

8. INFORMATION SYSTEM

Introduction

In the taxation department the collection and collation of required data and their analysis are vital for the proper enforcement of the tax and for the evaluation of the administration as well as of the impact of the tax. An adequate information basis is also needed for the simulation of the effects of proposed changes in the tax system. Thus, adequate data on all major aspects of the tax are a pre-requisite for tax enforcement, tax reform and tax legislation. For the purpose of collecting and collating the required data, a recent advance in computer technology, known as Management Information System (MIS), is extremely useful. It is designed to provide management with integrated, all-encompassing information on the working of the total organisation in order to facilitate the decision-making process. In this technique, the sub-systems are inter-related and the capability is built-in to transfer data between the different sub-systems. The result is an output that will provide management with meaningful data for effectively controlling and administering departmental policies.

Information Needs Analysis

To accomplish the above objectives, the following would seem to be the major aspects on which data have to be collected and collated:

- (i) Commodity-wise turnover and tax yield of General Sales Tax;
- (ii) Commodity-wise turnover and tax yield of Central Sales Tax;
- (iii) Flow of revenue quarter by quarter;
- (iv) Trends in turnover;
- (v) Distribution of registered dealers by size of turnover with corresponding tax paid;
- (vi) Distribution of registered dealers by regions with turnover and tax paid;
- (vii) Yearly assessments, collection and arrears;
- (viii) Flow of goods, i.e., imports and exports in the case of border checkpoints; and
- (ix) Information contained in the declaration forms.

Of these, the most important are the commodity-wise turnover and tax data and the size-distribution of dealers. The former would indicate the relative importance of different commodities or groups of commodities from the revenue point of view and also give an idea of the growth of trade in different commodities. Information on commodity-wise composition is necessary also for studying the incidence of the tax on different commodities and on different socio-economic classes of the population. In view of this, the commodity-wise data are tabulated by Major Codes and Minor Codes. These Codes identify the commodities according to the point of levy or as per the type of commodities. Information on the size distribution of dealers is obviously important from the revenue and administrative points of view.

In regard to effective enforcement of tax, there are areas that could be taken care of through a proper information system only. With the increasing reliance on the single-point tax, there is a greater dependence on checkpoints. The single-point system also places a large reliance on the 'declarations' issued by the registered seller who first sells a given commodity in the State. There arises the difficult task of verifications of these claims. A large number of transactions involving hundreds of dealers are required to be cross-checked to confirm the eligibility for exemptions from the first-point tax. Such verification is not manually feasible and, hence, not properly carried out in most cases. The computer could easily take up this task. The use of the computer will thus help create a Management Information System based on computerised data and would ultimately lead to an increase in efficiency of tax administration as well as more rational tax policy formulation.

The Existing Information System in Tamil Nadu

Before we make our recommendations for a sound information system for the sales tax department, it may be useful to give a brief description of the existing system, pointing out its shortcomings. Unlike in many other States, the Commercial Taxes Department in Tamil Nadu has made a good beginning in building up an information system for the sales tax. But the coverage of the information collected is inadequate and the manner of collection not quite appropriate for speedy procurement of data. Furthermore, the processing of the data collected takes an unduly long period of time. As a result

of these limitations, whatever information is collected cannot be put to effective use either for administering the tax or evaluating the efficiency of enforcement or for estimating the effects of contemplated policy changes.

The evolution of the information system in Tamil Nadu has been piece-meal. The information flowing from various organisations has not been interwoven. The system, developed so far could be classified into three sections namely, (a) collection of commodity-wise statistics, (b) undertaking commodity-wise studies, and (c) compilation of Monthly Consolidated Progress Reports (MCPR).

For the purpose of collection of commodity-wise statistics, a Data Processing Cell (DPC) has been in existence in the Department of Commercial Taxes since 1973. From its inception, it has been compiling and processing data and reviewing the quality of data collected. This is being done under the control of a senior person. Initially, an Assistant Commissioner (Legal) used to look after it, but for some years now, it is under the control of the Deputy Commissioner of Commercial Taxes (Statistics and Research) and Public Relations Officer. The technical work of the DPC is being looked after by a Systems Analyst (SA) in the cadre of a Deputy Commercial Tax Officer. Under the SA, there are three sections of the cell. Each section consists of one Superintendent and three Junior Assistants. All these persons check the input forms received from the assessing officers every fortnight.

