

EASE OF DOING BUSINESS

Improving Doing Business in Andhra Pradesh



Cost-Benefit Analysis

AUTHORS: **Nirupama Soundararajan**
Senior Fellow
Pahle India Foundation (PIF)

Shagun Khurana
Senior Research Associate
Pahle India Foundation (PIF)



PAHLE INDIA FOUNDATION
FACILITATING POLICY CHANGE



**ANDHRA PRADESH
PRIORITIES** AN
INDIA CONSENSUS
PRIORITIZATION
PROJECT



**INDIA
CONSENSUS** A
TATA TRUSTS &
COPENHAGEN CONSENSUS
CENTER PARTNERSHIP

© 2018 Copenhagen Consensus Center

info@copenhagenconsensus.com

www.copenhagenconsensus.com

This work has been produced as a part of the Andhra Pradesh Priorities project under the larger, India Consensus project.

This project is undertaken in partnership with Tata Trusts.

TATA TRUSTS

Some rights reserved



This work is available under the Creative Commons Attribution 4.0 International license ([CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)). Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:

Attribution

Please cite the work as follows: #AUTHOR NAME#, #PAPER TITLE#, Andhra Pradesh Priorities, Copenhagen Consensus Center, 2017. License: Creative Commons Attribution CC BY 4.0.

Third-party content

Copenhagen Consensus Center does not necessarily own each component of the content contained within the work. If you wish to re-use a component of the work, it is your responsibility to determine whether permission is needed for that re-use and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images.

Improving Doing Business in Andhra Pradesh

Andhra Pradesh Priorities

An India Consensus Prioritization Project

Nirupama Soundararajan

Senior Fellow, Pahle India Foundation

Shagun Khurana

Senior Research Associate, Pahle India Foundation

POLICY ABSTRACT	1
COSTS.....	1
BENEFITS.....	2
INTRODUCTION	3
OVERVIEW	6
BUSINESS SCENARIO IN ANDHRA PRADESH	6
LAND RECORDS MANAGEMENT SYSTEM	7
STATUS OF DILRMP IN ANDHRA PRADESH	9
METHODOLOGY	10
COMPUTATION OF COSTS:	10
COMPUTATION OF BENEFITS	11
ASSUMPTIONS AND STATISTICS USED	12
ANALYSIS	13
CONCLUSION	13
BIBLIOGRAPHY.....	15
APPENDIX I: LAND RECORDS MANAGEMENT SYSTEM	17

POLICY ABSTRACT

Regulatory environment is a key factor in attracting investors. There is variation in the ‘doing business’ environment provided by different states in India which gives investors ample choice for parking their funds. In the DIPP-Ease of Doing Business rankings for 2017, Andhra Pradesh stands third among all the states and UTs. The government has focussed on easing the process of land acquisition ever since the introduction of computerization in land records in the late 1980s. However, since 2014, it has been facing challenges in lieu of the split of the region into two different states – Telangana (north-western part of the region) and Andhra Pradesh. Telangana region is more developed than the rest of the region, which is developed in pockets. Even though it is relatively easy to obtain land in Andhra Pradesh, that perception is true for most of the Southern states.

A common observation is that it is generally easy to obtain land for business in states that have a high number of industrial parks earmarked by the state governments. Andhra Pradesh has over 300 industrial parks, which is one of the highest among all states in India. In order to streamline the land market further, the state needs to move towards the conclusive land titling system and to achieve that, all records related to land – record of rights, maps, surveys – need to be in coherence. Andhra Pradesh lags behind in completing its survey operations using the modern methods, and the state has an opportunity to start from the scratch. Clear property titles, the ownership of which is guaranteed by the government, can go a long way in making the land market in Andhra Pradesh more transparent and efficient.

There is an urgent need to address these issues. This study seeks to identify specific interventions in this area and present a cost-benefit analysis for the same.

We identify two specific interventions to improve the land records management system in Andhra Pradesh – (a) completion of survey/resurvey activities, and (b) digitisation of cadastral maps.

