E-Governance in Socio-Economic Activities

Preeti Abrol
C-DAC

Mrunalini Nandanwar
C-DAC

Anu Rani
C-DAC

ABSTRACT
The paper emphasizes the issues of the local governance in its transition to the knowledge society and the web based processes of advanced interactive web solutions aiming at designing and implementing coherent regional sustainable strategies. The innovative e-Governance approach creates an opportunity to the government for changing the process of the sustainable strategy design and implementation, from a system-oriented to an actor-driven one. This process helps in improving information and service delivery with their participation in overall decision-making. The Government requires knowledge of advance estimates of production for making various policy decisions relating to pricing, buffer, marketing, export/import, distribution, etc. Implementing the e-governance in the most effective and efficient manner in the economic and statistical organization, provides reliable, timely and credible data for disseminating information to the public and other agencies.

The objective is to determine the development needs or challenges that the State is facing. An attempt is made to determine how the Information Communication & Technology (ICT) initiatives can help to improve the identified problems in the State. The e-governance application developed for Economic and Statistical organization enables them to manage the data collection at district level through the application and generates reports on time for abstract preparation.

General Terms
Economic and Statistical MIS

Keywords
Socio-Economic Statistics, E-governance, ICT solutions for government offices, Price Index

1. INTRODUCTION
In today's world most of the offices using a fair amount of technology, often without even noticing it; computerized records have become the norm for most businesses/offices, but using spreadsheets for bookkeeping is more than mere convenience; the use of electronic spreadsheets has many advantages when compared to old-fashioned manual systems. Once a template is set up, it speeds up the processing time of business transactions. Now moving from spreadsheets to database makes convenience of getting the information instantly to those who need it anytime anywhere through the e-governance application. Availability of data/statistics to Planners and Policy makers in Government and outside; timely data collection and report generation are required to estimate the statistics through the e-governance application. The growing importance of e-Governance, spreading its branches in varied fields is still not reaching to state government organizations. Persons working on the manual system are still not ready to accept new technologies. We can achieve the goal of our country through taking initiative in developing the state government and organizing training programs for self development.

E-Governance should enable anyone visiting a city website to communicate and interact with city employees via the Internet. The focus of the e-governance is on the use of information and communication technologies in all facets of the operations of a government organization. E-governance allows citizens to interact with computers to achieve objectives at any time and any location, and eliminates the necessity for physical travel to government agents. Improved accounting and record keeping can be noted through computerization, and information through forms can be easily accessed, equaling quicker processing time. On the administrative side, it helps in accessing information which can now be stored in databases versus hardcopies stored in various locations.

2. E-GOVERNANCE IN STATE GOVERNMENT
Now State Government realized the importance of e-governance. They want to operate in the same environment in which the private sector thrives. Initially state government organization has taken initiative in developing the website for their organization to provide information of the overall services. Later on, government is moving towards the automation of the existing system for accurate results and reports generation as and when required by the government agencies. In the leading edge, software in particular has compelled to recognize the technology aspect of environment as the most significant component for implementation of e-Governance.

The Economic & Statistical Organization under the overall control of Planning Department broadly provides two types of services i.e. collection, compilation of socio-economic statistics and formulation of development plans. A Statistical Abstract is prepared from the collected data from various departments which presents the comparable series of statistical data in a consolidated form. It is extensively used by administrators, policy makers, researchers and various other Govt. and non-govt. institutions engaged in the research work and overall economic development of the State.

Economic and Statistical Organization, Punjab acts as a Nodal Agency which makes a major contribution in strengthening the database of the State for effective coordination of statistical activities of all the departments. The Statistical needs of private sector are also met by this Organization. The data collected by the Organization highlight the level of socio-economic development of the State. This data helps in formulation and evaluation of Development Programmes of the state and identifies different bottlenecks in these programmes for taking corrective measures for proper development of the state [3].

The Directorate of Economics and Statistics in the States keep liaison with the CSO for purpose of coordination at all-India

level [4]. At present all the states, regularly prepare estimates of total and per capita income both at current and constant prices. The Central Statistical Organization assists the States in the preparation of these estimates by rendering advice on conceptual and methodological problems. The estimates for commodity producing sectors like agriculture, forestry, fishing, mining & quarrying, manufacturing, etc. are prepared using the production approach i.e. measuring the value of output and deducting there from the cost of material inputs used in the process of production. The estimates for the services sectors like trade, transport, hotels & restaurants etc. are prepared by income approach, specifically, by multiplying the value added per worker by the number of workers.

