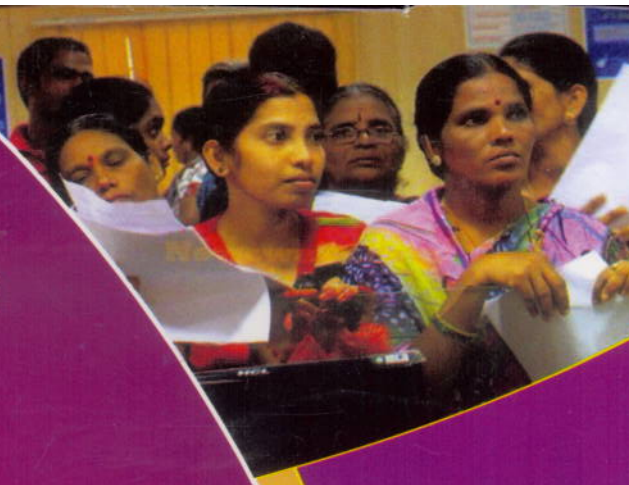

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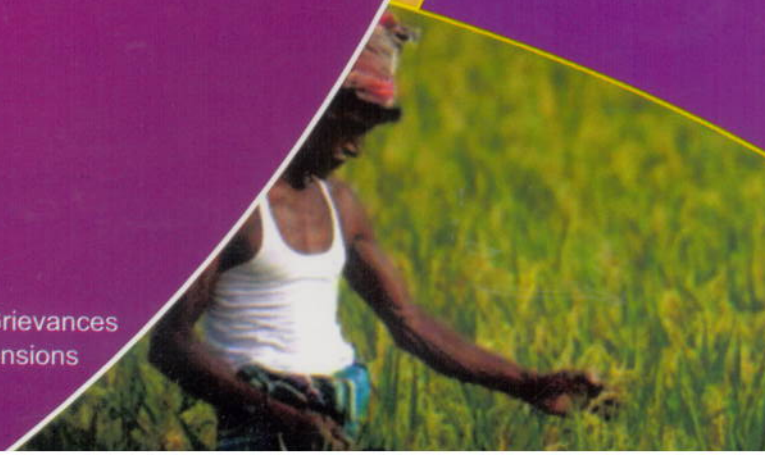

सत्यमेव जयते

Department of Administrative Reforms & Public Grievances
Ministry of Personnel, Public Grievances & Pensions
Government of India

Impact of Industry Partnership in Service Delivery Channels of Land Records in Himachal Pradesh

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Abstract- Land record keeping is one of the most important Government functions which affect all property owners both in urban and rural areas. Although similar to a bank account, it is more important, as a piece of land or house is owned by almost all members of most of the families. The computerisation of land records has been in progress in the State now for many years covering registration, record of rights, maps and resurvey of land using modern tools. Earlier, the service delivery in terms of record of rights and map copies was predominantly through the Government functionaries from their offices. However, now due to ICT advancement and full computerisation, the State Government has authorized Citizen Service Centre operators to issue these documents on behalf of the Government. Besides, the digitization of maps and resurvey of land has been entrusted to private sector. This paper attempts to study the impact of industry participation in service delivery and suggest a model for better serving the citizens by identifying the kind of services suitable for private delivery channels. The role of technology in the entire process has also been analysed to justify focus on process re-engineering in governance process.

Keywords-land records, digital governance, citizen service, record of rights, cadastral map, industry participation, new frontiers, delivery channel, registration, HimBhoomi

I. INTRODUCTION

The growing use of information and communication technologies (ICT) is making its presence felt in the developing nations through knowledge societies and allowing people to participate in the governan process. One of the models of digital governanc proposed earlier, was interactive service delive model whereby the Government services we extended beyond office complexes [1].

Gyandoot project in Dhar district of Madhya Prade was based on this model and later the LokMit pilot project was implemented in Hamirpur distri of Himachal Pradesh (HP) in the year 200 LokMitra Kendras (LMK) in 25 panchayats we set up in the private sector in Hamirpur as extensio counters of the Government for offering variou services [2]. These LMKs were set up by invitin direct applications from unemployed youth. The functioned as private entrepreneurs and provide informative and assured services like University School Education Board result copies, bill payments lodging of complaints etc. Most of these LMK remained operational for 9 years till their merge with the CSC scheme in the year 2010.

