



Proceedings of GLOGIFT 07

November 15-17, 2007
UP Technical University
Noida, pp. 216-225

TOWARDS A STRATEGIC FRAMEWORK FOR EFFECTIVE E-GOVERNANCE

P. K. Suri* and Sushil**

ABSTRACT

Government organizations in India, both at the Centre and State levels, have been attempting to adopt e-Governance route for efficient and effective delivery of services to citizens. Despite thrust from the Central Government and enhanced budgetary support, there are only a few large scale projects which could be termed as success from citizens' perspective. A possible reason for failure or partial success of many of such projects could be due to the conventional framework under which the programmes are being conceptualized and executed. This paper, attempts to study the conventional programme planning framework and examine its suitability to handle the dynamic context of e-Governance. Illustrative examples have been taken from the agriculture sector. Finally, learning issues have been synthesized to lay a foundation for arriving at a possible strategic framework for e-Governance.

Keywords : e-Governance, Planning and Strategic Framework, SAP-LAP

Introduction

Application of Information and Communication Technology (ICT) is increasingly becoming an integral part of the business strategy in the corporate sector. Several years back, companies like Wal *Mart and Dell demonstrated to the world as to how the ICT can be leveraged for achieving internal efficiency as well as building synergetic relationships with stakeholders. Drawing inspiration from the corporate sector, governments all over the world are trying to adopt ICT for improving their governance system. The phenomenon is popularly termed as e-Governance. In the recent past, a large number of such projects have been initiated in several countries. Ironically, majority of these projects have failed to deliver the expected results. As per a study conducted for developing countries, only 15% of the projects have been found to be successful in achieving the desired objectives (Heeks, 2003). While a comparison in terms of adoption of ICT in the corporate sector and the public sector would be unfair, government organizations should certainly leverage the opportunities offered by ICT for improving their productivity and streamlining service delivery to citizens.

In India, districts, state governments and central ministries were networked and their computerization was initiated way back during the period 1985-86 under NICNET programme of the Planning Commission. However, concerted efforts towards e-Governance can be said to have taken only in the year 1998 with the constitution of a National Task Force on IT. Based

* Technical Director, National Informatics Centre, New Delhi

** Professor, Department of Management Studies, Indian Institute of Technology Delhi

on one of the break-through recommendations of the Task Force, all the Government departments were directed to spend two to three per cent of their allotted budget for adopting IT. In the same year, the Department of Administrative Reforms and Public Grievances came out with a minimum agenda of e-Governance to be implemented by all government departments. However, in the eagerness to embrace ICT, the Government seem to have avoided getting entangled with challenging issues like standardization, interoperability, good governance, etc. though these were well highlighted in the Task Force Reports. Implementation approach for accomplishing the minimum agenda of e-Governance was left to the sole discretion of the individual departments. These Departments took-up IT projects independently as part of their plan/non plan schemes. Subsequently, while taking stock of the isolated efforts and slow progress of the e-Governance, the Government realized the need for a mission mode effort to be taken-up at the national level by a Central Government Department (Tenth Five Year Plan Document, 2002-07). This gave birth to National e-Governance Plan(NeGP) with Department of Information Technology designated as the nodal co-ordinating organization.

It can, therefore, be said that except for the projects taken up with international aid, most of the past or the ongoing efforts for implementing e-Governance in India are being carried out as per the existing planning and strategic framework. This paper attempts to study the fundamental framework within which the e-Governance projects are conceptualized and implemented in India. The objective is to examine the suitability of the conventional planning and strategic framework for the e-Governance projects. It is also expected that the lessons drawn here may also help other developing countries where a similar framework is being followed for implementing e-Governance.

Methodology

The focus of this paper is on identifying gaps in the existing Government plan schemes framework in which the e-Governance projects are being conceptualized and implemented. First, a review of literature is conducted to understand the plan schemes framework. It is then attempted to identify the gaps and their implications on e-Governance using Situation-Actors-Process (SAP) framework. SAP provides a methodical construct to deal with the interplay of three entities - Situation, Actor, and Process - contained in any management context. The interplay and synthesis of SAP leads to key learning issues which have been synthesized in the form of recommendations for improving the framework as per the requirements of e-Governance (LAP). The interplay of SAP and LAP makes the complete SAP-LAP framework (Sushil, 2001). Illustrations are used from select ongoing projects in agriculture sector to explain the limitations of the prevailing system. The learning issues which have been synthesized in the form of recommendations for improving the framework as per the requirements of e-Governance.