The input forms relate to (i) the turnover and tax due under the TNGST (Input-1 Form), (ii) the turnover and the tax under the CST (Input-2 Form), and (iii) the turnover not falling under the above two categories (Input-3 Form). The information gathered through Input-1 relates to gross turnover determined, deductions allowed by the assessing authority (i.e., by notification, second sales, etc.), taxable turnover, and the amount of sales tax due. Information in Input-2 Form relates to similar items but gives details of deductions on account of notification sales of declared goods which have already suffered tax under the TNGST, and endorsement sales. In Input-3 Form, details are given in regard to items not falling under the TNGST and the CST Acts. From among the above three forms, compilation has been done from 1972-73 through 1979-80 for the Input-1 Form only. The compilation from the Input-2 Form has not been attempted at all. The Input-3 Form has however been tabulated for the year 1976-77 only*.

The data collected by the Department are despatched to the Government Data Centre (GDC), Guindy, Madras, with necessary batch totals. The GDC punches the information into the cards which are processed on the computer. The information fed through the cards is thoroughly screened and the defective or incomplete cards are pointed out in the form of error lists. The correct information is stored on magnetic tapes. The error lists are sent by the GDC to the DPC who in turn gets the lists rectified, and sends the correction lists to the GDC where the cards are punched based on these correction lists and the information is stored on magnetic tapes corrected correspondingly. Finally, the information stored in tapes is processed to give out the printed output statements.

The inputs provided to the computer are in coded form. The assessee is identified by his registration number. A comprehensive five-digit code is assigned to identify the assessing unit, with a single major code to identify the Division, a two-digit code to identify the Zone within the Division and a further two-digit code to identify the Assessing Unit within the Zone. A single-alphabet code is assigned for the designation of the Assessing Officer. A single alphabet code is assigned for the fortnight in which the assessment is finalised. A single alphabet code is assigned for the type of assessment, i.e., to denote whether the assessment is (i) under Section 7 (compounded rate of tax), (ii) based on annual return: (A1) or (iii) under Rule 18 (monthly returns A2).

The most important code in the existing system relates to commodities which have been given a five-digit code. The first digit identifies the major classification of commodities according to the point or system of levy. That is to say, the Major Codes have been assigned for goods taxable at single-point under the First Schedule of the TNGST, for declared goods (Second Schedule), for exempted goods, and for goods taxable multi-point. A further two-digit code known as the inter-code has been assigned to identify the commodity group which is a broad Classification of the goods within the above major code. Another two-digit code known as the Minor Code, identifies the particular commodity within the above commodity group (inter-code). In all, the commodities have been classified into 248 commodity groups at the inter-code level and nearly 700 commodities at the Minor Code level.

The following are the major output statements printed out by the computer annually:

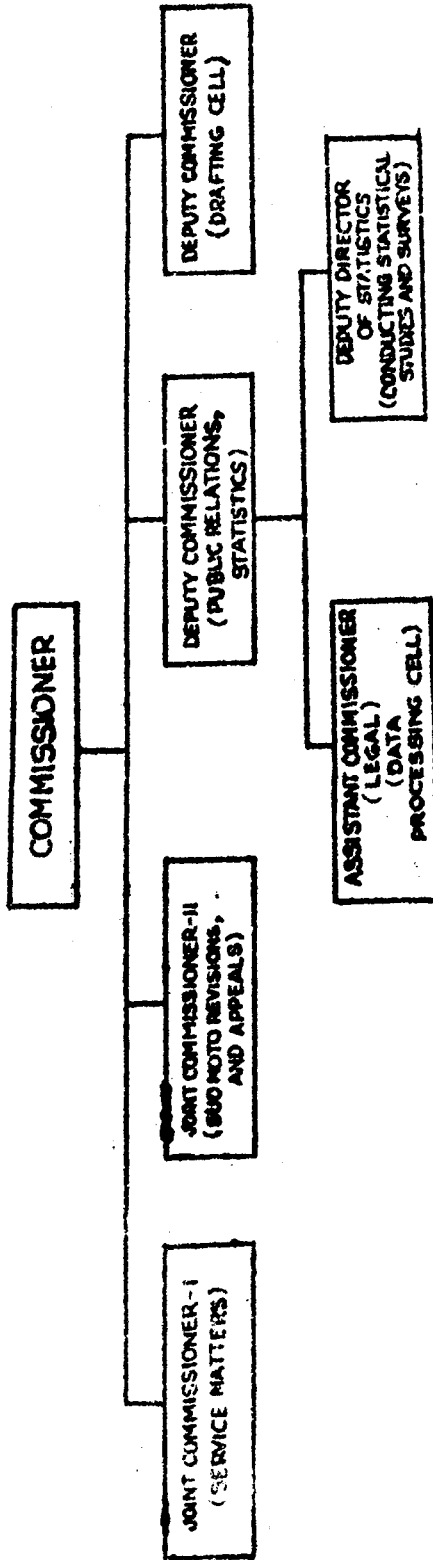
- (i) Commodity-wise turnover and revenue statements;
- (ii) Area-wise turnover and revenue statements;
- (iii) Commodity group statements of turnover and revenue for single-point and multi-point taxable goods; and
- (iv) Taxable turnover group statements under Section 7.

