

e-Government Policy – Reflections from the Meeseva Ecosystem

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1. Introduction

- Information and communication technologies (ICT), through e-services, has
 - increased incomes
 - improved health facilities
 - enhanced access to education and job opportunities
 - enabled B2C services at affordable prices to the underprivileged population
- But, the benefit from ICT depends on its adoption and access
 - High income economies show greater penetration of ICT (telephone, mobile, net)
 - Gaps exist in the adoption and access due to location, education, income, and age
 - **"Digital divide" describes the gap that exists in access and use of ICT**
 - Digital divide exists at different levels, in
 1. access to use ICT (measured by the spread of ICT tools, infrastructure, and devices)
 2. ability to use ICT (measured by functional and digital literacy)
 3. actual usage (number of online users, internet hosts, e-government and e-commerce usage)
 4. impact of ICT use (economic returns)

1. Introduction...

- India is one of the under performers in providing ICT access to its population
 - only 18 people using the internet per 100 population on average (The Hindu, dated 28-7-16)
 - number of telephone landlines per 100 population ranges from 4 to 44 percent
 - 70 percent of internet users are from the 7 cities (mumbai, delhi, bangalore, hyderabad, chennai, kolkata, and pune)
 - mobile penetration
 - in rural India ranges from 3 to 21 percent (national average of 4.92 percent)
 - in urban India, it averages 43.9 percent
- The Indian state of Andhra Pradesh (AP) was a pioneer in launching citizen-centric services delivery in 1998, and has refined it as **“Meeseva”**

2. Fact file of AP

- Eight largest state in the country, geographically (160,205 square kilometers)
- Population of 4,93,86,799 (2011 census)
 - Literacy rate of 91.01 percent (%)
 - Real per capita income is rupees 44,831 with a growth of 6.31% yoy (04-05 base year), while the national average is rupees 74,193 (12-13 base year)
- Real gdp is rupees 2,64,521 crores for fy 2014-15 with an annual growth of 7.21%
- ICT contributed rupees 1692 crores to the state gdp (0.32 %)

2. Fact file of AP



3. Meeseva fact file

- A network of 5454 common service centers (CSC) where meeseva (g2c) and business to citizen (b2c) services are offered
- A three-tier public private partnership model
 1. The office of Director, Meeseva identifies service providers through open bid (tier 1)
 2. The service providers set up the CSC (tier 2)
 3. Service providers appoint village level entrepreneurs (VLE) to manage the CSC (tier 3)
- Services offered in a typical CSC
 - G2C (government mandated)
 - Category A: Those requests for certificates which could be delivered within 15 minutes (43%)
 - Category B: Certificates which required verification by field officers (57%)
 - 350 Services with 35 departments on board
 - Total Transactions – 7.6 crores plus since 2011- till date
 - Top 3 departments: Revenue (69 services), Agriculture (35 services), and Registration (17 services)
 - User charges of rupees 25 and 35 for categories A and B
 - B2C
 - This includes aadhar enrollment, banking services, mobile phone top up cards, ticket bookings, insurance premium payments, and utilities bill payments

3. Meeseva fact file...

- Meeseva has earned rupees 10.5 million (2014-15)
- The revenues earned by VLE are shared as follows:

Table 1: Revenue Sharing Pattern of the Stakeholders in the ESD – Meeseva Project

Stakeholder details	Revenue Share (%)
The concerned government department	20-28
ESD – Meeseva office	4-28
Private partner	9-14
Village level entrepreneur	32-47
Source: Office of Director, ESD – Meeseva, Govt of A P	

3. Meeseva fact file...

- The following table shows the VLE earnings from the ESD – meeseva
- Income analysis of VLE
 - % of income from g2c (2014-15) – 63%
 - % of income from b2c (2014-15) – 37%
 - The goal of the government is to **enable at least 66% of the VLEs' income from B2C**

Table 2: Earnings of VLEs in the State for the Financial Years 2011-12 to 2014-15

Year	Monthly income from G2C (INR)	Monthly income from B2C (INR)	Average monthly income from G2C+B2C (INR)	Number of VLEs	Income contribution (INR in Lakhs)
2011-12	2562	1061	3623	1834	66.4
2012-13	2371	3578	5949	2844	169.2
2013-14	4144	2991	7135	4852	346.2
2014-15	5324	3138	8462	4565	386.3
% Growth	107.81	195.76	133.56	148.91	481.78

Source: Office of Director, ESD – Meeseva, Govt of A P

4. E-Commerce – meaning

- E-Commerce means buying and selling online, using e-mail and the www
 - Besides traditional goods, this includes ordering online content like music and movies
- E-Commerce technologies, in the context of Meeseva, include
 - Electronic funds transfer
 - Internet marketing
 - Electronic data transfer
 - B2B data exchange
- E-commerce business applications in Meeseva include
 - Domestic payment systems, to facilitate cashless payments and utility bills
 - Print on demand, as in birth and death certificates, and voter identity cards
 - Basic banking services (deposit, withdrawal, and account statements)
 - Electronic tickets for bus and train travel
 - Top ups for cell phone re-charges
 - Digital wallet