In the year 2010, the name LokMitra Kendra was given to the proposed 3366 Citizen Service Centres to be set up in the State under the scheme of DeitY, GoI under PPP model. The LMK operators are now appointed by short-listing two private firms through an open tender, which act as Service Centre Agency (SCA). This was the first step in allowing industry participation in service delivery model in a big way, thereby opening up new frontiers in digital governance. The land record services are being offered through these LMK centres and its service delivery channels are the focus area for studying impact of industry participation in Government service delivery.

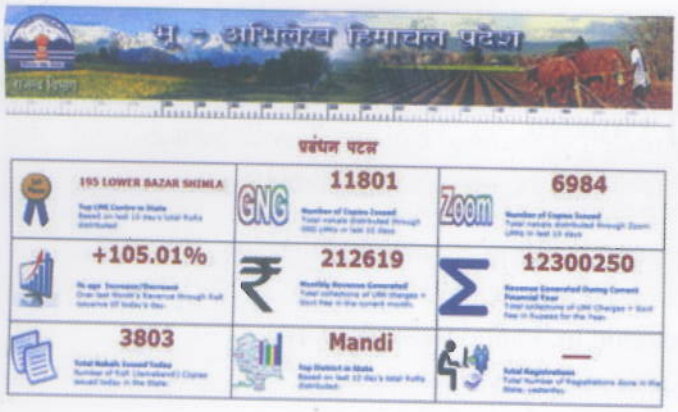

Figure 1: Online service delivery transaction management portal at

http://admis.hp.nic.in/himbhoomilmk

The computerisation of land records (CLR) in all States was started in the year 1988-89 and it picked up speed in the years 1992-1996. The main objective of CLR scheme was to provide the computerized copies of Records of Rights (RORs or Jamabandis), at a reasonable price to the land owners. Funds were provided to the State Governments to ensure online management of land records [3]. The other objectives included speed, accuracy and dispute resolution, empowerment of land owners, preservation of records etc. Subsequently the National Land Records Modernization Programme (NLRMP) was launched by Government of India in August 2008, with the objective to modernize management of land records, minimize scope of land/property disputes, enhance transparency in the land records maintenance system, and facilitate moving eventually towards guaranteed conclusive titles to immovable properties in the country [4]. The NLRMP focus is on integration of land records with registration, mutation, digitization of maps, integration of textual and spatial data, survey/ resurvey and capacity building. The conclusive titling with title guarantee is the ultimate goal and different State Governments are in various stages of achieving it.

II. LRC IMPLEMENTATION IN HIMACHAL PRADESH

Himachal Pradesh has 15 lakh households and 89% of its population lives in rural areas with small land holdings. The literacy rate is 83.78% which is good and implies that the land owners are quite vigilant.

The computerisation of Land Records in HP has been a massive exercise over the last 20 years. Started as true replica of age old existing record of rights, it got integrated with the registration process and thereafter, a number of process changes have been affected. During the process of computerization, the HP Revenue department has carried out many amendments to simplify and provide value additions to the RoR entries like; removing internal fractions (dar-var) while specifying shares owned by co-sharers. Computerisation has also resulted in removing the constraint of maintaining record up to last 10 generations while maintaining Shajra Nasb . The computerization of land records has resulted in providing unique identification to each owner within a village/hamlet. The land has been broadly categorized as cultivable and uncultivable and the cultivable land is further categorized as rain fed and irrigated. It is designed to extract irrigation sources information and holding size based data. Himachal Pradesh is the only state to have computerized Shajra Nasb which acts as index of owners for the RoR.

[1]The word Jamabandi and Record of Rights (RoR) are used interchangeably (same meaning in Himachal Pradesh).