Costs

- Cost of conducting survey/re-survey activities in rural areas
- Cost of digitizing the cadastral maps
- Operational and maintenance costs

Benefits

- Economic Benefit from secured property rights

Summary BCR table

Intervention	Discount Rate	Total Cost	Total Benefit	BCR
Conducting survey/re-survey activities; Digitization of cadastral maps	3%	498.53	19,709.31	39.54
	5%	481.02	10,938.37	22.74
	8%	461.52	5,297.68	11.48

INTRODUCTION

The Doing Business project, launched in 2002 by the World Bank, conducts a comprehensive study of the business regulations and their enforcement, presently across 190 economies. The study presents a detailed analysis of the costs, requirements and procedures that a domestic small and medium-size private firm is subject to in different countries, based on which it ranks them. At the inception stage, the project covered 133 countries and 5 indicator sets. The 2018 report includes a wide array of parameters to ascertain the regulatory environment laid out by the governments, clubbed under ten areas of reform – starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. The objective of the research is to encourage economies to compete towards more efficient and optimal regulation, and it offers measurable benchmarks for reform.

The Ease of Doing Business (EoDB) ranks are calculated using the distance to frontier (DTF) measure, which shows the distance of each economy to the “frontier”. The frontier represents the best performance observed on each of the indicators across all economies. India recently improved its EoDB rank to 100, from 130¹ in 2017. Based on the change in DTF scores from last year, India’s 30-notch jump can be attributed to developments in three reform areas, that is, paying taxes, getting credit and resolving insolvency. However, many scholars have argued that this improvement is mainly explained by changes in the World Bank’s methodology, rather than significant developments in the doing business environment.

Nevertheless, recent literature convincingly argues for the role of an efficient regulatory environment in enhancing business activity, especially for the developing world. The Global Investment Competitiveness Report 2017 finds that the level of legal protections against political and regulatory risks and transparency in dealing with public agencies are of crucial importance to the business sector. According to the report, 40 per cent of the survey respondents opine that project-level risks like expropriation, transfer and convertibility restrictions, absence of regulatory transparency, etc. negatively influence their decision to

¹ <http://www.doingbusiness.org/data/exploreeconomies/india>

invest. The government has very little to do with doing business per se, but it has the responsibility to create a conducive ecosystem that will promote the establishment of new private businesses, facilitate their continued sustainability, and eventual exit as and when the purpose is served or the business becomes unviable. Therefore, the role of the government is that of a facilitator of such an environment, more than a regulator.

In today's times, investor perceptions are a key factor in determining the level of investment and studies such as the Doing Business report shape these perceptions. India's position in the world as determined by this study is based on the findings from the two largest business cities – Mumbai and New Delhi. Together these two cities contribute less than 10 per cent to the total Gross Domestic Product (GDP) of India. The first limitation of the World Bank's study is that it does not account for regional diversity in the business climate across different states in India. Second, Mumbai and New Delhi function as registered offices for many businesses and only a limited amount of economic activity might actually happen within the boundaries of these cities. For instance, several major Indian firms have their corporate headquarters in Mumbai and New Delhi, with operations spread across the country. Thus, ranking based on the data obtained on the regulatory practices prevailing in these two cities alone is not a sufficient proxy at the national level.

In India, the responsibility of providing a healthy and efficient regulatory framework for businesses to thrive confers upon the states. The ease or difficulty of doing business in a state is a result of this, along with the level of implementation among other factors. With this in mind, since 2014 Department of Industrial Policy and Promotion (DIPP) in collaboration with the World Bank, releases a comprehensive list of reform measures known as the Business Reform Action Plan (BRAP) every year for implementation by all the states and union territories (UTs)². This exercise has been undertaken to enhance the focus of the respective state governments in order to ease doing business in India and present a holistic view of the same to both domestic and foreign investors. The DIPP-EoDB rankings³ for Delhi and Mumbai (Maharashtra) reinforce the aforementioned limitation of the World Bank's study and illustrate the variation in business climate across the country.

²Following the MSME Development Act 2006, state governments have made concerted efforts to attract investments from outside and to promote enterprise. The enterprise is an organisation whose business is "doing business".

