

A Model to ICT and E-Governance for Intermediate Organizations in India

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Abstract— Intermediate organizations are one of the areas where governments of developing countries can invest since intermediate organizations (IOs) play a vital role in economic growth. The application of ICT and e-governance has massive potential for intermediate organizations (IOs) in developing countries. Based on the degree of the use of ICT among intermediate organizations, this paper attempts to explore the potential and problems ICT and e-governance pose for IOs in India. Information and communication technology (ICT) is seen as a driving force in shaping universal economy in the 21st century. ICT plays a critical role in the global economy, which cannot be ignored. While ICT is seen as posing great potential for development in developing countries, it has also been substantiated that developing countries need to harness ICT in order to promote development.

Keywords: Intermediate Organizations (IOs), Information Communication Technology (ICT), E-Governance.

1. INTRODUCTION

E-Governance is the process of transformation of the relationship of government with its constituents the citizens, the businesses and between its own organs, through the use of tools of information and communication technology (ICT). The purpose to adopt ICTs is to give an opportunity to citizens, so they can get involve in decision making process. The aim is to carry regarding better access, accountability and efficiency in the delivery of government information and services. Information and communication technology (ICT) is seen as posing great potential for development in developing countries. However, it has also been substantiated that developing countries require to tie-together ICT in order to support development. ICT is believed to bring great prospects for developing economies and their communities. Since the so-called knowledge-based economy is driven by ICT, governments of developing countries need to make substantial investment in all sectors to ensure all its key sectors instigate growth and development.

E-Governance has potential to provide all government information and services online to the public and private sector, an e-governance initiatives and innovations will ensure a more democratic, transparent and accountable framework for the public and private apparatus to operate in. The governments of developing countries, therefore, need to play a crucial role in establishing a suitable environment for e-governance. (1). India is a developing country has far potentiality to take benefit of ICT but it also lacks the basis of democracy and thus environment for innovations and initiatives. This paper attempts to explore the scope to which ICT is used by middle or intermediate organizations in India and to establish if intermediate organizations (IOs) have potential to obtain benefits of ICT and instigate growth towards knowledge-based economy. Technology Barriers Lack of architecture integration and Infrastructure. A lack of back-end infrastructure, governance sand their employees will face the problem and unable to perform transactional activity and further stages [4].

The increasing use of ICT in different sectors is seen as having impact on all spheres of life. The use of ICT is also seen as opening up “new opportunities for developing countries to harness these technologies and services to serve their development goals” (Mansell & Wehn 1998, 1). In order to take advantage of the ICT, developing countries are encouraged to exploit the potential of ICT by investing in their infrastructure and training (Mansell & When, 1998 and Khan 2005). If harnessed suitably by developing countries, ICT poses potential for contraction the divides, including between and within the countries, intimidating our communities. It has potential to bridge the gap between rich and poor, urban and rural, North and South, and male and female. However, apart from ensuring sufficient investment in infrastructure (i.e. the Internet access and electricity), it is equally essential for developing countries to invest in their education (to have appropriately skilled human resources), and in its public and private sectors (to provide efficient services and instigate economic growth). Equally important to these is the initiatives of e-governance.

2. E-GOVERNANCE IN INTERMEDIATE ORGANIZATIONS (IOS)

ICT adds value to intermediate organizations (IOs) or middle level enterprises as reducing costs or increasing profits

through automating an existing activity, the cost of information system have been justified and ways found to increase profits. ICT also redesigning a business process as embedded in its intrinsically different from a manual process to which IT is only appended. While traditionally, e-governance was more associated with the narrow concept of e-government which referred to services dealing with government and/or public sector only. E-governance is referred to a broader concept involving both public and private sector. It refers to “how managers and supervisors utilize IT and Internet to execute their functions of supervising, planning, organizing, coordinating, and staffing effectively” (Palvia and Sharma, 2007: 1). In other words, e-governance refers to an innovative use of ICT to govern both public and private sector in order to attain efficiency and instigate growth. For the purpose of this paper, e-governance therefore is not restricted to services of the government where government uses ICT to provide new and innovative ways of delivering information and services to the public and private sector. It involves governance in general. This paper focuses on the concept of e-governance in relation to intermediate or middle organizations (IOs) in developing countries.