[2] Census of India 2011

[3] Shajra Nasb is the genealogy tree of a family

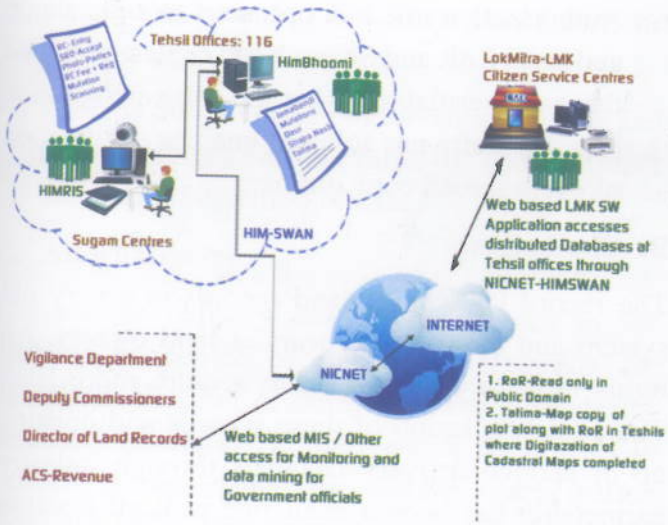

Figure-2: Conceptual diagram of NLRMP implementation in Himachal Pradesh [5].

After successful implementation in district Shimla where legacy data for 5 Tehsils was fed by the in house revenue officials, the job of one time legacy data digitization was outsourced to private entrepreneurs through tender process. The data fed by the outsourced agency was verified and got corrected by the concerned Patwari (village accountant) till both hardcopies, one prepared manually and the other print of electronic data, were fully matching. These were further sample checked by concerned Kanungo and Tehsildar before the records were consigned in the Revenue record room. Thereafter, the data is being kept up to date by feeding all the transactions taking place within seven days of passing of the order [6].

In the year 2008, Himachal Pradesh started the process of digitization of existing village map sheets by outsourcing the one time backlog digitization through private companies. This job is in progress in four districts and the remaining eight districts are being taken up through fresh tender. The work is likely to start in December 2014 for all these eight districts. As part of NLRMP, the second initiative is the resurvey of land using modern equipment i.e. Electronic Total Station (ETS) and Global Positioning System (GPS). The State has decided to procure modern equipment through tender process and as part of this tender the supplier will also carry out survey of 15 villages per district. The vendor h the responsibility to train the officials of Settleme department during the survey activity. The modes implementation and different software/ technologi used in LRC are given in Tables 1 and 2 below:

Table-1: Modes of Implementation

Function	Mode	Method
RoR (Jamabandi) backlog entry	Private	Hired data entry agencies by tender
Software	Government	In-house through NIC
Mutation	Government	Revenue officials
Registration	Government	Registration officials
RoR, Shajra Nasb copies issuance	Private and Government	LMK, Sugam and Tehsil centres
Digitization of Cadastral maps	Private	Open Tender
Data verification (textual & spatial)	Government	Revenue officials
Map updation	Government	Revenue officials
Survey, Resurvey	Private	Pilot outsourced
Capacity building	Private and Government	As per requirement

Table-2: Software and Technology

Software	Technology
HimBhoomi-RoR, mutation (attribute)	Client/ Server, MS Sql and VB, GIST SDK for Hindi language
HIMRIS-Registration	Client/Server, MS Sql and VB
Delivery of service RoR, Shajra Nasb	Web based application, ASP .Net, MS Sql, Unicode based

BhuNaksha (spatial solution)	PostGreSQL, Java
Survey/ Resurvey	ETS/GPS

A. Government Process Re-engineering:

The expansion of service delivery channels would not have proved to be so beneficial to the citizens had it not been for the Revenue department to carry out certain important process reforms. These are:

- Change of format and size of paper for printing of RoR copies: Earlier the Jamabandi was printed on A3 size paper with fixed 13 columns. However, the private entrepreneurs at LMKs could not afford expensive A3 size printers, whereas A4 size laser printers are quite economical and common. Therefore, the size of Jamabandi paper was reduced by Government and since lesser number of columns could be adjusted in A4 size and to enhance readability, the number of columns have been re-aligned and reduced to make the A4 size Jamabandi more legible. The revised format for Jamabandi with Map (Tatima) has also been approved for delivery through LMKs.

