Summary & Policy

Implications
CHAPTER VI
SUMMARY AND POLICY IMPLICATIONS

A brief summary of the research along with the salient findings, conclusions drawn and policy recommendations for administrators and planners are presented in this chapter.

6.1 Introduction

Land is a fundamentally important economic, social, and environmental resource, particularly in a country such as India where a majority of the population still earns their living from agriculture. It follows that defining, allocating, and protecting rights to land are crucially important. The strength and protection of such land rights ultimately depends upon a system of publicly kept land records. Despite the importance of these land records, such records in India, by all accounts, suffer from fundamental problems of inaccuracy, inefficiency, and opaqueness.

In recent years, the Ministry of Rural Development (MRD), Government of India has taken initiative to identify the deficiencies in the present systems of land records and to address them. The primary method for addressing the deficiencies has been to use information technology as means for improving the land records. The MRD has provided substantial resources to the states for such Computerization of Land Records (COLR) programs. The COLR scheme has involved three different actors: the National Informatics Centre (NIC); the MRD; and the state governments. NIC is responsible for upgrading its district centers with the latest hardware, software, terminals, and printers to expedite the work of data entry. It is also responsible for creating the software packages and providing training on the software to revenue officials. MRD provides financial support to the states for site preparation, data entry work, purchase of capital
equipment, and miscellaneous other expenditures. The state
governments are responsible for data collection, data verification and
validation, and distribution of the new records of rights to landowners

The state of Karnataka has been justifiably recognized as a pioneering
state in the Computerization of Land Records. Karnataka’s COLR
program has attracted widespread recognition and even international
awards. Karnataka’s land revenue records include about 20 million
plot-specific records of 6.7 million landowners in 177 Taluks. These
records had been maintained by approximately 9,000 Village
Accountants (VAs).

Computerization of Land Records began in Karnataka in 1991 when
the first pilot was initiated in Gulbarga District through a centrally-
sponsored scheme. By 1996, COLR projects had been sanctioned for
a pilot taluk in all districts of the state. These earlier efforts failed to
meet their objectives and fizzled out. Sometime later, after assessing
the earlier efforts, the state government mandated that COLR be
undertaken and finished in all of the state’s 177 taluks by March
2002.

Under this most recent effort, known as the Bhoomi E-governance
project, the state government claims to have fully computerized the
records of rights maintained by the revenue department throughout
the state. The system works with software called “BHoomi” designed
fully in-house by NIC, Bangalore. The software provides for printing of
land records and incorporates a process of online updatation to
ensure up-to-date issuance of the primary land document, Record of
Rights, Tenancy and Crop Information (RTC), to farmers. The software
also incorporates a bio-logon metrics system which authenticates
various users on the basis of fingerprints in order to reduce or
eliminate hacking and manipulation of the land records.

Perhaps most importantly, the system is designed so that
computerized copies of RTCs can be obtained at taluk-level computer
kiosks by farmers or any member of the general public for a fee of Rs 15 per record. Landowners need copies of such RTCs to undertake many tasks such as applying for loans, transacting in land, requesting a land survey, engaging in litigation concerning land, and obtaining income certificates (which are often required to prove eligibility for various government programs). Moreover, the state plans to connect the land records database to databases accessible to various courts and banks in order to facilitate their work relating to land records.

The "Bhoomi" software is designed by National Information Center (NIC) Bangalore. The software provides for printing of land records as and when required. It incorporates a process of online updation to ensure that the RTCs provided to the farmers are in sync with the present realities. The manual land records in operationalised taluks have been declared to have no legal significance. All the mutations to the land records database are done on the computer itself so as to ensure that data on computer remain current with time.