3. DIFFERENT SECTORS AFFECTING INDIAN ECONOMY

Economic & Statistical Organization, Punjab is involved in strengthening database at state, district and block levels through collection, compilation and analysis of socio-economic statistics. Various duties are performed by the department from data collection of different departments to publication of statistics [5]. In other words ESO acts as databank for making plans, forecasting and decision making [6]. Such information is being used not only in the formulation of development plans but also assessing the impact of development efforts for the growth of the economy of the state. The organization is also assisting District Planning Boards in formulating the district plans and assessing their impact at micro level [7]. The organisation structure is shown in (Fig.1).The immediate need is the transition to automatic information processing which involves utilizing the technological advancements in information technology to improve the efficiency of the department. Special expertise is involved in this very voluminous and huge calculation work to find out the income generated, contribution and rate of growth under different sectors of the economy.

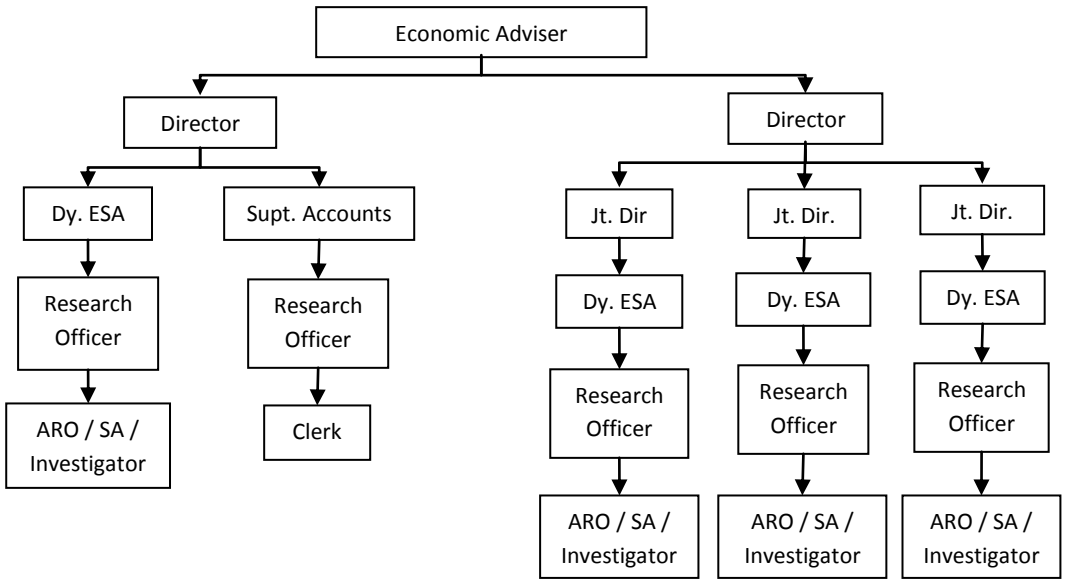

Fig 1: Organization structure

Different sections of the Economic & Statistical Organization, Punjab which affects the economy of India are computerized and one of them is as follows:

3.1 CONSUMER PRICE INDEX (CPI)

A CPI measures changes through time in the price level of consumer goods and services purchased by households. The CPI is a statistical estimate constructed using the prices of a sample of representative items whose prices are collected periodically. Sub-indexes and sub-sub-indexes are computed for different categories and sub-categories of goods and services, being combined to produce the overall index with weights reflecting their shares in the total of the consumer expenditures covered by the index. The annual percentage of change in a CPI is used as a measure of inflation. A CPI can be used to index the real value of wages, salaries, pensions, for regulating prices and for deflating monetary magnitudes to show changes in real values. The flow of the data from district to head office is shown in (Fig.2).

The CPI (industrial workers) is based on changes in prices at the retail level. The index, worked out by the ministry of labour, is used to measure the cost of living. CPI is used by the government, private sector, embassies, etc to compute the dearness allowance (DA).

For studying the behavior of prices especially under inflationary pressures, whole-sale and retail prices are collected and published in Prices Bulletins. Consumer Price Index Numbers for working class are prepared for different centers and supplied to State Govt. These indices are being used for providing dearness relief to the industrial workers.

CPI is one of the most frequently used statistics for identifying periods of inflation or deflation. This is because large rises in CPI during a short period of time typically denote periods of inflation and large drops in CPI during a short period of time usually mark periods of deflation.[8]

CPI shows increase of prices over a period for certain items of consumption of goods & services. Inflation is inevitable in the booming Indian economy and we have to accept the fact. In simple words, "inflation is a general increase in the level of prices over a period." Inflation is measured by Consumer Price Index or CPI.

Consumer Price Index shows changes in prices between two periods of standard package of goods and services which Indian household purchases for consumption. Government of India compiles and publishes CPI every month. CPI is comparison between two periods and has a compounding effect.

Two basic types of data are needed to construct the CPI: price data and weighting data. The price data are collected for a sample of goods and services from a sample of sales outlets in a sample of locations for a sample of times. The weighting data are the estimates of the shares of the different types of expenditure in the total expenditure covered by the index. [9] These weights are usually based upon expenditure data obtained from expenditure surveys for a sample of households or upon estimates of the composition of consumption expenditure in the National Income and Product Accounts. The index is usually computed monthly, or quarterly in some countries, as a weighted average of sub-indices for different components of consumer expenditure, such as food, housing, clothing, each of which is in turn a weighted average of sub-sub-indices.

