

## **2.3 Computerisation of Value Added Tax (VAT) Information System in Commercial Taxes Department**

### **Highlights**

- Lack of URS, system design and its documentation while switching over to the new environment of VAT computerisation exposed the lack of preparation at the time of customisation.

**(Paragraph 2.3.6.1)**

- Absence of proper connectivity between the client and server resulted in non generation of notices at circle level and consequent delay in realisation of revenue.

**(Paragraph 2.3.7.3)**

- Absence of input and validation controls in vital fields like TIN, rate of taxes resulted in lack of the data integrity and reliability.

**(Paragraph 2.3.8)**

### **2.3.1 Introduction**

The Commercial Taxes department, as part of its e-governance initiatives, planned to achieve a smooth transition to the VAT system by introducing e-services like e-registration, e-filing of returns, e-request for supply of forms and e-assessment by upgrading the existing hardware, software and network. It also planned to achieve upgradation of the facilities to capture return information quickly, avoiding manual data entry and safeguard against false claim of input tax credit and refund claim of the exporters.

With a view to implement the above objective, the Government of Tamil Nadu engaged M/s. Pallavan Transport Consultancy Services as its consultant in 2003. The department undertook the implementation of computerisation in various stages at a cost of Rs. 37.41 crore.

- The stand alone applications<sup>8</sup>, which were customised in-house and installed in all the 323 assessment circles, comprise registration module and return processing module under the VAT Act.
- The internet applications<sup>9</sup> comprise a website developed by the National Informatic Centre (NIC) and offer the following services, viz., online application for registration, e-filing of monthly returns, e-request of the saleable forms, online facility to know the details of a dealer, rate and schedule of a commodity, status of the refunds and the availability of the saleable forms.
- The intranet applications<sup>10</sup> are used for generation of live reports on revenue collection, MIS reports like return filed status, return audit, scrutiny of the data already entered in the offices, online cross

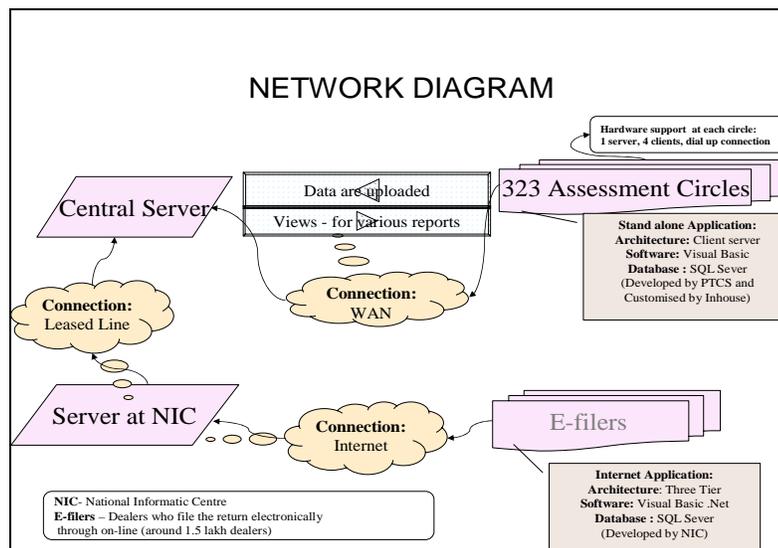
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<sup>8</sup> using Oracle as back end and Visual basic as front end.

<sup>9</sup> using Oracle as back end and VB.NET as front end.

<sup>10</sup> using Oracle as back end and VB.NET as front end.

verification of ITC<sup>11</sup> availed by the dealers, generation of notice for wrong claim and uploading of annexure to Form I and statutory forms.



At present, the filing of monthly returns by the assesseees is being done both manually and also through e-filing. The data captured in the stand alone database is exported to the central server through Wide Area Network (WAN)<sup>12</sup>. Capturing of the details of purchase and sales annexed to the monthly returns for the period pertaining to the previous two years has been outsourced. As regards e-filing, the return is entered online and the details regarding purchase and sales are uploaded as 'Excel file attachment' to the NIC server<sup>13</sup>, a copy of which is transmitted to the central server<sup>14</sup>. At present, 1.5 lakh dealers out of 5 lakh registered dealers (30 %) utilise the online facility to file their monthly returns.