All the above statements have been prepared for the TNGST Act only. For the transactions falling under the CST only sporadic attempts have been made.

Another activity relevant to the information system is performed by the Statistical Cell under the headquarters organisation (Exhibit 8.A). This cell came into being with effect from January 1, 1971. Since then it has been conducting various studies. These studies could be classified under various categories. First, most of the studies relate to specific industries. These are informative in nature and could be of great use to the assessing authorities. Second, some of the studies relate to estimating evasion of sales tax in specific commodities.

The third part of the existing information system relates to Monthly Consolidated Progress Report (MCPR) which has been introduced from June 1981. As stated earlier, the MCPR is collected directly by the personal

EXHIBIT VIII 'A'
COMMERCIAL TAXES DEPARTMENT, TAMIL NADU
HEAD QUARTERS ORGANISATION



staff of the Commissioner of Commercial Taxes. It is submitted by each of the assessing authority to its supervisor, viz., the Assistant Commissioner (AC). The AC in turn consolidates the information for the territorial division and submits it to the Deputy Commissioner who prepares a summary statement for the Division and forwards the same to the Commissioner of Commercial Taxes. Through the MCPR, data are collected on various aspects of the operation of the sales tax, viz., actual and targeted tax revenue, issue of registration certificates, provisional and final assessments, tax arrears, information about the submission of returns, annual inspection works, compounding fee and collection of advance tax through the enforcement, shop inspection, test purchases, lorry checks, and booking of offences.

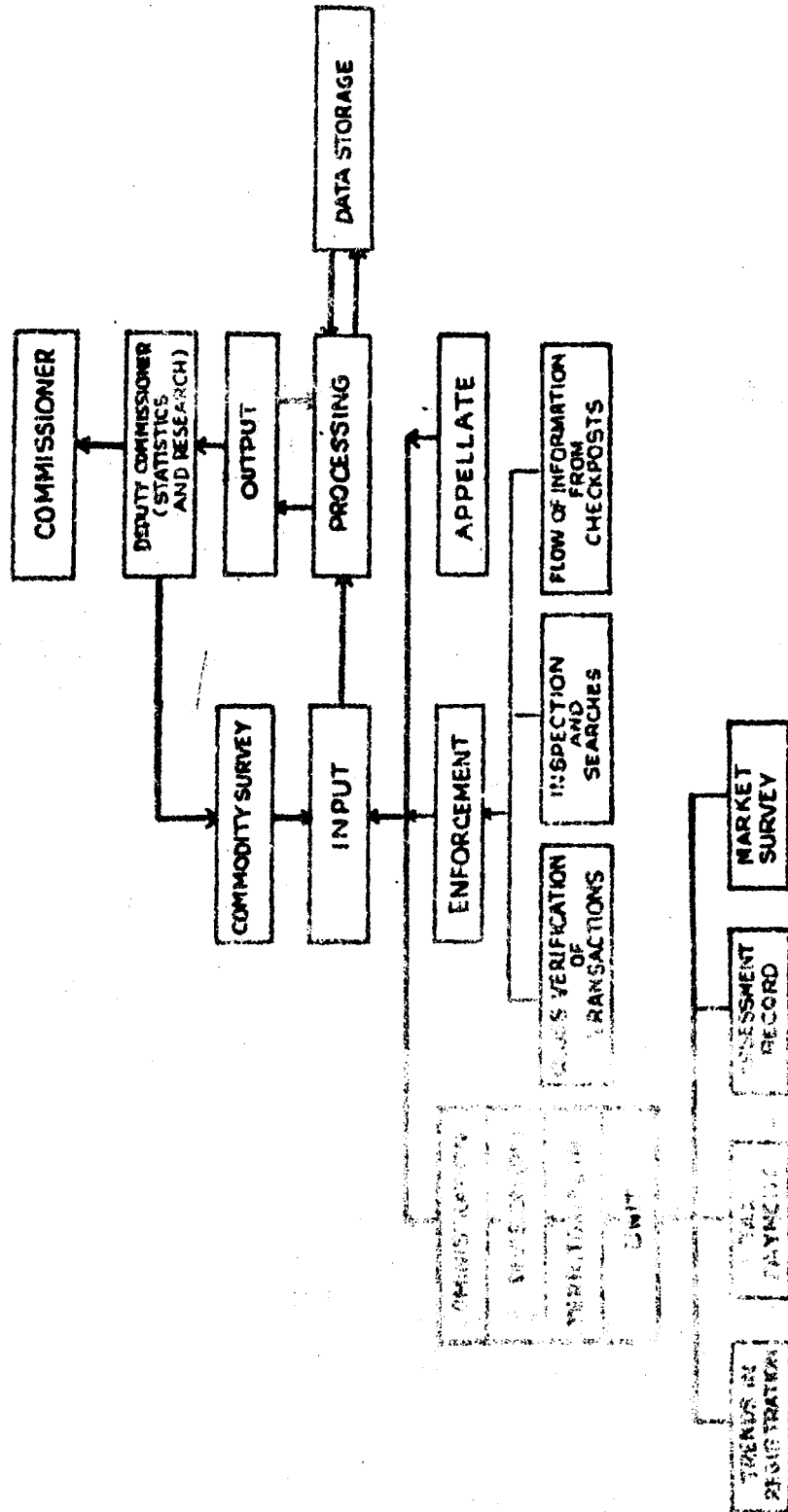
Thus, the existing information system is divided into three separate wings. Commodity-wise statistics is collected by a wing under the supervision of a system analyst; the commodity-wise surveys are attempted by the statistics wing, and the data on the operations of the tax are collected (vide the MCPR) by a wing consisting of the personal staff of the Commissioner of Commercial Taxes. As the MCPR is in the nature of a progress report, data are compiled to see the progress of the units (districts), mainly from the revenue angle; no proper compilation has been attempted to make it a part of the Information System. Likewise, statistical surveys have not been put into the mainstream of the Information System. As the attempts are ad hoc, the treatment meted out to the surveys is also casual. The information stemming from them is not linked with the other aspects of the Information System. Finally,