The Bhoomi software incorporates a state of the art bio-logon metrics system from Compaq, which authenticates various users on the basis of fingerprints. This ensures that nobody can hack the system by imitating other users. The replacement of password security system by fingerprint authentication system should go a long way to ensure those databases are free from any hacking and that the non-repudiation system is in place. This software also allows for scanning of original mutation orders of the Revenue Inspector (who is the authorized person to pass orders in the mutations in the field) and notices served on interested parties. Both documents are scanned to ensure responsibility can be fixed on Officials by showing the original documents signed by them and also to ensure that interested parities do not claim in the court that they were not served with the notice before effecting the mutation.
The software enables the administrators to generate various reports based on type of soil, land holding size, type of crops grown etc. This information should help administrators to take informed policy decision.

Hence, a systematic evaluation to measure the impact of COLR-related to development of rural economy at the community/land owners level will throw a limelight on the overall performance of this innovative e-governance scheme. Such an effort will also identify the operational problems encountered in the implementation of the scheme. Consequently, the experience gained will inform the design and implementation of similar such schemes in other state and in realizing and reaping the fullest potential of such schemes.

In view of the importance of COLR for the economy as a whole, the present study was undertaken with the objective of assessing COLR's impact in Karnataka. With this broad consideration, the following objectives have been attempted:

1. To assess the impact of COLR.

2. To estimate the transaction cost of accessing information from Kiosk obtain information about the time and costs necessary for farmers to obtain computerized land records.

3. To study the constraints and infrastructural bottlenecks in the effectiveness of COLR.

4. To document the views of land revenue officials regarding the advantages and disadvantages of the new computerized land records system.

6.2 Sampling framework

The study was taken up in two representative administrative zones of Karnataka namely, Tumkur and Gulbarga. Since the COLR process
has been implemented in the entire state it was very much necessary to cover two representative zones namely northern and a southern administrative zone and hence making a purposive selection of two zones. One district from each zone and two taluks in each district were selected randomly.

Fifty land owner respondents who visited the computerized kiosk to collect the land document were randomly selected from each taluk, totaling 200 primary respondents. A pre tested questionnaire was used for these interviews. The questionnaire mainly focused on information pertaining to: household details; land details; general awareness on COLR; benefits occurring from COLR; rent seeking behavior; behavior of conflicts; facilitation in availing institutional finance; facilitating in sale/purchase of land; mutation; on RTC; purpose of visiting the kiosk; purpose for obtaining the RTC; opinions on old and new methods of RTC distribution; and finally, the respondents comments and suggestions on COLR.

The next important sets of primary respondents were the concerned government officials, primarily those from the revenue department. Five different cadre officials from each taluka were interviewed, making a total sample size of 20. Different sets of questionnaire were prepared for this purpose and before collecting the data, the questionnaire was pre-tested and the necessary changes were incorporated accordingly. This set of respondents included the tahsildar, deputy tahsildar, revenue inspectors and village secretary/accountant. The information collected related to the officer’s roles and responsibilities under computerization, their duties, their opinion on old system of distributing RTC, on trainings to the staff, on online computerized land records maintenance, opinion on the present system, advantages and disadvantages of old and new systems, and their related comments and suggestions.
The last set of respondents under this section was the state-level revenue officials, which included the top brass of the department. A check list method was employed to collect their opinion on the computerization. The main information collected here related to state performance on COLR and the opinion and their views on the state’s COLR programs.

6.3 Analytical tools used

Tabular analysis, logistic regression analysis and garrets ranking technique were employed to realise the objectives of study. Tabular analyses were used to study the socio-economic characters of the respondents and the cost and time involved in obtaining computerized land records/RTC. Logistic regression analysis was used to assess the variables impacting the participation/adoption of respondents involving COLR. Garret ranking technique was used to rank the constraints.

6.4 Major findings

The major findings of the study are as follows:

1. The randomly selected land owners sample consisted primarily of middle-aged, educated, Hindu males. A majority of the respondents interviewed in the study area were middle aged between 43 years to 50 years. A majority (84 %) was Hindus and Muslims (16 %) comprised the next largest religion.

The study was highlighted with Hindu religion followed by Muslim community. With respect to caste, 35 per cent of the respondents were from OBC, followed by General Caste (30 %), SC (18 %), and ST (17 %).