- Updation of computer records within 7 days of any transaction taking place in the field by the concerned Revenue official (Patwari/ Kanungo/ Tehsildar) [6]. This has ensured updated copies of RoR and Shajra Nasb being available at the LMKs.

- Integration of Registration with land records database at all Registration offices in the State has helped to keep a check on fraudulent registrations as the seller details are picked directly from the RoR database and after registration, entry is made in the remarks column of RoR. The State had also allowed immediate mutation at the time of registration in the year 2011 as a step forward towards conclusive titling. However, the said notification has been withdrawn in the year 2013.

- Authorization of LMK operators to sign, stamp and issue RoR and Shajra Nasb copies, provided these are verifiable, as per the software solution [7]. The software solution enables verification of every issued copy online.

B. Challenges:

The record keeping of land records is a very old system and close to the heart of land owners. All fights in history have been to acquire more land. The computerisation of these records and opening up of service delivery channels through industry partnership has been a challenge in itself because of age-old practices and rules. The revenue officials were not interested in opening the service delivery channels for vested interests. The other major issues are listed below:

- The hardware and software need to be upgraded at Tehsils. The different software/technologies used in LRC as given in Table-2 are being used and need urgent upgradation.
- Good and stable connectivity in all Tehsil offices continues to be an issue even after so many years as some of the Tehsil data is still not accessible for services delivery through LMKs and citizens have to visit Tehsils offices to get services for such Tehsils.
- Capacity building among all levels of Revenue officials is a cause of concern and good monitoring requires to be done under NLRMP. Training of officials on digital signature certificate (DSC) technology is a must in the light of the Information Technology Act 2008 (Amended).
- Some of the initiatives like Map copy with RoR are yet to be opened for service delivery through LMKs by the Government. The digitization of Musavis is progressing at a slower pace due to delay in verification/ processing of digitized data and not all Tehsils are covered so far.
- Resurvey work using ETS/GPS is yet to take a proper direction as the issue related to change in the measured plot area remains a bone of

contention both for the Government and the land owners.

- There is huge shortage of Revenue officials and many posts are vacant (Table-4). These hamper the work of updation of data.

C. Alternatives:

The service delivery under LRC relates to the delivery of copies of documents, requests for mutations/ division of land, registration of deeds, survey of land etc. The delivery of documents to citizens is best suited for industry participation through LMKs. The other alternative studied is the RoR distribution through Tehsil office or directly through Patwari. But this option is rejected out-rightly based on the data analysed as citizens are not comfortable now that they have an option to get Jamabandi copy through LMKs in the State. The corruption factor reduces when there is none or lesser contact of citizens with Government officials. There is no restriction of office times and availability of Patwari in the Tehsil or Patwarkhana.

Registration is another area where industry participation is possible by authorizing the LMK operators to apply for appointment for registration and submit the scanned copies of documents for scrutiny before the actual registration appointment. Such an initiative is proposed to be implemented in online mode in the State of Haryana . However, at present it has a drawback as it doesn't allow the fixing of appointment through private channels like CSC or LMKs. This implies physical visit of citizens to the Office complex where a counter is set up for the purpose. The better option is to allow individual to schedule appointment using web interface sitting at home and uploading the supporting documents. Keeping in view the large number of land owners or probable purchasers who do not use computer/ internet, the facility can be provided through CSC operators who are village level entrepreneurs. This is an alternative mode, where application and documents could be submitted any time by th citizens from the CSC nearest to their home o payment of small fee. A similar approach coul be followed for mutation and land divisio amalgamation as being done in Karnataka.

As of now, there is no alternative available in cas of registrations but for RoR and Shajra Nasb copie the citizens are visiting LMKs as they prefer th private channel more than the Government, f better and assured services.