the commodity-wise statistics are collected only for the transactions falling under the GST; the data for the transactions under the CST have never been collected. Likewise, the data relating to the transactions not falling either under the GST or the CST have been tabulated only once. Moreover, there is a considerable time lag in the tabulation of these data, which defeats the very purpose of its collection.

Reforms in Information System

With a view to removing the weaknesses of the existing information system in the sales tax administration of Tamil Nadu, the following reforms have to be attempted. The first reform, essential to the building up of the MIS, relates to bringing the existing systems under the control of a single authority. Although formally, even today the existing systems are under the control of the Commissioner, it would not be unfair to say that the working of the DPC and the statistical cell has been completely independent of the system of the MCPR. Consequently, neither any attempt has been made to effectively use the data obtained from the different systems, nor has there been any effort to reform the individual systems. When all the wings of the existing information system are under the control of one authority, it would be possible to more effectively use the information for policy purposes. It is recommended that this authority should be vested in the Deputy Commissioner (Research and Statistics). (Exhibit S.B.).

EXHIBIT VIII
PROPOSED MANAGEMENT INFORMATION SYSTEM FOR
SALES TAX ADMINISTRATION IN TAMIL NADU



The second reform relates to the organisation of the existing Statistics and Research Wing. Presently, the work of the Public Relations Officer and that of Statistics and Research have been combined. This prevents the wing from doing any justice to the two independent activities - both of which are extremely useful for the working and the image of the department. It is, therefore, necessary to reorganise this wing to separate the public relations work. It is recommended that a new post of Public Relations Officer of the rank of the Deputy Commissioner of Commercial Taxes be created to head a separate wing to liaise between the department and the dealers. This would be useful both for giving proper information to the department and for circulating the information among the dealers. The Deputy Commissioner of Commercial Taxes (Statistics and Research) should be made responsible for executing the functions of collection of statistics, conducting commodity surveys and collection of MCPRs. The Deputy Commissioner (S&R) should, therefore, be a man of vigour and be chosen from among the experienced officers. He must be qualified to undertake research and put the collected data to proper use. It would be useful to have for this post a person with post-graduate qualifications in economics/statistics with some research experience. He should be sent for training to NIPFP or a similar organisation for a short period before appointment.

