TAXES ON VEHICLES

5.2 Computerisation of the Transport Department

Highlights

- Initial adoption of the software of a private firm instead of the freely available NIC software resulted in an unproductive expenditure of Rs.80.63 lakh

(Paragraph 5.2.6.1)

- Computerisation started as early as in 1998 is yet to be completed and put to use in full form despite an expenditure of Rs.14 crore.

(Paragraph 5.2.6.2)

- Non-linking of the offices with a central database resulted in failure to achieve the desired objectives and wastage of resources in terms of manpower and storage space.

(Paragraph 5.2.6.3)

- The software lacked built in alert mechanism to ensure revenue collection and adherence to mandatory requirements.

(Paragraph 5.2.7.5)

- Lack of input controls resulted in duplication of chassis number and engine number of the vehicles and capturing of irrelevant dates and incorrect values for the key fields made the data unreliable.

(Paragraph 5.2.8)

5.2.1 Introduction

The Transport Department of the Government of Tamil Nadu is administering the provisions of the Motor Vehicles Act, 1988; Central Motor Vehicles Rules, 1989; Tamil Nadu Motor Vehicles Rules, 1989; Tamil Nadu Motor Vehicles Taxation Act, 1974; and Tamil Nadu Motor Vehicles Taxation Rules, 1974. The main functions of the department are registration of motor vehicles, grant of permits to transport vehicles, collection of tax and fees, issue of driving and conductor licenses, inspection of accident vehicles and control of pollution caused by emission of the motor vehicles.

An IT audit of the computerisation of the Transport Department was conducted. It revealed a number of system and other deficiencies which are discussed in the succeeding paragraphs.

5.2.2 Organisational set-up

The Transport Department (hereinafter called the department) is headed by the Transport Commissioner and functions under the administrative control of the Home Department. The Transport Commissioner also functions as the State Transport Authority (STA). There are seven zonal offices, consisting of 53 regional transport offices, 40 unit offices and 19 check posts in the state under the direct supervision of regional transport officers.

5.2.3 Computerisation

Computerisation of the department covered the issue of driving licences, registration certificates and permits; demand and collection of motor vehicle taxes; and exchange of information between the regional transport offices (RTO) and STA through the electronic media, with the objective of faster, efficient and hassle free counter service; reducing the waiting time for the public; transmission of the data generated in the RTOs to the STA for better control and cross verification of facts; elimination of the bogus licenses and certificates and generation of quick reports on tax matters.

The project 'Driving Licences and Registration of Vehicles and Areas (DLRVAS)' and back data entry of the registration and driving license records for the period from 1983 were entrusted to M/s.Tata Infotech (1998), in all the offices for completion within a time frame of 18 months. This was commissioned in 17 offices as Phase-I (July 2001). Due to the reluctance on the part of the firm to replicate the software in the other locations, the department subsequently decided (July 2002) to adopt the software named 'VAHAN' and 'SARATHY' designed by National Informatics Centre (on client server architecture with SQL server as back-end and Visual Basic as front-end), in the remaining 76 locations and also to switchover to the NIC software in the 17 locations where the Tata infotech's software was implemented.

5.2.4 Audit objectives

The audit objectives were to ascertain whether :

- the overall scheme of computerisation was carried out as per the departmental plan;
- the software covered all the intended functions, was foolproof and free from errors;
- the department could achieve the projected objectives of computerisation; and
- security mechanism had been built into the system to prevent any unauthorised access and manipulation of the data/system.

5.2.5 Audit methodology and coverage

During the IT audit of the system, the following were scrutinised.

- manual records which are still in vogue at the RTOs;
- scheme of codification and master data in the system;
- original source documents; and
- general information available**.**

The selection of the units for the purpose of this audit was restricted to five[32] out of the 40 RTOs as implementation of the software in the remaining offices were in the initial stage of computerisation and no computerised data was available for analysis. The downloaded transaction data related to the offices where the software had been under implementation and the application software were examined for correctness, completeness and adequacy of controls. The outputs generated by the system and their uses were also examined.

Audit findings

System deficiencies

5.2.6 Planning and implementation

The development of a system requires adoption of a well established life cycle which includes a conceptual plan, detailed system study, formulation of system requirement specifications as well as user requirement specifications and a system design document.