Intermediate organizations (IOs) generally refer to independently owned and managed businesses which employ a limited number of employees and have assets within certain range. The specific size of employees and assets differs slightly in definition from country to country. Most countries have their own act defining IOs. Some general characteristics of IOs are independent ownership, limited funds and market shares, and narrow range of products and services. It is in this respect that the use of ICT poses a huge potential by possible broadening of scopes of IOs. Research shows that IOs in developing countries are lagging behind in adopting and using ICT (United Nations, 2003). However, literature also suggests that e-governance has capacity to assist IOs to survive and thrive (Gosen, 2007). The efficient use of ICT among IOs is also seen as reducing the gap between large corporations and micro-enterprises, enhancing organizational performance, productivity and access to markets (Gosen, 2007). The government’s role in facilitating the environment for IOs to survive and thrive is equally important. The Software Technology Parks of India (STPI) are good example of environment where IOs can take full advantage of the benefits of ICT. With provision for suitable environment to operate in, IOs also need to recognize the relevance and value of ICT and the use of ICT in order to utilize its optimum value. A process of relevant education to produce appropriately skilled human resources for the knowledge-based economies is essential. A skilled work force is crucial for IOs to be innovative and take advantages of e-governance (Godara and Agrawal, 2007).

The key importance of e-governance for IOs is due to the crucial part IOs play in the growth and development of national economy. IOs provide huge employment and make immense contribution towards national GDP. Through e-governance IOs can tackle their problems and take challenges in terms of innovation and cost effectiveness to manage their resources effectively to produce maximum profits. ICT poses potential benefits to IOs in terms of:

- 1) Obtaining and using knowledge and information
- 2) Improving internal and external communications
- 3) Improving decision making and thereby responsiveness and efficiency.
- 4) Improving overall flexibility, productivity and profit (Song & Mueller-Falcke 2006).

In general, ICT is said to have potential to facilitate improvements to productivity (Song & Mueller-Falcke 2006). The points mentioned above are potential benefits. Empirical research on impact of ICT on middle level organizations in developing countries such as India, Laos, Peru, Kenya and Tanzania now available show positive link to the use of ICT in these countries (Song & Mueller-Falcke 2006; Mueller-Falcke 2006; Matambalya & Wolf 2006). While ICT promises the benefits discussed above, it is important for the governments and IOs of developing countries to fully utilize these benefits. The United Nations through agencies such as the Economic and Social Commission for Asia and the Pacific (ESCAP) has for years been working towards building capacity of IOs in terms of being able to utilize ICT and adopt e-commerce (United Nations, 2003). While there have been success stories of the use ICT and e-commerce by IOs in the developing countries, studies also show weaknesses and problems encountered by IOs in these countries. Some of the drawbacks highlighted are low level of awareness on different aspects of ICT applications and e-commerce, inadequate infrastructure and access, need for legal and regulatory policies which supports the use of ICT and e-commerce, need government commitment towards development of appropriate human resources, and need to promote a good working and policy relationship between government and IOs (United Nations, 2003).

3. E-GOVERNANCE IN INDIA

India is a land of diversity. This diversity spans across culture, tradition, language, geography and the economic condition of the people. It is a nation that has a significant number of people who are below the minimal socio-economic benchmarks. This includes rural and urban poor, women in rural areas, street children, people belonging to historically disadvantaged castes and people living in less developed areas. The vulnerability of these sections of society has increased with globalization and this section is prone to become even more marginalized - economically

and socially. (*Capacity Building for E-Governance in India*, S.R.Das and R.Chandrashekhar,)

India is a developing country with huge potential for a fast-paced development. Nonetheless, it has been suffering the impact of a series of political crisis. These events have not only held India's growth and development but they have pushed India back by many years. If it wasn't for its succession of political crisis, India by now would have reaped the full benefits of ICT.

India's experience in e-Governance / ICT initiatives has demonstrated significant success in improving accessibility, cutting down costs, reducing corruption, extending help and increased access to un-served groups. In this phase of *experimentation*, e-government initiatives have reached millions of people belonging to these sections of society. Improved access to information and services has provided economic and social development opportunities, facilitated participation and communication in policy and decision-making processes and empowerment of the weakest groups. This has led to fostering a sense of ownership and building of social capital, which in turn, constitute a basis for local revitalization.

India is an ideal ICT hub position in the Asia. India not only connects to the rest of the world but is also the centre of the Asia. India is also a tourist destination. India has an advantage to be able to reap the potential benefits of ICT. Moreover, the gradual changes currently taking place in the telecommunications industry in India is also a positive step forward towards opening the telecommunications industry to competition and eventually better services and lower prices for customers. Like other developing countries, India government is also providing investment incentives in terms of tax concessions and establishment of e-zones for ICT-based industries. There are agencies such as India National ICT Council and projects such as e-government initiatives which are responsible for spearheading, formulating and executing of ICT related strategies and development plans.