³<http://eodb.dipp.gov.in>

BRAP 2017 included 405 recommendations for reforms on regulatory processes, policies, practices and procedures spread across twelve reform areas. These are labour regulation enablers, contract enforcement, property registration, inspection reform enablers, establishing a single window system, land availability and allotment, construction permit and environmental registration enablers, easing the obtaining of utility permits, paying taxes, access to information and transparency enablers and sector-specific reforms spanning the lifecycle of a typical business⁴. To assess the implementation of these reforms by states, DIPP carries out a comprehensive exercise using input-based methodology. This involves obtaining responses from states and UTs on the implementation status of the reform measures suggested in the BRAP. Based on this assessment, DIPP does a comparative study of states and calculates the rankings based on the implementation score of each state⁵.

BRAP Assessment Year	Implementation Score	DIPP rank
2015	70.12%	2
2016	98.78%	1
2017	99.73%	3

According to DIPP’s assessment, Andhra Pradesh is one of the best performing states with a consistently high implementation score. However, these scores fail to reflect the actual user experience since they do not take into account feedback from businesses. Business feedback is critical to ensure that the reforms undertaken by the state governments are felt by the private sector. This paper seeks to identify areas of further reform measures deemed necessary from a business point of view in Andhra Pradesh. The study proposes a set of interventions followed by a cost-benefit analysis to justify their implementation.

This paper begins with an overview of the business environment in Andhra Pradesh and an identification of the areas where there is scope for improvement. In the next section, the paper talks about the government initiatives towards modernization of land records in the state and the need to move towards conclusive titling. Next, we elaborate on the

⁴<https://www.thehindubusinessline.com/economy/dipp-world-bank-suggest-more-reforms-to-improve-easeofdoing-business-in-states/article9637984.ece>

⁵<http://eodb.dipp.gov.in/>

methodology and assumptions made for the cost-benefit analysis of the interventions proposed in this study, followed by the conclusion.

OVERVIEW

Business scenario in Andhra Pradesh

The coastal state of Andhra Pradesh has transpired to become a preferred destination for business in the past decade. The state's contribution towards India's GDP has been 4.4 per cent (on an average) in the last 13 years. In spite of being predominantly an agrarian state with around 70 per cent workforce employed in agriculture and allied activities, the manufacturing sector has seen a rapid growth and accounted for nearly 24 per cent of the state's GDP during 2015-16. According to the India Brand Equity Foundation (IBEF) report released in February 2017, the industrial sector grew the fastest at 6.55 per cent in 2015-16. The state had 20 operational SEZs across diversified sectors, which include textiles & apparel, food processing, footwear and leather products, multi-product, pharma, IT SEZs, etc. as of December 2017⁶. Andhra Pradesh is also home to manufacturing units of various national and global pharmaceutical companies. Besides the major industries, Vizag has seen tremendous growth in the number of Medium & Small Scale Industries with support from AP Industrial Infrastructure Corporation.

Since 2016 every year, National Council for Applied Economic Research (NCAER) calculates the State Investment Potential Index (N-SIPI) for all the states in India. This index serves as a single composite investment score that depicts how different states are positioned to encourage and attract investment. It is based on several parameters that are classified under – labour, land, infrastructure, economic climate, political stability and governance, and the responses to surveys. During the last two years, Andhra Pradesh has been among the top states in terms of investment potential. The advantages enjoyed by the state include a sound economy, easy availability of labour (ranked 2nd), a simpler land acquisition process owing to digitized land records (ranked 1st), and gracious industry perceptions (ranked 2nd).