5.2.6.1 Planning

The computerisation efforts were initiated in the Transport Department as early as in 1997. National Informatics Centre (NIC) stated in October 1997 that standard software for the Transport Department developed by them would be supplied to the Government of Tamil Nadu free of cost. NIC clearly indicated that it was not appropriate to deviate from their standard software by involving private software companies for development of fresh software, when the software required was already available in a standardised form. This advice of NIC was, however, ignored by the department for no recorded reasons and the work of computerisation was entrusted to Tata Infotech in June 1998.

Tata Infotech completed the project during 2001 against the target date of December 1999 in 17 out of the 93 locations only. In July 2002, the department decided to switch over to the NIC software for the remaining 76 offices in Phase-II and also to extend it to the 17 Phase-I offices for

[32] Chengalpattu, Chennai North, Erode, Madurai (South) and Redhills

uniformity in software and inability of Tata infotech to migrate their database into the All India Common Database. As a result, Rs.1.27 crore spent on Phase-I of the project towards software development by Tata Infotech (Rs.80.63 lakh) and purchase of Oracle Enterprise Server Edition 8 and Windows NT (Rs.46.07 lakh) became largely unproductive.

5.2.6.2 Delay in implementation of the NIC software

The Government sanctioned Rs.17 crore during August 2004, and ordered the Transport Commissioner to ensure implementation of the project within a specified time frame in view of the project being a major e-governance initiative. But no time frame was fixed and adopted by the department for execution of the project. The department could partially implement the scheme in all the locations only in March 2007, though the pilot site became functional in 2002. Out of thirteen functions committed and covered under the scheme of computerisation as per the proposal submitted by NIC to the department, four[33] functions were covered only partially and four[34] functions were not covered at all. Even in the case of functions covered either fully or partially, there was no uniformity in implementation of the package in all the locations. As of March 2007, Rs.14 crore has been spent on the project towards procurement of hardware, system software, site preparation, etc.

5.2.6.3 Non-linking of the offices with STA

Though creation of a central database was envisaged at the initial planning stage itself, there was no time frame or specific plan to achieve it. **The project has been implemented as stand alone package in the 93 sites without linking them to a common database**. As a result, data relating to a vehicle has been entered in more than one local database, when subsequent tax payments were made in any of the offices other than the one in which the vehicle was registered.

Test check in five[35] offices revealed that only in 19,724 out of 1,20,441 cases, master records pertaining to the vehicles registered in the other offices were captured. **In the absence of a centralised database and connectivity linking all the sites, the intended objectives of the computerisation such as online transmission of data to the STA, elimination of bogus licenses, cross verifications etc, could not be achieved in full**.

The department in its reply (September 2007) stated that it had taken measures to establish the connectivity of all unit offices with the STA.

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[33] Vehicle Registration, Issue of Permits, Enforcement and Taxation, Fee/Penalty Monitoring.

[34] MIS, Daily update of STA Database, MIS for STA and Office Automation.

[35] Chengalpattu, Chennai North, Erode, Madurai (South) and Red Hills.

5.2.6.4 Non-computerisation of the check posts

Check posts are the important enforcement points where vehicles are checked for possession of valid permit and payment of tax. Overloading of goods in the goods vehicle is also checked at the check posts. The department had an objective of computerisation of the check posts during the earlier DLRVAS project stage (1998) itself and this was also one of the functions covered under the domain of computerisation as per the proposal submitted by NIC.

As per Rule 206 of the Tamil Nadu Motor Vehicle Rules, the compounding fee for overloaded vehicle shall be collected within 15 days from the date of determination and the rule further stipulates cancellation or suspension of the permit on expiry of this mandatory period.

Due to non-computerisation of the check posts, the list of overloaded vehicles detected at the check posts continued to be communicated to the respective RTOs manually and then the information is fed into the computer system at the RTOs. Test check in the unit office at Chengalpattu revealed that due to delay in communication of the information from the check post to the RTO, the compounding fees of Rs.1.40 lakh was collected belatedly ranging from 1 month to 13 months in 35 cases and in 11 cases collection of Rs.52,000 was pending even after six months (June 2007).