III. ANALYSIS OF SERVICE DELIVERY CHANNELS

The CLR in HP has resulted in delivery of services citizens in the form of delivery of RoR/Shajra Na copies and registration of deeds. While registrat of deed continues to be with Government or the RoR and Shajra Nasb copies were distribu through Tehsil centres only till the year 2010. the year 2010, the web based interface allow distribution of copies through Tehsil and Sug Centres for individual Tehsils but in February 20 the Government authorized the LMKs to is certified copies of any Tehsil in the State. The ye wise number of transactions for these service given in Table-3 below:

Table-3: RoR and Registration copies deliver

Financial Year	RoR Issued by Tehsils	RoR Issued by LMKs	Deeds Register
2005-06	1816	0	0
2006-07	102521	0	2298
2007-08	49346	0	2802
2008-09	66786	0	3546
2009-10	150284	0	6071

[4]IT to check graft in land registrations, P.7, The Tribune, HP Edition, 23rd November 2014

2010-11	240948	537	87925
2011-12	220106	52055	66645
2012-13	216695	285451	61141
2013-14	215384	593307	59766
2014-15	228928	702685	58056

The above data is plotted in the line graph in Figure-3 to show the number of transactions through different service delivery channels and highlight the impact of Industry participation from the year 2010-11 onwards when the LMKs from the privates sector came into picture. The red line showing service delivery through industry participation jumps immediately after the Government authorized it in February 2011 and it keeps on growing exponentially whereas service delivery through Government channels remains either constant or drops marginally in these years.

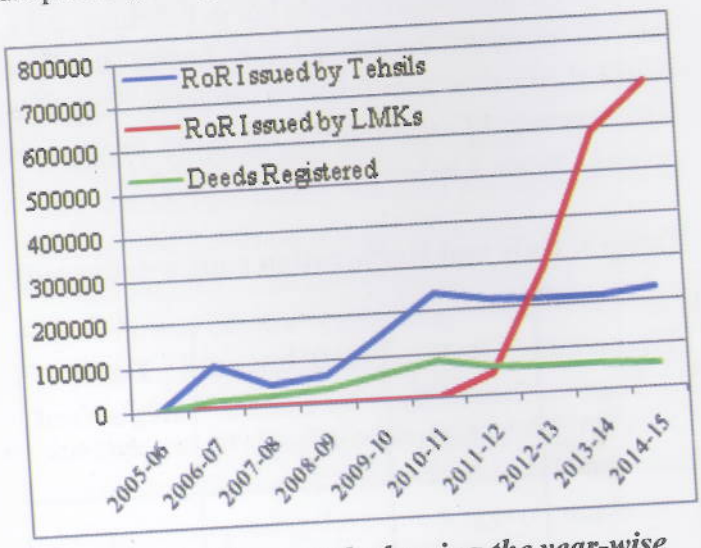

Figure-3: Line graph showing the year-wise impact of industry participation in service delivery channels

During the collection of above data, the shortage of Revenue officials was observed at various levels. Since the requisite number of officials must be present in the system to better serve the citizens, the employee strength at field level comprising of Patwaris was also studied. The data related to the total number of posts, filled posts and likely vacancies due to retirements/ promotions, is presented in Table-4 .

Table-4[6]: Year-wise number of vacant posts of Patwaris.

Year	Existing Vacancies as on 1-1-2010	Vacancies created due to retirements/ promotions	Cumulative Vacancies
2010	457	139	596
2011		127	723
2012		144	867
2013		146	1013

There is a total sanctioned strength of 2,450 Patwaris in Himachal Pradesh and the figure is unchanged since the year 2010. As many as 457 posts of Patwaris were lying vacant on 1-1-2010 and additional vacancies have been caused due to retirements and promotions as shown in Table-5. The total vacancy position is 1,013 at the beginning of the year which is almost 41% of the total sanctioned strength and no posts are getting filled over the years. Such a trend is likely to continue, although the Government is going to fill up many of the posts in near future as the work will suffer otherwise. The point here is that such a trend of lesser number of employees will continue, whereas the expectations of citizens from Government are increasing due to usage of ICT tools.

[5]Data as per the LRC MIS websites of HP Revenue Department at http://admis.hp.nic.in/lrc (till 2010) and http://admis.hp.nic.in/himbhoomilmk (2010 onwards) and data for 2014-15 include projected values of November-March months.