4. INTERMEDIATE ORGANIZATIONS IN INDIA

An intermediate organization in India is considered as any enterprise which has an annual turnover or total assets above 5000,000 and 25000,000 and employs between 21-50 people. While IOs in India make a extensive involvement towards national GDP and economic growth, there is no figures or data on the number and nature of IOs in the country. The Governor of Reserve Bank recently said that "*lack of data or statistics is one of the constraints impeding growth of the medium organizations*". He further stated that due to the lack of relevant data we do not have a break down of the make up of IOs in the economy or what is the employment figure as per different sizes of enterprises in India. The President of the Chamber of Commerce also recently blamed lack of statistics and analysis of its potentials for the lagging behind of IOs sector in India (Ali, 2008). There is nationalized Centre for minute and Micro Enterprises progress which is liable for micro and minute businesses in India but there is no major initiative for the use of ICT or e-governance.

5. METHODOLOGY

This study used both quantitative and qualitative techniques of data collection. The primary data was composed through quantitative review where a comprehensive opinion poll was used to interview and record reaction of the manager/owner of selected medium size enterprises in India. Since no exact number of medium size organizations operating in India could be obtained from the Office of the Register of Companies, the government department answerable for registering businesses in the country, 25 IOs was randomly selected from urban centers for the review. The arbitrary selection took into consideration the nature of IOs in order to get a feedback from a range of businesses. The nature of some of the businesses selected for the survey were clothing, grocery, spare parts, footwear, pharmacy, book shop, coffee shop, dental clinic, private doctor, electronics, furniture, hair saloon and restaurant.

A total of 150 IOs were, therefore, surveyed throughout the country. According to the response profile, 63% of the managers of IOs or the survey respondents were males and 37% were females. A majority of the respondents were from the age ranges: 21-30 and 31-40. A small percentage of them were above 50 years. A majority of 85% of the respondents were of ethnic Indians, 6% ethnic Indians and the remaining were of other ethnic groups. As far as the respondents' education background is concerned, 8% had primary level education, 48% secondary level, and 46% tertiary level. As one of the characteristics of IOs is independently owned, 67% of the respondents were managers and owners. Only 35% were managers employed by businesses.

The secondary data was collected through semi-structured interview of officials. This qualitative data was analyzed using thematic analysis technique. The response to open-ended questions in the review questionnaire was also analyzed using thematic analysis techniques. Themes and/or meanings rising from the content analysis of these messages are discussed as patterns.

6. RESULTS AND DISCUSSION

Though the heart of this study was to walk around the point of acceptance and use of ICT among IOs in the main urban centers in India, some none ICT-based technology such as fixed Land line Phone, fax machine, and pager were also included with the understanding that all IOs do not use ICT. TABLE 1 shows the scenery of ICT used by the IOs concerned in the review. The questionnaire was considered to get reaction on the use of different information and communication technologies (ICTs) by the businesses. These were computer, Land Line phone Connections, fax machine, pager, mobile phone, Internet, email, World Wide Web (WWW), and own Web page. These assert is further strengthened by the figures shown below in TABLE 1.

TABLE 1
 USE OF ICT BY IOs

ICTs	Used (in %)	Did Not Use (in %)
Land Line Phone	93	7
Fax Machine	55	45
Pager	0	100
Mobile	66	34
Computer	58	42
Internet	44	56
Email	43	57
WWW	34	67
Web Page	12	88

Apart from for the pager, the use of other ICTs shows a model. It undoubtedly shows that upper percentage of IOs used fixed phone line or Land Line phone and the percentage use of other ICT decreases as technology complexity increases. From the nature of the IOs, it is understood that 93% of them used fixed phone lines. Compared to fixed phone line, fax machine was used only by 55% of the IOs surveyed. While pager was not used by any of the IOs,, the use of mobile phone shows a high of 66%. Computer was used by 58% of them. However, the percentage use of Internet, email, www and webpage decreases significantly. This also confirms the definitional claim that IOs, are independent private owned, operating at Intermediate scale with limited services and products. According to the TABLE, only 12% of the IOs, had their own Web page. The pattern shown in TABLE 1 obviously suggests a mass of IOs, are not using ICT in their operation.