The third reform relates to changes in documents. The submission of a quarterly return by each registered dealer is a normal requirement. In some cases where monthly payment of tax is asked for, a monthly return is

also required. The monthly return is not intended to be a source of information to be compiled and put into the computer. Hence, only the minimum of information indicating the amount of tax paid and the name and registered address of the dealer is to be included. The quarterly returns should also be in a summary form but should give a little more information. The form should contain the following information:

- (i) Name and code of the registered dealer;
- (ii) Address of the registered dealer;
- (iii) Gross turnover;
- (iv) Taxable turnover; and
- (v) Tax paid.

The return would be submitted by the dealer, as is the case today, to the unit office in duplicate. The unit office would make an endorsement on the duplicate copy that the tax has been paid and send it on to the computer.

At the end of the fourth quarter, the dealer should submit a comprehensive annual return as he does today. This return is also to be submitted in duplicate, by the dealer to the unit office. The form and contents of the annual return, including data on commodity-wise turnover and tax, can be as they are today. In addition, we would suggest that dealers having turnover of Rs 5 lakh and above, should be required to give a list of purchases and sales in respect of a few commodities along with the

annual return. This information is for the purpose of cross-checking the claims of purchases of tax-paid goods. A duplicate copy of the annual return, with the enclosure on purchases and sales where applicable, would be sent by the unit office to the Computer Centre.

Fourthly, collecting and collating data in regard to Input-2 Form and Input-3 Form should be started forthwith. The information flow from these forms relates to transactions under the CST and transactions not covered under any of the taxable events. It is important that such information should also be collected and analysed. Indeed, it is somewhat strange that the Commercial Taxes Department has not thought fit to gather and analyse commodity-wise information relating to CST.

Fifthly, it is necessary to make use of the information collected at the checkposts on the nature and value of goods flowing into the State. We suggest that the border checkposts be required to send to the Computer Centre also the same information which they are now sending to the Unit offices, so that information on the flow of goods into the State would be centralised and could be tabulated for administrative use.

Completed Assessments

The information stemming from the annual return may be different from the information available in the completed assessment record in respect of any given dealer. As assessment may take a fairly long time, a new form should be devised to be sent by the unit office to

the Computer Centre giving further details about the assessment of a dealer as and when the assessment for a year is completed. This should include information about assessed gross turnover, assessed taxable turnover, assessed tax amount, the year in which the assessment was made, information about reopening the case and any other relevant information about appeals and appeal effects.

Consolidated Form

Apart from the above system of sending dealer-wise information to the Computer Centre, it would be useful to have a consolidated statement about the position of registrations, assessments, appeals, collections and arrears, as on 31st March of every year. This statement to be sent by the unit office could be used as an input by the Computer Centre to prepare the statistical profile for the State as a whole on all these aspects.

Computerisation and Master File of Dealers

As the registered dealer is the basic unit for analysing the tax data, a 'Master File' should be prepared in the computer for each registered dealer who should be coded in the following boxes:

§	£	@	*	**
---	---	---	---	----

The first box (§) would refer to the division, the second one (£) would refer to the unit of administration (district, etc.), the third (@) would have the commodity codes, the fourth one (*) would refer to the rate of tax on the commodity and the last box (**) would be indicating the registration number of the dealer. As this file will be maintained in the computer, the information on dealers as they are registered and on any changes in the unit registers would have to be regularly sent to the Computer Centre by the units.

Into this master-file would be fed the flow of information at regular intervals on various aspects of operations relating to each of the dealers. The regular flow of the required information to the Computer would require some changes in the present documentation and contents of returns, which we have already discussed.

Specification of the Output

The system of sending quarterly and annual returns from the district office to the Computer Centre, the submission by the unit office of information on registrations, assessments completed, etc., the collection and sending of information for completed assessment forms, information on purchases and sales by large dealers in respect of a few selected commodities and the information on the flow of goods across the border from the checkpoints, which we have detailed above, would ensure a regular flow of inputs into the computer from which a variety of output could be produced.

The first important output should relate to registration and general characteristics of the dealers. The output proforma on registrations and general characteristics should contain the following information:

- (i) Number of registrations at the beginning of the year;
- (ii) Number of registrations issued during the year;
- (iii) Number of registrations cancelled during the year;
- (iv) Number of total registered dealers at the end of the year;
- (v) Distribution of non-assessee registered dealers by division and circle;
- (vi) Distribution of non-assessee unregistered dealers by division and circle;
- (vii) Distribution of dealers by type of business: manufacturer, importer, other; and
- (viii) Distribution of dealers by turnover and tax paid.