Plan Schemes – Genesis, Formulation and Implementation

The apex authority responsible for development planning in India is Planning Commission. The plans are worked out for a period of five years. The Planning Commission and the line Ministries at the Centre and State Government level are expected to work in a harmonized fashion from conceptualization to implementation of plan schemes to achieve the targets set for a particular plan period. The sequential stages of genesis, detailing, approval and implementation of plan schemes is briefly explained as follows. For the purpose of illustration, we have chosen the method being followed at the Central Government level. In general, a similar methodology is followed at the State Government level also.

Genesis

The Planning Commission prepares an approach paper for next plan with inputs from support organizations like Central Statistical Organization and the Administrative Ministries. The approach paper is adopted with the approval of National Development Council (NDC). It then sets up Working Groups (WGs) and Steering Committees on different sectors and examines their reports. This is followed by makes choices about the recommendations in consultation with Administrative Ministries keeping into view the available resources. Finally a draft plan document is prepared for discussion by the NDC, a body presided over by the Prime Minister of India and composed of Union Cabinet Ministers, Chief Ministers of the States and Members of the Planning Commission. The draft plan document has to be accorded concurrence by the Finance Ministry before it is tabled for final approval of Parliament. Allocation of approved plan budget is conveyed to respective Central Ministries/State Governments for formulating details of plan schemes to be continued/introduced during the plan period (The Planning Process, 1975).

Detailing

Detailed planning about a scheme is taken up at the level of respective line Ministry at the Centre/State Government level, where the programme plan and strategy for its implementation is worked out by the concerned Divisional Head in consultation with the senior officers in the Division. In the case of Central Government, depending on the financial outlay projected for the scheme, the detailed scheme document is prepared in the form of a Memo for the consent of the Standing Finance Committee (SFC)/ the Expenditure Finance Committee (EFC) and the Cabinet..

Approval

All scheme proposals costing less than Rs 25 crores are required to have recommendation of SFC. This committee comprise Secretary of the line Ministry, Financial Adviser and Joint Secretary/Director of the concerned Division. The committee may invite representatives of the Planning Commission and the Department of Expenditure or any other Department, if required. Projects/schemes costing between Rs. 25 crores and Rs. 100 crores are examined by EFC. The committee is chaired by the Secretary of the line Ministry, with Secretary (Planning) and Secretary (Expenditure) or their representatives as members. The EFC for projects/schemes with outlays between Rs 100 crores and Rs 200 crores or above Rs 200 crores, where returns are not quantifiable, is headed by the Secretary (Expenditure). Proposals where projected outlay is above Rs 200 crores and returns are quantifiable are to be examined by the Public Investment Board(PIB). The SFC/EFC/PIB is an appraisal forum for any scheme project. The recommendations of the forum require approval of the competent authority for expenditure sanction. The competent authorities are identified as the Secretary of the Ministry/Department, Minister-in-charge of Administrative Ministry, Finance Minister or the Cabinet/Cabinet Committee on Economic Affairs according to the quantum of the projected outlay (Formulation, Appraisal and Approval of Plan Schemes and Projects, 2004).

Implementation

Once approved, the central plan schemes are implemented with the help of field units of Centre/State Governments whereas the State plan schemes are implemented through the field units of State Government. Throughout the implementation stage, Planning Commission has to be kept informed regularly about the physical and financial progress of schemes. The progress reports are expected to form the basis for allocation of annual budgets and further continuation of the schemes during the plan period. Apart from the established system of monitoring the progress of schemes by the Planning Commission, progress of a plan scheme

has to be evaluated by an independent agency before it is considered for continuation in the next plan period.

Weaknesses in the Planning System

Our objective here is to develop an understanding about basic weaknesses in the existing system. To achieve this objective, we have, primarily relied upon relevant chapters in the latest plan documents and the work of a few authors who have served as Members of the Planning Commission in the past. It is clarified here that our purpose is to understand the suitability of the overall planning and strategic framework for implementing e-Governance, rather than conducting a detailed literature review for presenting a critique on this particular aspect.

The planned development approach adopted by India in the post-Independence period has been critically examined by several authors. Sukhamoy(1987) argues that India's development strategy has constituted a major effort to reshape her economy and society. While confirming the inadequacies of design and implementation in the planning system, the author has suggested that the way out is not in giving up planning but in giving it new content. According to Sovani(1994), successive plans have focused only on economic growth and failed to address the larger problem of overall progress and re-making of the nation. The author has suggested that planners should bring out a series of alternate plans along with changes that are necessary to ensure success of each plan. Instead, the plans are more or less definitive statements which do not take into account uncertainties of economic and other events. Kabra(1997) has argued that planning for economic development cannot be only economic but necessarily to be an economic, political and social process.