However, there are challenges that remain. The government of Andhra Pradesh has focussed on easing the process of land acquisition ever since the introduction of computerization in land records. However, since 2014, it has been facing challenges in lieu of the split of the

⁶ <https://www.ibef.org/states/andhra-pradesh.aspx>

region into two different states – Telangana (north-western part of the region) and Andhra Pradesh. Telangana region is more developed than the rest of the region, which is developed in pockets. Even though it is relatively easy to obtain land in Andhra Pradesh, that perception is true for most of the Southern states. NCAER’s study finds that it is generally easy to obtain land for business in states that have a high number of industrial parks earmarked by the state governments. Andhra Pradesh has over 300 industrial parks, which is one of the highest among all states in India. In order to streamline the land market further, the state needs to move towards the conclusive land titling system and to achieve that, all records related to land – record of rights, maps, surveys – need to be in coherence. Andhra Pradesh lags behind in completing its survey operations using the modern methods, and the state has an opportunity to start from the scratch. Therefore, in this study, we propose two intervention relating to modernization of land records – completion of survey/re-survey and digitization of cadastral maps based on these fresh surveys.

LAND RECORDS MANAGEMENT SYSTEM

In India, land policy and administration is a state subject⁷. This means any reform pertaining to land transfer / conversion etc. will have to be solely driven by the state government authorities. Land records data can be broadly classified into two categories – spatial and non-spatial data. Spatial data consists of maps of each land plot and non-spatial (textual) data consists of details about ownership, size of plot, rent payable, irrigation status, crop status, etc. The records are maintained at the Revenue Department, and the Department of Stamps and Registration at the state level and at the Sub-Registrar’s Office (SRO) at the district level.

In an Indian state, land ownership is primarily established through a registered sale deed (a record of the property transaction between the buyer and seller), and not by a government guaranteed title. Other documents validating ownership include the record of rights (document with details of the property; RORs), property tax receipts and survey documents. During a property transaction, the onus of checking the past ownership record of a property is on the buyer, not on the government. Therefore, land ownership in India is presumptive in nature, and subject to challenge⁸.

⁷Schedule 7 of the Indian Constitution divides all matters of governance into three lists – Central List, State List and Concurrent List; [http://lawmin.nic.in/olwing/coi/coi-english/Const.Pock%20Pg.Rom8Fsss\(35\).pdf](http://lawmin.nic.in/olwing/coi/coi-english/Const.Pock%20Pg.Rom8Fsss(35).pdf)

⁸“Land Records and Titles in India”, PRS Legislative Research, September 2017

The process of modernisation of land records began as early as in the 1980s. The central government introduced the Computerisation of Land Records (CLR) programme in 1988-89 with 100 per cent financial assistance on a pilot basis focusing on computerising non-spatial data to remove problems inherent in the manual system of maintenance and updating of land records. Land records are maintained across different departments at the district or village level, each of which works in a stand-alone manner and data across departments is not updated properly. Updating is crucial for systematic maintenance of land records to reflect ground realities in sync with ownership changes, ensure genuine land transactions and implement rural development programmes⁹. Updating also reduces land/property-related disputes, which make about 66 per cent of all civil cases in India¹⁰. With these objectives in mind, the government initiated a second important scheme, viz., Strengthening of Revenue Administration and Updating of Land Records (SRA&ULR) on a 50:50 cost-sharing basis between the Centre and states. These programmes aimed at providing better services in terms of efficiency, time, transparency and reduction in corruption.

Under the SRA&ULR, the process of transforming the land records management system was mainly technology-driven, comprising of methods such as, modernization of survey and settlement operations, printing of survey maps, reports/documents and for storage, copying and updating of land and crops records using science and technology inputs¹¹. Relying on technology-based tools results in better access to information and transparency, and can play a big role in reducing the time and cost of maintenance of records. Since 1994-95, the Ministry of Rural Development has been working in collaboration with the National Informatics Centre (NIC), which is responsible for the supply, installation and maintenance of hardware, software and other peripherals. NIC is also responsible for providing training and technical support to revenue officials to ensure proper implementation.

The Digital India Land Records Modernisation Programme (DILRMP) (previously known as National Land Records Modernisation Programme) is a revamped and comprehensive version of all existing government initiatives. In addition to the previous objectives, it aims to provide an exhaustive database for planning developmental, regulatory and disaster management

⁹<http://dolr.nic.in/dolr/sra&ulr.asp>

¹⁰<http://dakshindia.org/access-to-justice-survey-results/index.html>

¹¹<http://dolr.nic.in/dolr/sra&ulr.asp>

activities by providing location-specific information, while providing citizen services based on land record data. The activities that come under the purview of DILRMP are computerization of land records, survey/ resurvey, digitization of maps, computerization of mutation and registration, and citizen centric services. The ultimate goal of this programme is to replace the existing manual, presumptive land-title system and forge digital, conclusive land titling system.