**A review of the computerisation of the Value Added Tax Information System in the Commercial Taxes Department was conducted by Audit. It indicated a number of system and compliance deficiencies which have been discussed in the subsequent paragraphs.**

### 2.3.2 Organisational structure

The Secretary, Commercial Taxes and Registration department (CT department) is the head of the department at the Government level. The Commissioner of Commercial Taxes (CCT) is the head of the Commercial Taxes department and is assisted by the Additional Commissioners, Joint Commissioners and Deputy Commissioners who exercise administrative

<sup>11</sup> Input tax credit – Section 19(1) of TNVAT Act provides for input tax credit of the amount of tax paid or payable under this Act, by the registered dealer to the seller on his purchases of taxable goods specified in the First schedule. The registered dealer, who claims input tax credit, shall establish that the tax due on such purchases has been paid by him in the manner prescribed.

<sup>12</sup> WAN- A wide area network (WAN) is a computer network that connects a broad area.

<sup>13</sup> located in the NIC premises.

<sup>14</sup> located in department's premises.

control. The Central Computer centre of the CT department is headed by the Joint Commissioner (Computer Systems) and functions with three programmers, four deputy programmers and eight assistant programmers.

### **2.3.3 Audit objective**

The information technology audit of computerisation of VAT was undertaken with a view to ascertain that

- there exists proper documentation for system design, user requirement specification and system requirement specification;
- proper acceptance testing such as programme testing, system testing, user testing and quality assurance testing was done;
- the system meets the requirements of the TNVAT Act and is synchronised with the critical business rules of the department;
- proper input, validation and process controls exist in the system to ensure the authenticity, completeness and accuracy of the data;
- the database provides sufficient, complete, reliable and authorised information for management action; and
- there exists adequate security controls and disaster recovery plan.

### **2.3.4 Scope and methodology of audit**

Test check of the records of five assessment circles<sup>15</sup> was conducted to study the system in place. Further, the data available for the period from January 2007 to October 2008 in the central server of the department was obtained and examined using structured query language (SQL) to check their adequacy and reliability. The mapping of business rules and the controls available in the application software were ascertained through an examination of the data entry screens.

### **2.3.5 Acknowledgement**

The Indian Audit and Accounts Department acknowledges the co-operation of the CT department in providing necessary information and records for audit. An entry conference was held in April 2009 in which audit objectives and methodology were explained. The exit conference was held in August 2009 with the Commissioner and officers of the CT department and officials of NIC in which results of audit and recommendations were discussed. The draft review was forwarded to the department and the Government in August 2009 and replies received from the department during the exit conference and at other times have been appropriately reflected in the review report.

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<sup>15</sup> Fast Track Assessment Circle (FTAC) I, Chennai, FTAC II, Chennai, Sowcarpet I, Sowcarpet II and Manali.

**Audit findings****System deficiencies****2.3.6 General controls**

General controls relate to the environment within which the development and implementation of IT systems are carried out. The objectives of the controls are to ensure effective development, implementation and maintenance of the IT systems. An assessment of these controls indicated the following deficiencies.

**Planning**

**2.3.6.1** As a preparatory step towards introduction of the TNVAT Act, the Government sanctioned an amount of Rs. 1 crore for consultancy and development work and the same was entrusted to M/s. Pallavan Transport Consultancy Services (PTCS) in January 2003. As the vendor expressed difficulty to continue with the project (January 2005), the department paid an amount of Rs. 0.57 crore for the completed modules<sup>16</sup>. Further, under the e-governance plan (August 2004), the Government sanctioned Rs. 15.80 crore, out of which Rs. 13.09 crore was spent for extending e-services<sup>17</sup> through NIC.

The TNGST modules developed by the PTCS were further customised by in-house developers for VAT. This was implemented in all the 323 assessment circles for capturing information of manual filers. In the absence of the documentation<sup>18</sup>, audit could not find out whether the issues brought out in the succeeding paragraphs were due to user requirements not being identified initially or due to deficiency in the stages of development of the software. Later, the department paid Rs. 0.45 crore (March 2007) to M/s. Electronics Corporation of Tamilnadu Ltd. (ELCOT) for the development of the integrated web based software<sup>19</sup>.

Audit scrutiny indicated that the department was already using a web based application developed by the NIC to enable online e-filing of the monthly returns by the dealers. The department could have customised this existing web based application developed by the NIC after rectifying the deficiencies noticed and utilised it by creating more users and providing appropriate access rights. Instead, the department opted for developing a new application through M/s. ELCOT which was a duplication of the work. Further, no URS was prepared or timeframe set while entrusting the work to the ELCOT. It was also noticed that the vendor had not prepared SRS or SDD and was yet to deliver the software (August 2009).

<sup>16</sup> For TNGST, Check post movement and appellate wing.

<sup>17</sup> Like e-registration, e-filing of returns, e-payment, e-assessment, e-request for supply of forms.