The CPI can be performed as

$$CPI = \frac{\text{Updated Cost}}{\text{Base Period Cost}} \times 100$$

The "updated cost" is the price of an item at a given year (say, the price of bread in 2012), divided by the initial year (the price of bread in 1999), and multiplied by one hundred.

The consumer price index, along with the national income and population census, is calculated by governmental statistical agencies. The calculation of weights in detailed depends upon the availability of information and upon the scope of the index [10].

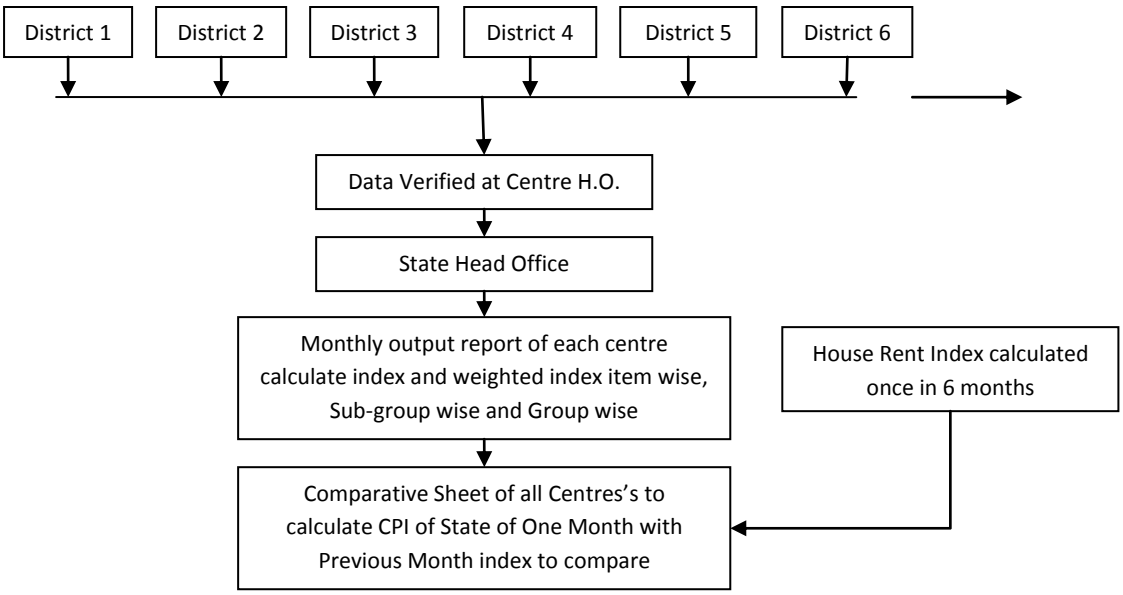

Fig 2: Flow diagram of CPI module

4. FEATURES OF THE APPLICATION

- Automated the manual system
- Proper authentication and access according to the roles provided
- Transparency in system provides better service delivery.
- Accurate report generation on yearly basis
- Secure, reliable and faster data processing.
- Automatic compilation of data
- Saves time as data provided by district through application
- Record keeping and easy maintenance
- Intermediate report generation (compilation sheets)
- Automatic report generation of some reports based on compilation sheets data.
- Generation of reports anywhere with the help of proper resources (computer and internet facility) by authorized person.

5. CONCLUSION

Regular data collection for comparison of prices of various items helps in estimation of price index, percentage of the previous index levels, annual growth rate to give an idea of near term inflation to investor. This can be achieved through proper usage of ICT in government sectors.

Just aiming an implementation of the e-governance in state government office is not sufficient, a usefulness of the application is necessary for better results and transparency. To achieve this, proper infrastructure at office is required and training to the concerned person before implementation should be provided. A successful implementation of E-

governance at District level provides opportunities to the government organization to move forward and adopt new technologies to achieve the goal of the organization with high quality, cost effective, transparency and on time service delivery.

6. REFERENCES

[1] Metadata for National Agricultural Statistics, India.

[2] R. Srinivasan1* and G. Iyyakutti Iyappan, "Different Methodologies and Methods of E- Governance Using Open Source Technology"

[3] Present practice in India - United Nations Statistics Division

[4] Gupta, M. P., "Promise of e-Governance" (Operational Challenges)

[5] RTI manual of Directorate of Economics and Statistics

[6] Methodology of Crop Estimation

[7] Ministry of Statistics and Programme Implementation

[8] Consumer Price Index

[9] Wholesale-price index, economy watch

[10] Municipal Statistics Abstract

[11] Annual report of MOSPI