A plan tends to become something imposed from above due to built-in tendency of more and more centralization in the bureaucratic system. The system does not encourage or allow any qualitative assessment. The efficiency is judged not by the accomplishment in real terms but only by the index of the progress of expenditure. A plan consists of individual schemes that have to be implemented at different locations and under various conditions of physical and human resources. There is lack of talent and capacity at the grassroots level to tackle the unique problems encountered at the implementation stage. The bias of the bureaucratic machinery to seek uniform solutions for different problems together with concern of the planners almost exclusively with macro-problems, is mainly responsible for the countrywide failure of plan implementation that has attracted so much notice(Sovani,1994). Kabra(1997) has emphasized on the need for planning of plan implementation to bridge the gap between planning and plan implementation.

Feedback system to aid the planning process with local experience is poor (Sovani, 1994). Data are mostly used as a one time exercise at the time of plan formulation (Bhaya, 1997) . There is no system to get regular feedback on the progress of schemes at the implementation stage either. Plan documents have been consistently pointing out this weakness.

The need for bottom-up approach for planning is well acknowledged by the Planning Commission. However, not much headway has been made in this direction owing to weak planning machinery at state and district levels. To add more to the complexities, the Central Government has over the years developed a whole array of centrally sponsored schemes where the role of State Government is subordinate (Sukhamoy, 1987).

Details of a plan scheme are worked out at the level of respective departments. The conventional structure of the Government departments has no space for experts in planning and strategy formulation. In general, it is the experience of a few seniors which is relied upon.

Organizing a series of structured deliberations with various stakeholders to get divergent views is usually avoided. The hierarchical system does not encourage free exchange of ideas. The operational level staff, even if invited to such discussion, feels reluctant to provide such inputs which contradict the views of seniors.

Further, there is a very large number of actors involved whose decisions cannot be influenced in the desired directions by what the planners propose. It is possible that plans did not work because the desired co-ordination of activities among the different actors was faulty, either because 'messages' were faulty or because they were transmitted with delay, or went contrary to the specific interests of the actors involved and were therefore evaded (Sukhamoy,1987). A similar observation was made by Kalecki(1962) who held the lack of control on the social conditions and institutional framework responsible for lack of effectiveness of planning in India.

The distortions and inefficiencies in the planning system are increasingly being realized by the Government. For example, Government is looking for restructuring the planning system in the agriculture sector. A strong need has now been felt for localized, state-specific strategies based on local agro-climatic conditions and constrains. All the State Governments have been advised to work out their agricultural plans based on district plans.

It is felt that several of the bottlenecks being faced in implementing e-Governance are due to the inherent limitations of the conventional planning and strategic framework within which the individual projects are being conceived and implemented. Pande (2004) argues that the contemporary Indian policy planning viewpoint is linearly causal and largely derived from Newtonian and Euclidian viewpoint where there are clearly defined system boundaries and the forces acting on units, can be precisely measured and mapped. In actuality such linear causality cannot exist, since the variables involved are linked to the others in highly interdependent and often acausal ways. Linear causality forgets that different government units have different socio-cultural frameworks and adapt to new interventions at their own pace. In the next section, it is attempted to bring out implications of the limitations of the existing planning and strategic framework on e-Governance.

Implications on e-Governance – SAP Analysis

In this section, we have attempted to identify specific characteristics/limitations in the conventional planning and strategic framework, related gaps and their implications on e-Governance. We have used SAP framework for presenting the analysis in Tables 1-3.

Illustrative Examples

The unsuitability of the conventional planning and strategic framework is distinctly visible in many e-Governance projects. In this section, we discuss two such examples taken from the agriculture sector which is a state subject in India.