After this was pointed out, the department in its reply (September 2007) stated that initial measures had been taken for computerisation of the check posts.

5.2.6.5 Non-compliance with the password policy

Though the department had formulated password policy of changing the password periodically, on verification of the database, it was noticed that the same password was being used by the Administrators of three[36] offices and no change of password was effected since the day of inception of the software. This indicates that the department failed to comply with the policy.

5.2.6.6 Absence of change management

It was noticed on verification of the tax slab database in three[37] offices for the stage carriage vehicles (First Schedule-2-III-(b)), that the changed slab rate for payment of tax effective from 1 April 2003 was not incorporated in the programme, despite the Government notification for changing the rate. This indicated that the controls during the change management procedures were inadequate. Though there was no short collection of tax due to manual intervention, there was a risk of loss of revenue.

[36] Chengalpattu Unit Office, Erode RTO and Madurai (South) RTO

[37] Chengalpattu Unit Office, Erode RTO and Madurai (South) RTO

5.2.7 Application design deficiencies

Deficiencies in the software leading to manual interventions and bypassing the system were noticed in the following cases.

5.2.7.1 Category of vehicle and mode of payment

Though road tax for the commercial vehicles are payable quarterly, half-yearly or annually, test check of data in three[38] offices revealed that in 38 out of 16,117 cases, the taxes were collected using the one time tax payment mode. Though the tax was collected correctly due to manual intervention, the taxation period was shown in most of the cases as 15 years instead of the appropriate periodicity mentioned above. This deficiency in the software to restrict the period of payment of tax on the basis of the category of the vehicle posed a risk of omission to collect the subsequent tax for a period of 15 years apart from the unreliability of data.

The department replied (September 2007) that the taxes for commercial vehicles were collected for the appropriate period. The reply is not tenable as it did not address the issue of the software deficiency pointed out by audit, rather, confirmed the manual intervention being resorted by the department to ensure the periodic collection of taxes from the commercial vehicles.

5.2.7.2 Allotment of advance numbers

Allotment of advance registration number for a vehicle is made on request from a vehicle owner for a specific number either in the current series or beyond current series. As per the G.O. Ms. No.153 dated 25/2/2002, an amount of Rs.8,000 has to be collected in the case of imported cars and cars made in India whose cost exceeds Rs.4.00 lakh and Rs.2,000 has to be collected in the case of the motor cycle having cubic capacity exceeding 50 CC for allotment of advance numbers within 1,000 numbers from the last number assigned, whereas an amount of Rs.25,000 should be collected for allotment of advance number "from the 5th series and beyond" including the current series.

The computer system does not provide for automatic calculation of the advance number fee, though the required parameters for allotting the advance number were captured in the system. Instead, the software had provision to allow the users to select the category to levy the fees. Such manual interventions resulted in short collection of fees of Rs.12 lakh in 123 cases due to wrong selection of the category. The department in its reply (September 2007) stated that such provision was available in the software. However, the department did not comment on the absence of the provision for the calculation of advance number fee by the system based on the parameters, thus, restricting any manual interventions.

[38] Chengalpattu, Unit Office, Erode RTO and Madurai (South) RTO

5.2.7.3 Non-collection of surcharge

The software provided for automatic calculation of road taxes, surcharge, etc., based on the key parameters. **However, it also had the provision for manual intervention by the users to change the amount of tax, previous adjustment, surcharge, rebate and fine including the period of tax through a different mode.** The design deficiency of allowing manual intervention for entering the surcharge through the mode resulted in omission to collect surcharge in 50 cases relating to stage carriage vehicles at the RTO Madurai (South).

After the cases were pointed out, the department accepted the audit comment and replied (September 2007) that the application had been suitably modified to collect the surcharge.

5.2.7.4 Non-integration of blacklisted module and collection module

The lists containing the details of compounding fee levied for the overloaded vehicles are communicated from the checkposts to the respective RTO manually and the information were fed into the system in the "Blacklisted vehicle module" by the RTO/MVI to block the vehicle from doing any further transaction before remitting the compounding fee. The collection of the compounding fee is made through the collection module in the counter computer. **However, it was found that there was no integration between these two modules.**

During the data analysis in the Unit office, Chengalpattu, it was noticed that in the 'Blacklisted vehicle module', five cases were erroneously closed without ensuring collection of the entire compounding fee. In three cases, no entry was made in the 'Blacklisted vehicle module' regarding the quantum of the compounding fee. Hence, the correctness of collection of the compounding fee could not be verified.