4. E-Commerce – economic impact

- As e-commerce enhances informational access, prices are predicted to drop
- E-commerce has led to consolidation in the travel and book industry, and reduced geographical barriers
- E-commerce helps creation of more jobs that requires higher technical skills in computing, logistics, and warehousing
- For the consumer, impacts relate to
 - Lower prices
 - More variety
 - Cumbersome procedure in returning goods, and
 - Possibilities of cheating
- E-commerce businesses are cheaper to run due to low rents, and simplified business processes

5. Drivers of E-Commerce in Meeseva - digital divide

- India is ranked 131 (out of 167 nations) in the united nations international telecommunication union ICT index (2016) – low access and usage
- In the study
 - The number of e-transactions recorded in the CSC is a measure of digital literacy
 - A higher number of G2C and B2C transactions indicate a higher level of digital literacy
 - Mandal, the lowest unit of revenue administration, is considered as the unit of analysis
 - 686 mandals spread over 13 districts
 - A normal distribution of population and functional literates **and** a positive correlation between functional and digital literacy implies a normal distribution of e-transactions
 - The G2C transactions (source: ESD - meeseva office records) of 686 mandals (1-10-15 to 30-9-16) is analyzed

5. Drivers of E-Commerce in Meeseva ...

- Some results –

1. The average number of G2C transactions per mandal for the year is 25912 (total being 177,42,672)
2. The number of G2C transactions in 485 mandals (71 %) were below this average
3. Only nine mandals breached the 100000 transaction mark
 - Visakapatnam (urban) mandal recording the maximum number of transactions (301991)
 - Ramachandrapuram recorded the least (274 G2C transactions), and is near forest agency area
 - Ten mandals did not cross even the 1000 mark, of which 6 mandals are in east godavari, the district with the highest functional literacy
4. 30-35 e-services accounted for 85% of the total volume of transactions
5. The top five G2C services in the urban areas are
 1. application for land registration and its corrections
 2. application for income certificate
 3. food ration card application
 4. temple darshan ticket booking
 5. application for birth certificate.

5. Drivers of E-Commerce in Meeseva ...

- The top five B2C services are
 1. electricity bills payments
 2. vehicle tax payments
 3. property tax payments
 4. driving license slot bookings for test rides
 5. payment of traffic fines
- In the rural areas too, the pattern was similar
- For G2C, urban citizens accounted for 60% and rural citizens, 40%
- For B2C, urban citizens accounted for 85%, and rural citizens, 15%
- The e-transactions eliminated corruption to a large extent, and this may have incentivized illiterate citizens and narrowed the digital divide
- Demand pertaining to temple darshan tickets from religion-oriented citizens, who may not be functionally and digitally literate, reveals the pervasive influence of Meeseva in reducing the digital divide

5. Drivers of E-Commerce in Meeseva ...

- This study uses data from the ESD - meeseva and the chief commissioner of land administration (CCLA) office for econometric estimation by OLS (in R)
- The population model is specified as follows:

$$\begin{aligned} & \textit{Total e-transactions in the mandal per year} = \beta_0 \\ & + \beta_1 * \textit{number of meeseva centers in the mandal} \\ & + \beta_2 * \textit{population in the mandal} \\ & + \beta_3 * \textit{urban service provider 2} \\ & + \beta_4 * \textit{rural service provider 2} \\ & + \beta_5 * \textit{rural service provider 3} \\ & + \beta_6 * \textit{rich mandal} \\ & + \beta_7 * \textit{number of government institutions that offer e-services in the mandal} + u \dots \\ & (1) \end{aligned}$$

5. Drivers of E-Commerce in Meeseva ...

Independent variables	Definition of variable
Number of meeseva centers	This variable refers to the total number of meeseva centers in the mandal offering G2C services to the citizens
Population	This refers to the total population of the mandal, based on 2011 census
Urban service provider 1 and 2	There are two urban service providers, who employ franchisee agents in urban areas of the mandals in AP to offer G2C services to the citizens; this is coded as a categoric variable, with urban service provider 1 being the reference variable
Rural service provider 1, 2, 3	There are three rural service providers who employ village level entrepreneurs in the rural areas of the mandals in AP to offer G2C services to the citizens; this is coded as a categoric variable, with rural service provider 1 being the reference variable
Rich mandal	The rayalaseema districts comprising kadapa, chittoor, kurnool, and anathapur are economically backward, due to geographical reasons like scanty rainfall and aridity; this is coded as a categoric variable (reference category is poor mandal)
Number of publicly funded organizations	This refers to the number of government organizations in the mandal that have adopted IT for their business processes and offer some or all of their services electronically