- The Department of Agriculture and Co-operation (DAC), Ministry of Agriculture, Government of India has initiated Agricultural Informatics & Communication Network(AGRISNET) project as a centre sector scheme. The project, being implemented in States and Union Territories of India, has been identified as a Mission Mode Project under NeGP. The project aims at connecting all states and district level agricultural offices and several ICT based services for the benefit of farming community. The services include agricultural resources improvement, input supply, agricultural production monitoring, agricultural marketing and sales management, agro-advisory and extension services, farmers' help desk etc. The project is independently being handled by different states either through private vendors or

Table 1: Situation Analysis

S.No	Conventional Planning and Strategic Framework Characteristics/Limitations	Gaps	Implications
1.	Existence of loosely coupled State and Central level plan schemes.	Planning Commission has been raising concerns about multiple schemes (both at Centre and State Government levels) with overlapping objectives.	This has led to isolated e-Governance efforts leading to disparate systems. Projects conceptualized under department specific plan schemes have no concern for issues like inter-operability, standardization, integrated service delivery etc.
2.	Plans are expected to be executed within the prevailing Governance system notwithstanding the inherent efficiencies.	Good governance related issues generally not addressed. Even though X plan document devotes a separate chapter on this (a noteworthy deviation from the past), practically such issues are beyond the purview of Planning Commission.	True e-Governance demands rationalization of Government structures and processes for efficient and effective service delivery to citizens. Such concerns continue to remain un-addressed in practice.
3.	Conventional planning assume slow changes in the environment	Project plans are not adaptable to fast changing situations.	Expectations of citizens keep increasing as they become accustomed to IT based service. Service levels need to be constantly enhanced. Resource miss-match at field level act as a deterrent in meeting emergent situations as per local requirements.
4.	Emphasis on achieving the overall economic growth targets.	Regional disparities and social imbalances continue to prevail.	e-Governance initiatives are apparently empowering the better off citizens only. Weaker sections of society may be getting further marginalized.

NIC state units. The project guidelines do not enforce building of services based on common repositories, integration with several disparate projects at Centre as well as State Government levels, etc. In the absence of this, there is likely to be wide variation between what is intended under NeGP and what actually gets implemented at the field.

- Agricultural marketing is another area where there are duplicities both at the Centre Government as well as State Government levels. At the central level four organizations, viz. Directorate of Marketing and Inspection (DMI), Directorate of Economics and Statistics (DES), National Horticulture Board (NHB) and Department of Consumer Affairs (DCA) are involved in collection, analysis and dissemination of market information. While their scopes vary, synergetic relationships among the four can easily be built around the Agricultural Marketing Information Network System (AGMARKNET) project of DMI which has networked 2800+ agriculture produce wholesale markets in the country for dissemination of daily commodity prices and arrivals and other marketing related information through the portal www.agamrknet.nic.in (Suri and Sushil, 2006). The project has also been identified as a Mission Mode e-Governance Project. However, due to inherent limitations in the traditional approach, the projects are continuing in an independent fashion under the respective organizations. There are similar projects at the State Government level. For example, States

Table 2: Actors Analysis

S.No	Conventional Planning and Strategic Framework Characteristics/Limitations	Gaps	Implications
1.	Working Groups are formed on one time basis.	WG members are generally serving officials /entrepreneurs. They are expected to take dual responsibility in limited timeframe. The ad hoc arrangement is inadequate for national planning.	e-Governance projects conceptualized on the basis of sketchy analysis face bottlenecks at implementation stage and may not deliver results as per expectations.
2.	Assumes sector specific experienced people at top level.	Key positions in various Departments dominated by Administrative Service officers who are posted for fixed periods. Sector specific experience/ specialization not mandatory.	Top level may not contribute as per expectations due to lack of adequate domain knowledge and IT experience. Postings at key positions are tenure based and not linked to project durations. This makes it difficult to maintain continuity of perceptions and priorities.
3.	Detailed programme plan generally prepared by a small group of senior officers	Insufficient involvement of field level offices and stakeholders at planning stage.	Miss-match in planners' expectations and stakeholders' expectations from the project; incoherence among involved actors due to lack of shared vision and mission.
4.	Planners assume smooth implementation of the conceived schemes; plans lack planning for plan implementation; implementation is generally attempted with existing manpower resources to avoid complex procedures.	Due to limited resources, implementing agencies keep shifting their priorities depending upon directions received from top level; There are less capable people at implementation level.	Lack of ownership, implementation delays, difficult to establish feedback based learning loops; expectations of citizens keep increasing as they become accustomed to IT based service; resource miss-match at field level prevent them from meeting emergent situations as per local requirements.

such as Maharashtra, Madhya Pradesh, Karnataka and Andhra Pradesh have their own portals and their harmonization with AGMARKNET has been taken as a post implementation exercise.