Such absence of automatic link between the modules posed the risk of release of the blacklisted vehicles without ensuring collection of the fee.

5.2.7.5 Absence of built in alert mechanism

In the computerised system, it was necessary to provide alert mechanisms to monitor collection of the dues and mandatory checks. **Non-provision of built in alert mechanism could result in non-collection of revenue and non-adherence of mandatory requirements such as insurance coverage, pollution check etc as mentioned below.**

- Though there was a provision in the system to collect an amount of Rs.500 per annum as green tax for the transport vehicle on expiry of seven years from the date of its registration, it did not have built in alert mechanism either immediately on completion of the mandatory period or at the time when the owner made any other subsequent payment. This resulted in non-collection of green tax in respect of 389 out of 3,530 vehicles, amounting to Rs.1.87 lakh.

- Though the software provided for a check at the time of issue of permit as to whether the pollution check for the vehicle had been done or not, it did not provide a built in alert mechanism for pollution check during the subsequent transactions of the vehicle.

- Though the software made it compulsory to capture the information pertaining to the insurance details at the time of initial registration of the vehicle, there is no provision in the software to ensure the insurance coverage at the time of each and every subsequent transaction of the vehicle. In the absence of such built in alert, in four[39] offices it was found that in 1,122 cases the software allowed further processing even after the expiry of the validity period of insurance of the vehicles.

After the cases were pointed out, the department replied (September 2007) that the software had been modified to enforce insurance cover at the time of each transaction.

The Government may consider rectifying the design deficiencies in the software. Built in alert mechanism may be provided for capturing the information like green tax, pollution check, insurance coverage, etc.

5.2.8 Deficiencies in input control

Input controls ensure that the data received for processing is authentic, complete, accurate, properly authorised and is entered accurately and without duplication. **The computerised system did not have sufficient input controls to ensure completeness and correctness of data fed into the system as illustrated hereunder.**

5.2.8.1 Incorrect coding

The vehicles were codified in the database as per their category for the purpose of linking with other critical parameters such as tax rate, granting of permits etc. It was observed that, due to lack of input control, different codes i.e., 47 and 210 were allotted for the category "Vehicle fitted with Compressor". Similar duplication was also seen in the case of 49 and 214 for "Vehicle fitted with Drilling Rigs".

After the cases were pointed out by audit, the department replied (September 2007) that the deficiencies had been rectified.

[39] Chengalpattu Unit Office, Erode RTO, Madurai (South) RTO and Redhills Unit Office

5.2.8.2 Duplicate and dummy values in key fields

The chassis number and engine number are the unique identification marks of a vehicle which are essential for the purpose of its registration. During analysis of the data in four[40] offices, it was noticed that in 522 cases there were duplicate entries of engine numbers and chassis numbers. These fields also contained dummy values like 'XXXX', 'NA', 'NIL' etc indicating that the input validation checks were not built in the system. This led to deficient data in the database.

The department replied (September 2007) that special characters were not allowed in the chassis number. The reply thus did not address the issue of duplicate and dummy values being allowed in the key fields, as pointed by audit.

5.2.8.3 Tax period with irrelevant dates

The database contained information of 'date from' and 'date upto' for which the tax had been collected for the purpose of indication of the period for which the tax payment was made.

During test check of the data in three[41] offices, it was noticed that in 271 cases the 'date from' and 'date upto' information contained irrelevant dates indicating deficient input controls posing risks of omission of tax collection in addition to generation of wrong MIS reports.

After the cases were pointed out, the department replied (September 2007) that necessary check provisions had been made in the software. However, the data already fed into the database was yet to be rectified.

5.2.8.4 Key fields containing incorrect values

As per the Motor Vehicles Act, 1988, road tax was levied based on the parameters like sale amount in the case of private motor cars, cubic capacity in the case of private motor cycle, seating capacity in the case of passenger vehicle having stage carriage permit/contract carriage permit and laden weight in the case of goods vehicle.