Status of DILRMP in Andhra Pradesh

CLR began as a pilot project of the government in 1988-89. Since then, computerised copies of RORs have been made available for a nominal fee in 97.16 per cent¹² of the villages through kiosk centres established in each *taluka*, and handwritten records have been discontinued. 98 per cent of the RoRs are available with a digital signature of the designated official (17212 villages out of 17563) and are legally accepted. The process of mutation¹³ has been computerized in 97.94 per cent of the villages in Andhra Pradesh. It is due to such efforts by the state government that in terms of perception on land, the state ranks at one¹⁴ among all the states.

However, Andhra Pradesh is far from adopting the conclusive land titling system as envisaged in the DILRMP, owing to a flawed implementation design¹⁵. The state revenue department has completed the survey activities under DILRMP for only 131 of the villages (0.75 per cent). It has digitized 57 per cent of the existing maps; all existing cadastral maps under use were prepared using the traditional techniques¹⁶. Spatial data captured in these maps has been verified for only 1.83 per cent of the villages (321 of 17563 villages). The land records available online are not free of errors as modernization has largely meant that paper records are now stored in computers without updating, with almost no verification of ownership and other data. Conclusive titling system requires all land records to be integrated and updated simultaneously in order to make future land transactions less cumbersome and reduce the land-related disputes.

¹²<http://dilrmp.nic.in/faces/rptstatewisephysical/rptComputerizationOfLandRecord.xhtml>

¹³*Mutation* is the change of title ownership from one person to another when the property is sold or transferred. By mutating a property, the new owner gets the property recorded on his name in the *land* revenue department and the government is able to charge property tax from the rightful owner.

¹⁴ NCAER-SIPI 2017

¹⁵ <http://www.asianage.com/india/all-india/150218/the-perils-of-going-digital-with-an-imperfect-design.html>

¹⁶Traditional methods of surveying land include equipment like 100-foot long metal tapes, transits, electronic distance measurement, theodolites, and total stations.

Land is inarguably a crucial factor of production, required for setting up a business. Land is made available for industrial use through either the state government buying land from local people and setting up industrial areas or Special Economic Zones¹⁷ (SEZs), or when entrepreneurs buy the land from the owners directly, without any government intervention. Businesses set up in industrial areas and SEZs enjoy a wide range of locational benefits such as good infrastructural facilities, economies of scale, tax exemptions, easy availability of labour, support facilities, etc. This increases the cost of land in industrial areas and SEZs as compared to the land obtained directly from the owners. However, outdated land records, high pendency of land-related disputes in courts and cumbersome regulations renders the direct obtaining of land less preferred.

Digitization of land records serves as a remedy for the multiple problems in the land records management system and the perceived benefits are long lasting. Ahuja and Singh (2006) deem the manual system of land records as highly opaque and subject to manipulation by the village officials. Proper implementation of the components of DILRMP leaves no room for such illicit activities. Clear property titles, the ownership of which is guaranteed by the government, can go a long way in making the land market in Andhra Pradesh more transparent and efficient.

We identify two specific interventions in this area – (a) completion of survey/resurvey activities, and (b) digitisation of cadastral maps.

Methodology

Computation of costs:

Under the DILRMP, the government has been allocating funds for the states since the inception of CLR. Presently, the central government provides 100% financial assistance for digitization of cadastral maps, and shares the burden of expenditure for survey/re-survey activities with the states on a 50:50 basis. We have calculated the cost of undertaking these reforms in Andhra Pradesh based on the costs incurred by other states.

Land surveys are used to establish land maps and boundaries for ownership and locations, are required for other government programmes and for civil law services (property sales)¹⁸.