Learning Issues

The above discussion leads to emergence of certain specific lessons which are summarized as follows:

- The traditional approach of planning and strategy-making is analogous to Newtonian method of strategy development which assumes highly intelligent people at top of an organization working through data gathering, analysis, and selection and planning, then passing the results to others for implementation. In this approach (mechanical, top-driven and centralized), there are multiple organizational layers that must be penetrated to translate a plan into action and there is sheer lack of connection between planners and line staff. Such a framework, where strategic planning and execution are treated as mutually exclusive aspects, is not suitable for e-Governance.
- Successful implementation of e-Governance projects demands iterative enhancements in service levels through learning loops which in turn require a constant dialogue among

Table 3: Process Analysis

S.No	Conventional Planning and Strategic Framework Characteristics/Limitations	Gaps	Implications
1.	National plan takes basic inputs from Working Group(WG) Reports on different sectors.	Planning exercise is constrained by lack of sectoral databases on identified themes. WG Members provide inputs based on their experience. Structured field studies generally not undertaken.	Projects have genesis in the recommendations made in the plan document. In-depth Program Planning like analysis generally not conducted even at Department level. This has serious implications at subsequent stages.
2.	Assumes regular in-flow of progress reports from implementing agencies.	System to facilitate constant monitoring and evaluation of various plan schemes not yet stabilized. Progress monitoring is generally with respect to utilization of allocated budget and not the physical outcomes.	In the absence of required level of involvement of field offices and their constant feedback for improving the services, projects continue to be executed with pre-decided perceptions.
3.	Implementation is attempted with existing manpower resources due to financial stipulations.	Non projection of future resources to handle the changing requirements.	Resource constraints act as a deterrent in meeting emergent situations.
4.	Plans are static and inflexible in nature.	Planning is one time process. Refinement of the SFC/EFC memo during the course of implementation is generally avoided due to procedural intricacies.	A static and fixed framework is incapable of handling the dynamic context of e-Governance. Such projects require flexible and adaptive planning and strategy-making framework.

planners, strategy makers, implementers and beneficiaries during the project life cycle. On the other hand, taking corrective measures in an ongoing plan scheme involves cumbersome procedures and is thus generally avoided by the scheme heads in the administrative ministries. e-Governance projects are thus being implemented like any other plan scheme with 'business-as-usual' approach.

- Plan schemes appear to be pushed from top. Planning machinery at the district level is weak. The State level plans do not adequately address the local issues due to lack of comprehensive inputs from the districts. This has serious implications on the attempt to achieve balanced development in the country.
- There is a general tendency of designing plan schemes for uniform application across the country. The approach is not suitable for a vast country like India having diverse economic, political and social conditions.
- The EFC/SFC guiding framework, under which the e-Governance projects are being approved, continues to be same as that for any other plan scheme. It does not mandate discussion on aspects like change management, process re-engineering, interoperability, digital-divide, standardization, integrated service delivery, value accruing to stakeholders, performance metrics for objectives and activities, etc. which are the key challenges to be tackled while attempting e-Governance.
- Lack of talent at the grassroots has been identified as a major weakness in the implementation of plan schemes. E-Governance projects, being ICT driven, expect the actors at grassroots level equipped with a minimum level of IT skills.

- e-Governance and good governance are related aspects. However, governance issues do not fall under the purview of Planning Commission. Continuation of e-Governance projects under the conventional planning and strategic framework, without addressing the core governance issues, may prove a futile exercise in the end. Although this issue is discussed in the NeGP, nothing noteworthy has been achieved on this front so far.

Based on these learning issues, we attempt to present certain concrete recommendations in the next section.

Strategic Recommendations

The conventional planning and strategic framework need to be refined to suite the context of e-Governance. Few suggestions and expected benefits there from are brought out as follows in Table 4:

Table 4: Recommendations and Benefits

S.No.	Recommendation	Expected Benefit(s)
1.	The process of planning and strategy making should be reflective, engaging and emergent as opposed to traditional analytic, directive and planned. For this, operational level staff as well as other stakeholders should be adequately involved while planning and formulating plans and strategy.	Coordinated and Coherent efforts by various actors due to shared mission and vision among different actors; preparedness for strategic change.
2.	Strategic assessment of internal and external environment with respect to any proposed e-Governance project should be made mandatory. EFC/SFC proforma should also be re-designed to enable comprehensive project specific discussion on approach of tackling e-Governance challenges. Aspects like process re-engineering, change management, interoperability, integrated service delivery, standards, narrowing of digital divide etc. should be enforced at this stage.	Plugging of the loopholes in the existing system keeping in view that large scale changes in the established conventional planning and strategic system are unlikely to happen in a fast track mode.
3.	Planning and strategy making should be a continuous process during the life cycle of e-Governance projects. Procedures to incorporate changes in an approved plan scheme, during the course of its implementation, should be simplified.	Adaptable and flexible strategy with ability to handle emerging situations
4.	A carefully planned feedback system should be an essential component of any e-Governance project to accelerate organizational learning	Organizational learning which stimulates organizational changes to support e-Governance.
5.	The performance monitoring system should be re-defined to monitor strategic effectiveness rather than just monitoring progress in terms of physical and financial targets.	Provides inputs required for renewal of strategy to move towards achieving strategic objectives of the project
6.	A repository of all the e-Governance projects which are already implemented, ongoing or in pipeline should be created	Control on present state of disorderliness.