The analysis of data by audit revealed that in three offices[42], in respect of 5,907 cases these fields contained the value zero and in four offices[43] in

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[40] Chengalpattu Unit Office, Erode RTO, Madurai (South) RTO and Redhills Unit Office.

[41] Chengalpattu Unit Office, Erode RTO and Madurai (South) RTO.

[42] Chengalpattu Unit Office, Erode RTO and Madurai (South) RTO.

[43] Chengalpattu Unit Office, Erode RTO, Madurai (South) RTO and Redhills Unit Office

respect of 152 cases, the data relating to cubic capacity of vehicles had values outside the specifications of the manufacturer due to lack of input control and validation checks made during the bulk backlog entry. Though correct tax was collected through manual interventions, such incorrect information had the risk of generation of wrong MIS Reports besides implications in tax collection.

The department replied (September 2007) that necessary controls had been made in the software for not accepting zero in the key fields. However, the data already fed into the database was yet to be rectified.

5.2.8.5 Vehicle class and Make/Model

The 'Vehicle classes', were codified like 'Motor cycle', 'LMV Cars', 'Omni Bus', 'Maxi Cab', etc., with sub-codification of make/model in the software for the purpose of linking with other key fields like tax collection, granting of permit, classification as to whether transport or non-transport vehicles, etc.

Test check in four[44] offices revealed that in 31 out of 80,478 cases, due to lack of input controls in place, goods vehicles and motorcars ('Bison Tipper NIC 1611/2', Maruthi 800, 'Tempo 3 wheel minidor pickup') were incorrectly classified as motor cycle. This led to unreliability of data.

The department (September 2007) accepted the audit comment and stated that it had taken measures to stop the wrong classification of vehicles.

The Government may consider incorporating stringent input and validation controls into the system to ensure that unauthorised, invalid and non-existing data is not fed into the system.

Other deficiencies

5.2.9 Non-linking of the database with other agencies

The information regarding the theft of vehicles i.e., registration number, chassis number, vehicle type, engine number etc. contained in the department's system are shared with the Police Department. Since the functions of the Police Department had also been computerised, the databases of both departments were not linked to enable the departments to share critical information in time.

The department accepted the audit recommendation and replied (September 2007) that once all the offices were interlinked with the STA common database, the process of sharing/exchange of information with the other departments would be implemented.

[44] Chengalpattu Unit Office, Erode RTO, Madurai (South) RTO and Redhills Unit Office

5.2.10 Short levy of tax in the case of motor cycle

As per the Motor Vehicle Act, 1988, the tax for motorcycles is levied based on the cubic capacity[45] of the vehicle. During data analysis in Chengalpattu unit office, it was found that in 16 cases an amount of Rs.23,512 was short levied during January 2006 to July 2006 indicating deficient process control. The department's reply has not been received (September 2007).

5.2.11 Conclusion

Though the project was conceived as early as in 1997 and an expenditure of Rs.14 crore has been incurred, it continues to be open ended without any time frame for its full implementation. In the absence of freezing of the design, trial run before introduction in all the units and interconnectivity of the units with setting up of a common database, the scope for realisation of the larger objective of e-governance was far away. Non-creation of the central database resulted in wastage of resources in terms of manpower and storage space.

Some of the areas committed for computerisation had not been covered. The system was largely used only for collection of tax and fees and issue of licenses with continued manual interventions for rectification of errors, serving no other expected purposes. Various software deficiencies necessitated manual interventions apart from the risks of omissions. Moreover, as the application lacked essential internal controls and validation checks, the database had wrong data and could not be relied upon. In the absence of clear IT strategy and execution, the department could hardly achieve any of its objectives completely.

5.2.12 Summary of recommendations

The Goverment may consider taking the following action for rectifying the system and other issues;

- rectifying the design deficiencies in the software;
- built-in alert mechanism may be provided for capturing the information like green tax, pollution check, insurance coverage etc;
- incorporating stringent input and validation controls into the system to ensure that unauthorised, invalid and non-existing date is not fed into the system; and
- high level monitoring of change management procedure for uniform updation of tariff amendments, version of the software etc., in the field offices.

[45] Power of the engine measured in terms of cubic capacity, which represents pulling capacity of the vehicle