In all the study Taluks, a majority of the respondents had at least a high school.
2. A majority (62%) of the respondents interviewed had agriculture as their primary occupation and source of income. Among all respondents, 66 per cent had more than one plot/parcel and the rest had a single plot/parcel. The major source of irrigation was bore well.

3. The primary method of obtaining land was through ancestry (86%).

4. In general, 41 per cent of respondents were documented in medium land size category, 31 per cent in small land size category and 28 per cent large size category.

5. Eighty-five per cent of the respondents were aware about COLR and 86 per cent were aware of the procedures required for obtaining a computerized RTC from the kiosk.

6. Sixty-five per cent of the respondents reported that they received a free copy of computerized RTC during the process of computerization in their respective areas, which in most cases was between the years of 2002-05.

7. Sixty-one percent of respondents reported that the village accountant was their source of information on the COLR. Neighbors and friends contributed for 20 and 16 percent respectively.

8. Eighty-four per cent of respondents were aware of the survey numbers of their land(s).

9. Among all the interviewed respondents, 57 percent opined that the new computerized system is 100 percent accurate and 30% of the respondents were not in a position to judge the accuracy.

10. A majority of respondents (52%) were in the kiosk to collect only on RTC, closely followed by respondents who were these to collect both on RTC and MR (43%).
11. Respondents reported that the major purposes for obtaining the RTC were crop loans (100%) and legal purposes (62.5%).

12. Fifty-five per cent respondents stated that the new system was free from harassment. Thirteen per cent of respondents were not in a position to comment.

13. Seventeen per cent of respondents reported the COLR system had not generated greater awareness about government lands.

14. Fifty-eight per cent of respondents reported that they were able to obtain a computerized RTC from the kiosk without delay. Thirty-three per cent reported delays and 9 per cent stated that they are not in apposition to judge.

15. Prior to computerization, 61 per cent of respondents reported that they were able to obtain an RTC within one day. Eighteen per cent reported that it took one week and 17 per cent two weeks.

16. After computerization, the average time required for obtaining an RTC after initial request has decreased. Eighty-two per cent of respondents received the document with in one day. In fact, 6 per cent received them with in 5 minutes, 14 per cent with in one hour, 20 per cent with in half a day and 42 per cent with in one day. Seven per cent took longer then one day and 11 per cent didn’t know.

17. Surprisingly, the amount spent to obtain an RTC was high in the new computerized system at an average of Rs. 94. In the old manual system, the average spending was Rs. 65.

18. The distance traveled to obtain land documents increased after computerization. The average distance traveled was 37 Kilo meters after computerization, whereas it was 26 kms prior to computerization.
19. Nearly all respondents (98.5 %) urged for the establishment of an alternative kiosk. Among which, 75 percent of respondents are interested in having the alternative kiosk at the Hobli level followed by 19 per cent asking for kiosk at the Gram panchayath level and 6 per cent at the village level.

20. The three most cited positive outcomes from COLR from land owner respondents were: less opportunity to manipulate the land records, reduction of land disputes and related conflicts, and easy availability of finance and crop loans.

21. The state level government officials generally pointed to other outcomes as most important. The top three positive COLR outcomes cited by them were: timely collection of revenue, time saving to the land owners, and reduced work load for VAs.

22. The results from the logit analysis indicated that income, education and age of the respondents had significant effect on respondent's adoption behavior towards the new technology of computerization. Meaning all the three factors played a vital role in adopting COLR.

23. The study reflect the week and in some cases the non-functioning of the “Neemadi Kendras”.

24. The three most important constraints or problems faced by the land owner sample with the new COLR system included: long distance traveled, transportation cost, and high fees for the RTC.

25. The major problem with the new computerized system cited by the state level government officials were: lack of staff followed by decentralization, high work load, and lack of infrastructural facilities.