¹⁷Under the Special Economic Zones Act, 2005

¹⁸<http://automatedsurveys.com.au/learn-surveying>

Only around 0.75 per cent¹⁹ of the total villages in Andhra Pradesh have been surveyed using modern survey techniques under DILRMP. The cost of survey/re-survey is determined from the LBSNAA study of DILRMP in Rajasthan released in 2016. Drawing from the Rajasthan study and assuming the cost of surveying per square km to be the same for Andhra Pradesh, we have calculated the cost of surveying/re-surveying²⁰.

Cadastral maps show the boundaries of all parcels of land within a specific area, for instance a village. These are maintained by the land administration of the state, and are a matter of public record. The existing 57 per cent of the cadastral maps of Andhra Pradesh have been digitized under DILRMP but have not been updated since the last survey operations. The proposed interventions imply a simultaneous digitization of maps made and updated during the surveys conducted under DILRMP. For computing the cost of digitization of maps, we use the cost per map digitized for Andhra Pradesh itself. The central government released a total of INR 1.22 crores for map digitization; we assume complete utilisation of these funds for digitizing 178710 of the 315798 maps by the Andhra Pradesh government and obtain the cost per map digitized from this.

In addition to the fixed capital expenditure for conducting surveys and digitizing cadastral maps, there are operational and maintenance costs that will be incurred every period over time. This study assumes annual marginal increase in the existing operational costs of 0.22 per cent of the fixed costs of implementing the interventions.

Computation of Benefits

First, the economic benefit from secured property rights is calculated by using the results of Knack and Keefer (1995)²¹. The authors examine the impact of property rights on economic growth using institutional indicators like the risk of expropriation, existence of mechanisms for peaceful resolution of disputes, contract enforcement, corruption in the government, and quality of bureaucracy. These indicators are compiled by International Country Risk Guide (ICRG), which provides private international investment risk services. For this analysis, we assume that digitisation and updating of all land records with the help of surveys will contribute towards securing property rights in Andhra Pradesh and lead to a movement of

¹⁹<http://dilrmp.nic.in/faces/rptstatewisephysical/rptSurveyresurveyStatus.xhtml>

²⁰The costs involved can be accessed from the DILRMP website.

²¹"Institutions and Economic Performance: Cross-country tests using Alternative Institutional Measures", *Economics and Politics*, 7(3), 1995

1/50th standard deviation of the ICRG index. This would mean a 0.024 percentage point boost to the growth rate of the economy of Andhra Pradesh.

The costs and benefits of conducting survey/resurvey activities and digitisation of cadastral maps are estimated and the benefit to cost ratio of the interventions is calculated using the following formula:

$$BCR = \frac{PV \text{ of total benefits}}{PV \text{ of total costs}}$$

where BCR is the benefit-cost ratio and PV stands for present value.

While the costs are one-time, the benefits of digitisation are calculated based on present value for perpetuity since they will be reaped over a lifetime. We assume the standard present value discount rates of 3 per cent, 5 per cent and 8 per cent for this study.

Assumptions and Statistics used

- The costs and benefits are calculated at 2017 prices.
- The benefit-cost ratio obtained is for both digitisation of maps and survey/resurvey activities implemented simultaneously.
- The total rural area of Andhra Pradesh left to be surveyed under DILRMP is 142,107 sq. km.
- The total number of cadastral maps for Andhra Pradesh required to be digitized are 315798.
- The cost of surveying land is INR 34000 per sq.km.
- The cost of implementing these interventions are two-part. The fixed cost of conducting surveys and digitizing maps is one-time. The additional operational and maintenance costs are recurring and are taken as a 0.22 per cent proportion of the fixed cost of implementation.
- The duration of the intervention is taken to be 53 years, that is, until 2070 and the costs and benefits are calculated accordingly.
- A comprehensive exercise of land records and maps digitization and updation could make some improvement in the expropriation risk and the rule of law (Knack and Keefer, 1995). This is expected to reflect in the movements on the ICRG scale of

1/50th standard deviation. This will accentuate the growth rate of the economy by 0.024 percentage points every year.