5. Drivers of E-Commerce in Meeseva ...

Dependent variable: Total e-transactions in the mandal per year	
Number of meeseva centers	1447*** (88.3)
Population	0.1405*** (0.0012)
Urban service provider 2	-14890*** (1670)
Rural service provider 2	-1963 (1661)
Rural service provider 3	-4627* (2476)
Rich mandal	275.4 (166.3)
Number of government institutions offering e-services	30.68 (36.69)
Intercept	9735 (1436)
Observations	685
R-squared	0.6734
**** 0.001 *** 0.10 ; standard errors in parentheses	

5. Drivers of E-Commerce in Meeseva ...

- *Ceteris paribus*,

1. For every increase of a CSC unit in a mandal, the number of e-government transactions is predicted to increase by 1447 per year
2. If the population in a mandal increases by 100, the number of e-government transactions is predicted to increase by 14 on a yearly basis
3. CSCs operated by urban service provider 2 are predicted to have 14890 lesser e-government transactions per year, as compared to urban service provider 1
 - urban service provider 1 has exposure in financial and data management technologies, and partnered with wallet companies to offer attractive incentives to users availing G2C services
4. CSCs operated by rural service provider 1 are predicted to have 4627 more e-government transactions per year, as compared to rural service provider 3
 - Rural service provider 1's knowledge of the operational terrain in e-government is immense, and offers attractive incentives , and a wider range of innovative B2C services that projects some of their kiosks in the rural areas as a one stop shop for all the citizen's needs

5. Drivers of E-Commerce in Meeseva ...

- The entrepreneurial spirit of service providers has a statistically significant and positive relationship with the number of e-government transactions
 - In addition to the mandated G2C services, the service providers also offer several B2C services to augment income
 - These service providers
 - tie ups with credit card and debit card companies, point-of-sale machines, and e-wallet firms like paytm and mobikwik, which in turn, offer attractive incentives to citizens using these services
 - foster an ecosystem to develop businesses in the transport, leisure and tourism, entertainment, electronics and telecommunication, and financial technology space

6. Demonetization and E-Commerce

- On 8-11-16, Government of India declared rupees 500 and 1000 bank notes of Mahatma Gandhi series as illegal tender to combat black money
 - Thus, rupees 15 lakh crores, circulating in the economy as on 8-11-16, in the banned denominations were declared as void
 - ATMs were not configured for the new series of rupees 500 and 2000 notes, nor were there adequate currencies of lower denominations (rupees 100, 50, 20, 10)
- This led to panic, and chaos amongst the public since 8-11-16; Impacts include
 1. Long wait lines before ATMs due to severe cash shortages
 2. Small agriculturists, and low income households unable to purchase daily needs
 3. Several deaths linked to ATM rush
 4. Productivity lost as people spent an average of 6-8 hours waiting in lines at ATMs
 5. Rupees 21,000 crores added in the jan dhan accounts in a week post 8-11-16, implying that hoarders were depositing hoarded money in poor peoples' accounts
 6. Politicians under surveillance continue to spend hundreds of crores of rupees on weddings and festivals, implying that hoarded money is not stored entirely in cash
 7. Farmers unable to buy seeds and fertilizers for their winter crop

6. Demonetization and ...

- In AP, effects include
 - currency shortage of an estimated rupees 8000 crores over the next 5 days
 - contraction of economic activity – quick estimates reveal contraction by 4-5% of gdp
 - farmers unable to pay for seeds, fertilizers, and day labor
- To mitigate the currency shortage crisis and revive economic activities, cashless transaction system is under implementation, which include
 1. Massive encouragement to mobile currency (like Axis pay) which can be used for interbank transfer of accounts, and pay merchants, with **smart and feature phones**
 2. Installation of point-of-sale machines at all citizen-commerce interfaces which include mom and pop stores, liquor outlets, small traders, and meeseva centers
 - Major pos device vendors (paynear, pine labs) were called for an emergency meeting with the CMO
 - Government to bear the purchase (rs. 3500 per unit) or the rental cost (rs. 350-400 per month)
 - Banks were requested to issue terminal ids within 48 hours of application
 - Transaction charges on card swipes to be withdrawn by banks till 31-12-16
 - Biometric add on to be included in cases of statutory payments
 3. Encouragement for internet online banking

Conclusions

- Meeseva has narrowed the digital divide in AP by
 1. providing several citizen-centric G2C services online, with transparency, speed, and convenience
 2. encouraging service providers to offer innovative B2C services to citizens which creates an ecosystem for firms in the leisure, entertainment, transport, finance and data management space
- By rendering kiosk transactions pos- and m-enabled, Meeseva contributes its bit to move towards the cashless society

Thanks

End