<sup>18</sup> User requirement specification (URS), System requirement specification (SRS) or System design document (SDD).

<sup>19</sup> Covering the functions such as On-line dealer registration, e-return filing and capturing of data contained in the manual return filed by the assessee at the circle office, tax collection and refund, saleable form, self assessment order.

**2.3.6.2** Based on the project report submitted by PTCS, the department had an initial plan of adopting ICR<sup>20</sup> and VPN<sup>21</sup> technology and sanctioned Rs. 1.24 crore during 2006 for capturing the data of monthly returns. However, the department did not procure the required hardware. Instead, it diverted (March 2009) Rs. 1.20 crore for procurement of other hardware and enhancing the infrastructure of NIC server after three years.

The essence of the VAT is the concept of the ITC. The details of purchase and sales furnished with the returns have to be cross checked with the other returns of same/other circles to verify the correctness of the claims.

Due to non-adoption of the initial plan, the data pertaining to the period from January 2007 to June 2008 (approx 15 crore records) were pending to be captured in the system and the ITC amounting to Rs. 9,586 crore in respect of returns filed is yet to be verified. Failure of the department to execute its initial plan had resulted in delay in capturing the data, besides expenditure of Rs. 5.25 crore on outsourcing of the manual data entry of voluminous pending records. The work was yet to be completed.

**2.3.6.3** In the absence of documentation, the various stages of system development, back up, physical and logical security could not be analysed.

The department while accepting the non-existence of necessary documentation, stated (October 2009) that this would be carried out in the web based software being developed by the ELCOT.

### **2.3.7 Application controls**

#### **2.3.7.1 Acceptance testing**

The process of acceptance testing is to identify, as far as possible, the errors and deficiencies which can exist in the software supporting the system, the user interface, the procedure manuals, the job design and the organisational structure design, if any, prior to its final release for putting into use. Acceptance testing is carried out to identify these errors or deficiencies before these errors cause a widespread adverse impact.

Audit scrutiny indicated that acceptance tests like the programme and the system user quality assurance were not carried out by the department.

The department replied (August 2009) that quality assurance testing was not carried out in the existing software and it would be carried out in the Web based software being developed by the ELCOT.

#### **2.3.7.2 System design**

The return processing module captures the tax payable details (tax due from the dealers) from the monthly return furnished by the dealers. The collection module captures the details of tax collected from the dealer. Tax collected may be on account of tax paid under TNVAT, CST, interest for belated payment of tax, if any, penalty, if any, cost of forms, etc. The collection module does not

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<sup>20</sup> Intelligent character recognition (ICR) is process that translates handwritten text into machine readable characters. ICR technology permits data capture software to automatically read information from all types of documents.

<sup>21</sup> Virtual private network.

have separate head wise provision for capturing the details of collection of various components like entry tax, TDS, VAT, CST, advance tax at check post, interest, etc. The tax collection could not, therefore, be correlated with the tax due.

Data analysis indicated that in 11,078 returns the details of tax paid in the monthly returns was at variance with the details of the tax collected.

After this was pointed out, the department attributed (August 2009) the variance to the non-availability of separate provisions for entry tax, TDS, advance tax at check post, payment of interest, etc.

**The Government may consider providing for a separate provision in the system for capturing the details of various taxes/various elements to ensure the correctness of tax collection.**

### **2.3.7.3 Mapping of business procedures**

The responsibility of the cross verification of information furnished by the dealers rests with the assessing officers at the circle level. However, it was noticed that the facility of the cross verification was not provided at the circle level. Instead, after cross verification, notices were generated at the central level where the central server was located. The officials at the central levels are not responsible for issuing the notice and they communicate it to the circles through email. Thus, though the responsibility had been vested with the concerned assessment officials of the circles they are solely depended upon the information provided to them by those at the central level.

Audit scrutiny indicated (August 2009) that in June 2009, 9,909 notices were generated at the central level and sent to the concerned circles. Out of these, only 1,987 notices were issued to the dealers by the assessment circles. Non-mapping of this business procedure in the IT environment by generation/issue of notices at the circle level resulted in deficient assurance on the correctness of the claim/tax paid.

- Online monthly return required to be filed by the dealer contains information like tax paid during the period for purchases, tax payable through sales and these are supported by the details of purchase and sales. However, the tax credit and the tax payable were not generated through the system from the details of the purchase and sales. Instead, users were required to manually enter the details once again in the return format. This indicated that the process of capturing information for the main return from the details given against the purchases and sales was not mapped in the system.

Audit observed that in 64,061 returns, the ITC claimed in the return was in excess of the eligible amount of VAT paid as exhibited in the details of purchase/sales.