26. The major problems cited by kiosk operators were: lack and high dependency on the trained kiosk operators, dependency on the officials, and poor establishment of kiosk centers.
27. From the Thasildhars point of view on the COLR, delivery of accurate land records and less chance for land records fraud were considered as the major merits of COLR. Less trained kiosk operators and increased workload on the Thasildhar were considered as the major demerits of the COLR.

28. According to the Deputy Thasildhars, more accurate land records and less fraudulent manipulation of land records were the major advantage of the COLR. Whereas, long distance travel from the land owners and more time and costs involved were considered as the major disadvantages in the new computerized system.

29. The views of the revenue inspectors on the new COLR system varied slightly from that of the other officials. More time available to attend the other works and easy verification of the land buyers and accurate records were the identified positive points. More dependency on the VA for the transfer of “J” slip to the Taluk office, and more frequent traveling of inspectors to the Taluk office were the major negatives points.

30. All the interviewed VAs opined that a reduction in RTC-related work and the fact that anyone can obtain an RTC from the kiosk were considered as the major advantages of the COLR. On the other hand, the major disadvantages listed were more visits of the VAs to taluk offices and more time needed for the new entries.
6.5 Policy implications

Computerization of land records is considered as a good practice approach in standardizing the land record maintenance system. From the policy makers point of view it is very important to consider certain points for its better performance and to make it more user-friendly. Accordingly, the following policy implications are drawn from the findings of the study:

1. Opening of new alternate kiosk at the Hobli level should be considered on a priority basis as it reduces the time and cost involved for the land owners.

2. Strengthening the existing "Neemadi Kendras" should be considered and necessary steps should be taken for its smooth functioning.

3. Providing better infrastructural facilities such as a better building for the kiosk, a good computer system and printers, and, particularly, long lasting battery back ups to overcome the long power cuts will help in the smooth functioning of the system and hence enhance the productivity.

4. Formation of a separate BHoomi cell at Taluk level is recommended, as the department is using the existing revenue staff for its operation. Forming a new cell will result in the better functioning of the system and allow the existing staff to concentrate on other work.

5. Recruiting additional staff and providing training to additional staff is highly recommended as it helps in overcoming the overall constraints faced.

6. The existing thumb login system for correction and data changes should be decentralized from the Thasildhar level to other lower
officials. This will allow the Thasildhars to concentrate on other duties and will result in quicker transactions.

7. From the technology point of view, the correction software has been considered as an excessively time-consuming process. Simplifying this is recommended as it helps in quicker transactions and avoids long pending of the applications.

8. Issue RTC copies on a per landholder basis rather than a per land plot basis.

9. Establish a ticket number queuing system to establish efficiency and equity in the queuing process at the computer kiosk.

10. For the other states that are on the process of computerizing, it is very important to conduct an intensive ground work on the time and cost reduction.

11. Other states should learn the best practices from this state and at the same time should try to overcome the constraints faced here. For example, on the kiosk centers establishment, distance traveled and so on. Any new program developed should be useful to end users and should be designed and implemented keeping them in view.

6.6 Conclusion

Improving the system of public land records in India is important in order to make the processes of defining, protecting, allocating, and transferring land more effective. The Government of India has chosen the computerization of existing manual land records as a primary means of improving the land records system. International experience and the early and laudable pioneering efforts of Karnataka can provide lessons as to the potential benefits and problems of computerization. Only time and more comprehensive assessments will determine whether COLR in Karnataka has resulted in a land records system
that (1) better protects the rights of all landowners, and (2) makes land transactions easier, less expensive, simpler, and more effective.

In the end, COLR, on its own, is unlikely to be a panacea for the multiple problems inherent in India's land record systems. COLR certainly can improve land records systems (and already has in Karnataka). Whether such improvements are worth the program costs—especially considering the long-term commitment required—will require more comprehensive and regular assessments. Such assessments should take advantage of the international lessons, keep in view the initial and fundamental objectives of the COLR efforts, and, most importantly, seek the views of those the program is meant to benefit— the landowners themselves.