6 Data provided by the Director of Land Records and Consolidation, Himachal Pradesh

Therefore, in order to expand the ambit of citizen services, the departments need to add delivery channels through industry participation.

IV. KEY FINDINGS

The industry participation in land records service delivery channels is certainly a plus factor benefitting the citizens, as has been proved by the data analysed. The key finding of this study, with reference to the land records computerisation in Himachal Pradesh, are given below:

- Himachal Pradesh has a total population of 65 lakhs with 15 lakh households. The number of copies distributed through LMKs in the last three years is 16.6 lakhs, implying that almost every house-hold of the State has availed of the citizen service through LMKs. This has helped to empower the land owners, which is a basic objective of the NLRMP.
- The data for registrations is more or less constant over the years because this is under Government domain. The data for RoR shows a sudden jump when service delivery in standardized format from Tehsils was started in 2009-10 and then it remains constant. However, there is phenomenal increase in the number of transactions through LMKs immediately and it is still increasing as the citizens don't have to visit Government offices to avail of this service.
- Technology per se is not the crucial factor, but connectivity is a cause of concern. Without good and reliable connectivity, no service delivery is possible as some of the Tehsils in the State are yet to start the citizen services from LMKs. Private participation in providing connectivity to Tehsils is advisable.
- The availability of data in digitized format is actually the key to success of the land records computerisation in the State through industry participation. The data has been digitized through private channels whereas the ownership and further processing is with the Government only. The data needs to be kept updated all the time, as has been done through the office order [4], only then the confidence of citizens and industry partners could be gained.
- NIC has been able to integrate the client-server based HimBhoomi software and data with the web-enabled distribution of RoR software because it has become subject expert due to its officials being associated with the LRC for the last 25 years. The RoR software has been recently integrated with the web-enabled BhuNaksha software for processing of digitized maps. The resurvey work using ETS and GPS is also proposed to be fully integrated in the existing framework although the base HimBhoomi software may also be converted into a fully web-enabled application by that time.
- The application of DSC and its acceptance among rural people is yet to pick up. The reason could be lack of sufficient knowledge about the technology behind DSCs. However, the existing LMK based signed and printed copies are more acceptable to all stakeholders.
- The infrastructure created under NeGP like SWAN and Citizen Service Centre (CSC-LMK) have been optimally used in this initiative. All Tehsils have SWAN connectivity which is used to synchronize the data of RoRs which is the base data being used to link to maps and registrations. The CSCs are renamed as LokMitra Kendra in the State and are appointed through the private operators (SCA) selected through open tendering.
- The number of Revenue officials in the Revenue department is dwindling over the years. There has been a decrease of 41% in filled posts of Patwaris since the year 2001. The overall strength of Government employees per hundred of the State population is witnessing a downward trend as employee/ population ratio has reduced from 4.67 in 2001 to 3.70 in the year 2014 [8]. This trend is likely to grow in

future too as Governments are less likely to hire permanent employees and hence, should lay stress on outsourcing service delivery channels.

V. RECOMMENDATIONS

- The suggested model for industry participation in Government service delivery channels is that the Government concentrates on governance reforms and back-end office automation and outsources the service delivery mediums with the objectives to better serve the citizens near to their homes at lesser costs and better service quality. In order to improvise the service delivery in the State, certain important points emerge, which need to be addressed. These recommendations are listed below:

- The HP Revenue department needs to go in for extensive capacity building through private channels. The equipment being used in survey work is altogether a new technology and the usage of BhuNaksha software for processing of maps (land division, amalgamation) requires high level of ICT skills.

- Although DSCs have not implemented in this initiative, it will need to be incorporated, as per provisions of the Information Technology Act 2008 (amended), so that it meets the expectations of IT savvy citizens related to online service delivery.

- The Government should restrict its role to the backend processing part and expand the service delivery channels through industry participation.

- The Government must carry out process reforms and, if required, make necessary changes in the existing acts, rules, manuals to simplify the already established systems. All such notifications must be hosted on the concerned website so that citizens read these and become aware of alternate means of service delivery.

