyday routines. Interestingly, while Lakshmi likes her kiosk work, she sees her husband as the primary breadwinner for the family and appears somewhat uncomfortable that her husband does not earn enough to provide his family a comfortable lifestyle with his earnings alone.

While Lakshmi struggles with these contradictory emotions, Chinnaatha has her own set of contradictions to deal with in her life. She confessed that she received no support from her husband and his family. Chinnaatha's mother who lived in a neighboring village supported her by taking care of her children during the week. Chinnaatha wryly remarked that everybody liked the money she brought in but resented the time she spent away from home and from housework. She herself feels bad about the time she spends away from her children. Chinnaatha struggles constantly between how much time she spends at home and at work. She has also tried unsuccessfully to engage her husband in the work she does, but he has not displayed any interest so far. Chinnaatha says that she often despairs of carrying on in this way. However, she says almost in the same breath that she likes what she is doing and appreciates the support from the Dhan office that keeps her going.

Thus, being a KO has brought about significant changes in the lives that women KOs lead in their communities and families. Women KOs have then been able to use the economic and social resources that were available to them in their role as KOs in the renegotiation of their everyday lives in small ways. An important point to note here is the role played by Dhan in these changes. While earning an income has been important in the changes described above, it is clear that the support from Dhan has strongly shaped the way in which women experience being a KO. Their ability to contest their family norms, for example, draws largely from their belief that the Dhan project staff is behind them. They also draw strength from their interactions with other women KOs who may face similar circumstances. Thus, Dhan's interaction and training-centric model has been crucial to the way women KOs experience the SARI project and how they have drawn on this

experience in their lives outside the kiosk.

A common theme that emerges from the examples of change presented so far is the importance of unintended changes that a project of this kind makes possible. The Dhan-SARI project was started with a goal of information provision and in the hope that access to information would bring about economic prosperity for kiosk users in the village community. While information services do not appear to have made drastic differences in the economic prosperity of their users, Dhan KOs have benefited in unanticipated ways from the project. Further, these benefits do not directly derive from access to information, nor are they solely economic. They are linked rather to the opportunities made available by being associated closely with a project of this kind, in particular through the creation or modification of spaces for interaction.

## VII. CONCLUSION

Based on my study of the SARI kiosk project operated by Dhan in India, I have argued that while SARI kiosks have not brought about radical changes in the socio-economic conditions of their users, they have nevertheless shaped significant changes in the lives of kiosk operators. For KOs, their awareness of procedures and techniques, their ability to negotiate interactions with other KOs, Dhan personnel, bureaucrats, scientists, health professionals and people from a variety of other fields, and finally, their changed status in their communities because of their role as KOs, are particularly significant. I have argued that the social and economic changes brought about by the Dhan kiosks have been less about a "reduction of information asymmetries" and more about gathering resources required to negotiate social asymmetries. I have suggested that the changing frequency and nature of interactions with different entities have helped KOs garner such resources. Association with the project has provided KOs with new forums in which to conduct these interactions (online consultation, face-to-face meetings with bureaucrats to fetch certificates for customers, KACs, kiosk events) and new resources (familiarity with terms, procedures, techniques, social and political connections) that they leverage even outside their role as KOs. Overall, the project has changed both how a KO "sees the state" and how the community "sees" the KO.

Finally, I have used these examples of changes to advance the argument that if development projects do not achieve the objectives that they lay out, they do not always end up only strengthening dominant sections of a community either. Whatever the intentions of a development project might be, it is important to study its working on the ground to understand the unanticipated ways in which marginalized sections of a community utilize opportunities offered by the project.

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