e-Governance projects are a complex mix of organizational, legal, political, social and technological aspects. The peculiarity with these projects is that they get evolved over a period of time in an iterative fashion. The expectations of users keep increasing as they become accustomed to an ICT based service. It is unlikely that the e-Governance projects, conceived from top as plan schemes, under the NeGP or elsewhere, would deliver as per expectations due to inability of the conventional planning and strategic framework to handle changing situations and other limitations inherent in the system. It is expected that initiating corrective measures on the lines of suggestions brought out in the study will trigger the march towards a flexible and adaptive system capable of tackling the dynamics of e-Governance.

* The Views expressed in the paper are the personal views of the authors

References

- Agricultural Strategy for Eleventh Plan: Some Critical Issues (2007), *Planning Commission*, Government of India.
- Allocation of Business Rules, Government of India, Available at http://cabsec.nic.in/abr/abr_scnd.htm , last accessed on 8.9.07.
- Bhaya H. (1997) Organizing for Planning in H. Bhaya(Ed.) *Indian Planning - Search For Change*, Asian Institute of Transport Development, New Delhi.
- Chakravarty,S. (1987) *Development Planning, The Indian Experience*, Oxford University Press, Oxford.
- Chakravarty, S. (1994) Problems of Plan Implementation, in Terence J. Byres(Ed.) *The State of Development Planning in India*, Oxford University Press, Oxford.
- Dandekar V.M. (1997) Planning: What and How in H. Bhaya(Ed.) *Indian Planning -Search For Change*, Asian Institute of Transport Development, New Delhi.
- Department of Information Technology, Government of India, *National E-Governance Plan* , Available at www.mit.gov.in, last accessed on 10.9.07
- Formulation, Appraisal and Approval of Plan Schemes and Projects (2004), Ministry of Finance, Government of India, Available at http://www.finmin.nic.in/the_ministry/dept_expenditure/plan_finance2/CompofImpCirc.pdf, last accessed on 10.09.2007.
- Heeks R. (2003) Most eGovernment –for-Development Projects Fail : How can Risks be Reduced?, *i-Government Working Paper Series Paper No. 14*, available at http://www.sed.manchester.ac.uk/idpm/publications/wp/igov_wp14.pdf, last accessed on 10.10.2006.
- Kabra, K.N. (1997) *Development Planning in India, Exploring an Alternative Approach*, Sage Publications, New Delhi
- Kalecki,M. (1962) The Marxist Theory of Development:Some notes on Warsaw Conference, *International Social Science Journal*, Vol(14), pp. 784-85
- National Task Force on Information Technology & Software Development, Government of India, Available at <http://it-taskforce.nic.in/bgr11.htm>, last accessed on 10.9.07.
- Note on AGRISNET, Department of Agriculture and Co-operation, Government of India, <http://agricoop.nic.in/conten1.htm#c15>, last accessed on 10.9.2007
- Pande A.S. (2004) An Emergent Complex Systems Perspective on E-Governance, in MP Gupta (Ed.) *Towards E-Government - Management Challenges*, Tata McGraw-Hill, New Delhi , 237
- Sovani N.V. (1994) Planning and Planners in India, in R.K.Sinha (Ed.) *Planning and Development in India*, Har –Anand Publications, New Delhi.
- Suri P.K. and Sushil (2006) Implementing E-Governance through Strategic Alliances - A Case of Agricultural Marketing Information System in India, *IIMB Management Review*, 18 (4), pp.389-401.
- Sushil (201) SAP-LAP Framework, *Global Journal of Flexible Systems Management*, 2(1) , 51-55 .
- Tenth Five Year Plan Document (2002-07) *Chapters on Design of Programmes, Governance and the Institutional Framework for Development ; Governance and Implementation; and Information Technology*, Planning Commission, Government of India, Available at www.planningcommission.nic.in, last accessed on 10.9.07
- The Planning Process (1975), Planning Commission, Government of India.