Analysis

The total cost of digitisation of cadastral maps and conducting survey/re-survey activities in Andhra Pradesh that will accrue for a period of 53 years is estimated to be INR 541.91 crores at 2017 prices²². The present value of the cost stream amounts to INR 498.53 crores at 3 per cent discount rate, INR 481.02 crores at 5 per cent discount rate and INR 461.52 crores at 8 per cent discount rate.

The total benefit resulting from the implementation of these two interventions is estimated to be INR 55962.40 at 2017 prices²³. The present value of the benefit stream amounts to approximately INR 19709.31 crores at 3 per cent discount rate, INR 10938.37 crores at 5 per cent discount rate and INR 5297.68 crores at 8 per cent discount rate. Table 1 shows the benefit-cost ratio thus calculated (Appendix I).

Table 1: Benefit-Cost ratio for modernisation of Land Records

Present value discount rate	3%	5%	8%
BCR with 0.024 percentage point boost in growth per annum	39.54	22.74	11.48

The above table shows that after the survey activities and map digitization are complete, for every INR 1 spent on modernising land records, the benefits that accrue are INR 39.54 at a low discount rate, INR 22.74 at a medium discount rate and INR 11.48 at a high discount rate.

CONCLUSION

The measures taken by the Department of Industrial Policy and Promotion towards improving ease of doing business in India make it necessary for the state governments to play a proactive role in achieving the desired objective. Recent studies show that Andhra Pradesh is considered as one of the attractive destinations among the business community. The state has immense potential for both small and large businesses. Over the last 11 years, Andhra

²²Appendix I: Land Records Management System

²³Appendix I: Land Records Management System

Pradesh has contributed a share of 4.4 per cent in the total GDP of India and is expected to grow by 7-8 per cent per annum in the next decade.

Obtaining land outside of industrial parks and SEZs continues to be a hurdle in the state, owing to poor state of land records and their management. Modernization of land records has been in the pipeline for around three decades, but still remains to get a priority status from all state governments. Even though computerization of land records is nearly complete, it largely entails converting the paper document into a digital format without any verification and updating. Andhra Pradesh needs to focus on achieving the ultimate goal of Digital India Land Records Modernization Programme, that is, conclusive titling system and revise its implementation design accordingly. It is imperative to provide a clean, transparent and smooth system for accessing land records that are updated regularly and are integrated across government departments.

The expanse of surveying and digitizing records is huge, but it is of high importance, in order to streamline the process of obtaining land for businesses. Governments are dissuaded not just by the magnitude and cost of mapping millions of properties but also a fear of paralyzing property markets and sparking unrest. However, the long-term benefits of a modern land records management system outpaces such disincentives.

Private investment is shrinking in India and in order to revive it, the state governments need to offer a fresh perspective towards doing business and fully commit to it. The objective of this cost-benefit study is to strike a policy debate on doing business in Andhra Pradesh in order to deliver a more efficient business environment.

BIBLIOGRAPHY

“Access to Justice Survey 2015-16”, Daksh, Bangalore, India, retrieved from <http://dakshindia.org/wp-content/uploads/2016/05/Daksh-access-to-justice-survey.pdf>

Ahuja M., Singh A.P. (2006, March). “Computerization of Land Records in West Bengal”. Man & Development.

Ahuja M., Singh A.P. (2003). “Evaluation of Computerization of Land Records in Karnataka: A Study from Gulbarga District”. Centre for Rural Studies.

“Foreign Investment Perspectives and Policy Implications”. (2017-18). Global Investment Competitiveness Report

India Brand Equity Foundation Report. (2017, February). Andhra Pradesh

Knack S., Keefer P. (1995). “Institutions and Economic Performance: Cross-country tests using Alternative Institutional Measures”. *Economics and Politics*, 7(3)

Mishra P., Suhag R. (2017, September). “Land Records and Titles in India”. PRS Legislative Research.

Record of discussion of the Core Technical Advisory Group (CTAG) meeting held on 11.08.2016 under the Chairmanship of Secretary (LR) can be accessed at http://dolr.gov.in/sites/default/files/DILRMP%20CTAG%20Meeting%20on%2011-Aug-2016%20-%20Record%20of%20Discussion_0.pdf

Singh V. V., (2016), “Identifying Existing Capacities to Execute the National Land Records Modernization Programme in Rajasthan: An Appraisal”, Lal Bahadur Shastri National Academy of Administration.