The second output relates to the assessment record. It should give information about pending assessments at the beginning of the year, assessments completed during the year and assessments pending at the end of the year. The computer should also be made to yield information on the age of pending assessment cases and of pending tax arrears.

The next major output would be commodity-wise and rate-wise information on turnover and tax paid. There should also be a two-way classification of turnover and

tax paid by commodity and region so that one can keep track of the revenue yield of different commodities from different regions. Along with these could be coupled the distribution of the dealers by range of turnover and the turnover and tax paid in each range.

The next important output from the computer relates to verification of the transactions. For this purpose, as mentioned earlier, we have to obtain details of sales and purchases by large dealers (having turnover of Rs 5 lakh and above). To begin with, this could be attempted for a few select commodities. The Computer Centre would cross-check these sales and purchases. Whenever any difference is found, the unit would be informed about it. Similarly, the information received at the border check-posts would be properly recorded by the computer and a summary statement of purchases made by the dealers classified by units would be prepared. This statement would be sent to the concerned Assessing Authority for verifying the existence of such transactions in the accounts of the concerned dealers.

The information contained in the quarterly returns could be used in two ways. First, the entries would be made in the master file of the dealer. Second, the computer would pull out the files of the dealers who have either not paid the tax or have not submitted the returns to the unit office. The Computer Centre would then issue reminders directly to the dealers. It is a recognised fact that failure of the Department to promptly handle the defaulters is a major factor in not realising revenue promptly (Purohit, 1978b). The reminders from the

Computer Centre with the use of the master-file should help the department reduce the rate of delinquency.

The Computer Centre

The question of performing all the above tasks brings us to the matter of the location and the capacity of the Computer Centre, for, this happens to be the major component of the MIS. At present the Commercial Taxes Department does not have a computer of its own. The data collected by the Department have to be processed at the GDC which has only an IBM 1440. The capacity of this computer is not commensurate with the large volume of work to be performed by the GDC for all its client Departments. It would also seem that high priority is not accorded by the GDC to the work of the Commercial Taxes Department. For these reasons, the Department is able to get its data processed only to a limited extent. At the moment only information on the commodity-wise yield of turnover and tax and on the distribution of assesseees by size of turnover is being generated. Besides, what is equally important, data are being processed after a considerable time-lag so that it is never possible to obtain information relating to any year earlier than 3 to 4 years after the date of enquiry.

Since the data can be processed only with such considerable time-lag, the very purpose of collecting and tabulating them gets defeated. Moreover, if the MIS is to play its proper role, it is necessary to gather and maintain data which would help in better enforcement of the tax. As pointed out in Chapter 6, the computer should

be used for selecting the random sample for the assessment of small dealers. This is possible only when the master file of each dealer is maintained in the computer. Besides, the maintenance of the master file of the dealers in a centre easily accessible to the headquarters would be beneficial in various other ways; for example, it would keep the Commissioner well informed about all aspects relating to the active dealers in the State.

As we have pointed out earlier, the large volume of information collected through the checkpoints is not being effectively used at present. The computer could be pressed into service for processing the information received from the border checkpoints. This would enable the Department to verify if goods purported to be sent to different dealers are shown by them in their respective returns.

Thus, it is absolutely necessary to locate the Computer Centre at the Commissioner's Office. In fact the computer could play its proper role in performing the jobs narrated above only when the Computer Centre is at the command of the Commercial Taxes Department. As the computer would have to handle the information relating to all the registered dealers (roughly 3 lakhs) as well as the data from the border checkpoints and also be used to cross-verify the sales and purchase transactions, it must have a relatively large capacity. It is recommended that the Department should have a computer of the type, say, IBM 360 or ICL 2904.

Summing Up

The information system is an integration of man/machine system for providing information to support the operations, management and decision-making functions in an organisation. The system utilises computer facilities and manual operations in such a way that the information is best used to support the decision-making process. In this regard, the Commercial Taxes Department in Tamil Nadu has made a good beginning, but the coverage of the information collected is inadequate and the manner of collection not quite proper. Hence, the collected information is not put to effective use. We, therefore, recommend that reforms should be attempted both in regard to organisational structure and the system of collection and collation of data. A master-file for all the dealers should be maintained at the Computer Centre. The computer should help the department to cross-verify the intra-State transactions on a selective basis and to monitor the flow of goods across the State barriers. Besides, the computer should be located in the office of the Commissioner of Commercial Taxes and the computer should be of the type that could handle information relating to all the registered dealers as well as the data from the border checkpoints.