Those IOs, which did not use one or more of the ICTs listed in TABLE 1, cited lack of knowledge (21%), lack of skills (12%), and expensive (21%) as the reasons behind not using the ICTs. The remaining 45% reported there was no real need for such ICT in their business. Some stated that they preferred the manual system while others thought their business was too small to use such ICT. This is where government initiatives and innovations can occur to bring a measured change of attitude and culture.

Seeing as the center of attention of this paper is the use of ICT, the data discussed in detail will exclude fixed phone line, fax machine and pager. TABLE 2 shows IOs, used mobile phone, computer, Internet, email, WWW and own Web page.

TABLE 2
 THE USE OF ICT BY SMALL AND MEDIUM ENTERPRISES

	Communication	Information	Advertising/ buying/ selling
Mobile phone	89%	6%	5%
Computer	40%	44%	16%
Internet	40%	45%	15%
Email	48%	38%	14%
WWW	21%	67%	12%
Web Page	21%	32%	47%

TABLE 2 shows the extent to which listed ICTs were used for the purpose of communicating, attaining information, and advertising, buying and selling. Results show that mobile phone was used mostly for communication purposes.

Its percentage use for acquiring information and advertising, buying or selling is insignificant. The use of computer, on the other hand, was used nearly equally for communication and information. The Internet and email usage also shows a parallel pattern as the use of computer by IOs,. The WWW, however, was generally used for information (67%), while

only 21% used for communication and 12% for advertising, buying or selling. The use of WWW for communication refers to the use of Skype by IOs,. Some of the respondents reported that they use Skype to communicate and negotiate with their foreign-based suppliers. The Web page was mostly used for advertng and promotion purposes. In some cases buying and selling also occurred. Those who have been using ICTs listed in TABLE 3 have found it to be beneficial to their businesses. TABLE 3 demonstrates the benefits from the use of ICTs.

TABLE 3
 BENEFITS FROM THE USE OF ICT BY IOs

	Mobile	Computer	E mail	WWW	Web Page
Obtaining and using knowledge and information	87%	96%	88%	97%	82%
Improving internal and external Communication	85%	80%	95%	88%	90%
Improving decision making and thereby efficiency	75%	78%	83%	85%	67%
Improving staff performance	59%	75%	71%	83%	57%
Improving staff productivity	63%	77%	71%	75%	67%
Improving service and/or turnover	81%	92%	82%	79%	80%
Increasing profit	74%	83%	85%	83%	88%

Though the percentage of IOs, using ICT other than mobile phone has been low, TABLE 3 shows significantly high percentage of those using these ICTs find them beneficial for their businesses. According to TABLE 3, the listed ICTs have benefited the IOs, in terms of obtaining and using knowledge and information, improving internal and external communication, improving decision making and thereby efficiency, improving staff performance, improving staff efficiency, improving service and/or turnover, and increasing profit. Results shown in TABLE 3 further support the theory that ICT has potential to assist IOs, and this also suggests that the innovations and initiatives such as e-governance has a lot to carry to IOs,. Some general explanation received from the respondents from the IOs, included ICT is good for business, ICT makes procedure easier, future goal is to get own Web page for the business, cannot afford ICT, the cost of maintenance is high, and ICT is not needed for the business because

it deal with local suppliers. Some of the key problems cited by those who used ICT regulatory were technical problems, virus, slow Speed and disconnection, and lack of Web developers to update Web pages.

7. CONCLUSION

Results undoubtedly support the argument that ICT and innovations such as e-governance have a lot to offer to IOs, in developing countries. The study of IOs, in India shows though low percent of IOs, use ICTs, ICTs do help IOs, in many ways. ICTs not only allow IOs, to communicate faster, access resources and information, promote business online, and access international markets but it also improves many services, efficiency, decision making, staff performance and productivity, and it even increases profit. The result discussed in this paper suggests that IOs, have potential to take advantage of ICT and initiatives such as e-governance but the government has to establish the innovative atmosphere where IOs, are confident and empowered to take advantages of potentials e-governance has to offer. India has Centers for intermediate organizations Development, but it is not sufficient to spearhead IOs, sector into a fast-paced growth. The government definitely needs to look into more new initiatives and innovations. There is a need to encourage/facilitate a diffusion of ICT into IOs,. Once ICT is in use, e-governance has the potential to lead IOs, into a new era. However, at the same time government has to work towards establishing and sustaining equality which is the basis of e-governance.

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