“The NCAER State Investment Potential Index”, Report 2017, National Council of Applied Economic Research, retrieved from http://www.ncaer.org/uploads/photo-gallery/files/1500629311N-SIP_2017.pdf

Data Sources

Digital India Land Records Modernization Programme portal, accessed at <http://dilrmp.nic.in/faces/common/home.xhtml>

Open Government Data Platform India, accessed at <https://data.gov.in/>

Unspent balance of Computerization of Land Records, Strengthening of Revenue Administration and Updation of Land Records programmes, retrieved from <http://dolr.nic.in/dolr/downloads/pdfs/CLR,%20SRA&ULR%20Refund%20of%20Unspend%20Balance%2029-Apr-2014.pdf>

APPENDIX I: LAND RECORDS MANAGEMENT SYSTEM

Costs sources	
Different costs	Source
Cost of conducting survey/re-survey activities	LBSNAA study, CTAG discussions
Cost of digitizing all the cadastral maps	DILRMP portal, calculations
Operational and maintenance cost	

Benefits sources	
Different benefits	Source
Economic benefit from secure property rights	Knack and Keefer, 1995; SGDP projections from IMF data

Cost-Benefit Analysis				
Costs				Amount (INR; 2017 prices)
	<i>Price</i>	<i>Basis</i>	<i>Area to be surveyed (sq.km.)</i>	
Cost of Survey/Re-survey work	34000	per sq.km.	142107.017	4,831,638,578
			<i>Maps left to be digitized</i>	
Cost of digitizing the cadastral maps	68.37	per map	315798	21,591,109
			<i>Proportion of fixed cost</i>	
Annual operational and maintenance cost			0.22%	10,677,105
Total fixed costs				4,853,229,687
Total costs (till 2070)				5,419,116,269
Benefits				
Total Economic Benefit (0.024% growth in SGDP)				559,624,042,406
Total benefits (till 2070)				559,624,042,406

Present Value Discount Rate	3%	5%	8%
Cost (INR in crores)	498.53	481.02	461.52
Benefit (INR in crores)	19,709.31	10,938.37	5,297.68

BCR (0.024% growth)	39.54	22.74	11.48
---------------------	-------	-------	-------

As a new state, Andhra Pradesh faces a bright future, but it is still experiencing many acute social and economic development challenges. It has made great strides in creating a positive environment for business, and was recently ranked 2nd in India for ease of doing business. Yet, progress needs to be much faster if it is to achieve its ambitions of becoming the leading state in India in terms of social development and economic growth. With limited resources and time, it is crucial that focus is informed by what will do the most good for each rupee spent. The Andhra Pradesh Priorities project as part of the larger India Consensus – a partnership between Tata Trusts and the Copenhagen Consensus Center, will work with stakeholders across the state to identify, analyze, rank and disseminate the best solutions for the state. We will engage people and institutions from all parts of society, through newspapers, radio and TV, along with NGOs, decision makers, sector experts and businesses to propose the most relevant solutions to these challenges. We will commission some of the best economists in India, Andhra Pradesh, and the world to calculate the social, environmental and economic costs and benefits of these proposals



ANDHRA PRADESH PRIORITIES

AN
INDIA CONSENSUS
PRIORITIZATION
PROJECT

For more information visit www.APpriorities.com

C O P E N H A G E N C O N S E N S U S C E N T E R

Copenhagen Consensus Center is a think tank that investigates and publishes the best policies and investment opportunities based on social good (measured in dollars, but also incorporating e.g. welfare, health and environmental protection) for every dollar spent. The Copenhagen Consensus was conceived to address a fundamental, but overlooked topic in international development: In a world with limited budgets and attention spans, we need to find effective ways to do the most good for the most people. The Copenhagen Consensus works with 300+ of the world's top economists including 7 Nobel Laureates to prioritize solutions to the world's biggest problems, on the basis of data and cost-benefit analysis.