- The NIC has in-depth knowledge of the entire NLRMP requirements and should continue in its role as system integrator and software solution provider for all the services proposed to be delivered in near future.

- The reduction in total number of Revenue officials implies un-necessary over-burdening of existing officials with newer and specialized kind of jobs. The demands and expectations of citizens will continue to increase for new, accurate, better services. Industry participation in service delivery channels will have to increase to meet this kind of demand. The same day mutation office order was withdrawn due to shortage of employees. The fixing of date of registration deed and submission of papers along with a request for date/time of registration appointment through LMKs will help the Department in betterment of registration related service too. The Revenue officials should concentrate on process re-engineering, introduction of latest technological innovations in land survey work and back-end processing of RoR, maps, registration only while providing the outputs through Internet or LMKs.

- Digital divide exists in the State as rural population doesn't have access to ICT tools for accessing online citizen services. The private sector LMKs provide the necessary ICT infrastructure for addressing this issue. Therefore, Government needs to carry out reforms in sectors like employment enrolment, welfare pension schemes, applying for certificates, ration cards besides land records. These reforms should allow delivery of services through LMKs which are in the rural areas and will address the issue of digital divide.

- The kind of services which are best suited for delivery through the private sector i.e. LMKs in this case, include, but are not limited to:
  - renewal applications for driving license, arms license, ration card, passport

- applications for welfare pension, registration in employment exchange, certificates like caste, income, domicile
- fixing of appointments in Government offices where individual presence is required for processing of application, like land mutation, its division and registration, driving test, Aadhaar registration
- payment of taxes, Government receipts, bills already presented for payment etc.

VI. CONCLUSION

The industry partnership in service delivery channels, beyond the restriction of office timings and work-place, is highly acceptable to the citizens and, given a chance, they readily avail these services. The data proves this point that earlier the citizens would visit a Government office for a copy of Jamabandi in case of mandatory requirements only, now they are taking copies of Jamabandi just to reassure them of their land holding being safe in Government records. The will of the Government is another key factor in expanding the ambit of service delivery channels through industry participation. The private sector is willing to participate actively in providing Government services to the citizens at Government defined rates, but the number of such services, as of now, is less. In nutshell, the Government role should be to effect changes in rules and processes to enable service delivery through industry participation, the NIC should continue in its role as the integrator of services for software solution whereas the specialized technology dependant processes and backlog data entry effort should be outsourced through industry participation. The citizens are eager for better, cheaper and quality services at their doorstep and the industry is willing to partner with the Government in its endeavor.

REFERENCES

[1] Digital Governance Models, Vikash Nath, The Innovation Journal: A Special Issue on Designing Innovation, Volume 8 Issue 1, (January - March 2003) edited by Parthasarathi Banerjee

[2] LokMitra Kendras, Hamirpur, 2001 GoHP website at http://himachal.nic.in/images/lokmitra/lokmitra/lokmitra_hdr.htm#1 accessed on 17th November 2014

[3] Computerisation of Land Records, Department of Land Records, Ministry of Rural Development, GoI website at http://dolr.nic.in/dolr/comp_land_records.asp, accessed on 20th November 2014.

[4] National Land Records Modernization Programme- MIS, Department of Land Records, Ministry of Rural Development, GoI website at http://nlrmp.nic.in/, accessed on 20th November 2014.

[5] Best Practices in Land Records, pp.148-153, Department of Land Records, GoI website at http://dolr.nic.in/dolr/comp_land_records.asp, accessed on 22nd November 2014.

[6] Himachal Pradesh Land Records Manual, 1992, pp.143-44, para 8.4 (c) as amended, Computerisation of Land Records.

[7] Notification No.Rev-C(F)10-1/2009 dated 14th February 2011 issued by the Principal Secretary (Revenue) to the Government of Himachal Pradesh

[8] Census of Himachal Pradesh Government Employees, 2013-14, Department of Economics and Statistics P.X, Table-5, Number of Government Employees per lakh of Population.

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The efforts of State and Central Government officials engaged in LRC, enabling industry participation along with appropriate Government process re-engineering, to better serve the citizens, are acknowledged.