The department replied (August 2009) that efforts had been made to ensure the correctness of information through generation of notices after cross verifying the details and corrective action taken in many cases and in the absence of the provision for correcting the errors, the corrections could not be incorporated in the system.

- Further, the system also allowed the users to manually enter the amount of VAT instead of it being derived automatically from purchase/sales turnover and commodity codes furnished by the dealer using the tax rates available in the system. As a result, the arithmetical accuracy for the amount of VAT paid i.e., the amount of purchase multiplied by the tax rate was not ensured by the system in respect of 99,838 instances in 94,376 returns.

**The Government may consider providing a system which automatically captures the return information from the details of purchases and sales entered manually and ensure mapping of business procedures and restricting repeated manual entry to improve integrity of data.**

### **Compliance deficiencies**

#### **2.3.8 Input control/validation checks**

Input controls ensure that the data received for processing is genuine, complete, properly authorised and entered accurately without duplication. It was observed that both in manual data entry and e-filing of returns, the software captures data as such and no controls were programmed to check and validate the data. The discrepancies in input/validation checks noticed are mentioned below:

##### **2.3.8.1 Input control**

- **Tax payers Identification Number (TIN)**

Audit scrutiny of the purchase details furnished by the dealers alongwith the 'I' return<sup>22</sup> indicated that in 8,30,142 purchases mentioned in 1,11,825 returns, the seller's VAT number contained invalid TIN, alphabets and undefined state codes which were not between 01 and 35. Similarly, the sales details furnished by the dealers alongwith the monthly returns were found to contain invalid TIN, alphabets and undefined state codes in 44,48,986 instances in 2,82,800 returns.

The department replied (August 2009) that the cases of invalid TIN, lesser digits, alphabets and undefined state codes had been identified by the department and notices had been generated and sent to the circles.

The genuineness of the TIN registration, the details of the dealers, inter state purchase, eligibility of ITC could be verified only with proper entry of TIN. The system did not validate the data entered, as was evident by the mistakes noticed in the returns. The lack of supervisory input controls has resulted in accepting returns with large number of errors and also made verification of the above facts difficult.

- **Commodity codes and tax rates**

The system contained the data relating to various commodity codes, their description and the rates of tax. In the absence of input controls, the system allowed capture of incorrect commodity codes and failed to validate both commodity codes and tax rates with reference to details available in the system.

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<sup>22</sup> 'I' return - Value added tax Monthly Return furnished by the assessee to the department.

- It was noticed during data analysis that the system accepted data entry of 398 invalid commodity codes in 31,440 instances.

After this was pointed out, the department accepted (August 2009) that the software did not have the provision for validating the commodity codes.

- It was also noticed that in 360 instances in 144 returns, tax in excess of the applicable rate of one *per cent*; in 1,51,570 instances in 7,714 returns, tax in excess of the applicable rate of four *per cent* and in 5,598 instances in 1,018 returns, tax in excess of the applicable rate of 12.5 *per cent* were allowed to be entered in the returns. It was also noticed that instead of the applicable tax rates i.e. (one *per cent*/four *per cent*/12.5 *per cent*), various incorrect rates such as 8,301, 2.82, etc. were also allowed to be entered in respect of the commodity codes 2001 to 2150 and 301 to 369.

After this was pointed out, the department stated (August 2009) that these errors were due to wrong entry of commodity code and also stated that the errors were communicated to the circles for rectification.

**The Government may consider incorporating proper input control to avoid incorrect data entry.**

#### 2.3.8.2 Validation checks

- **Carry forward of the ITC**

The closing balance of the ITC of the previous month has to be automatically considered as the opening balance of ITC in the succeeding month. Audit noticed a difference of Rs. 960.48 crore between the opening balance and closing balance of the ITC in 1,28,147 returns including 11,924 returns of e-filers.

After this was pointed out, the department accepted (August 2009) the absence of validation in this regard.

**The Government may consider modifying the software to ensure that the closing balance of the ITC of the previous month is the opening balance of the succeeding month.**

- **Reverse credit**

The details regarding the claim relating to reversal of the ITC<sup>23</sup> during the month should also be annexed separately alongwith the monthly return. Data analysis indicated that in 44 returns, the ITC reversal amount shown in the annexure varied with the reverse credit amount shown in the monthly return. In respect of 23 returns, the reverse credit amount as per the return was less than the reversal amount as per the annexure, resulting in excess credit of Rs. 1.74 lakh. This indicated deficient validation checks in this regard.

The department replied (August 2009) that the cases would be reviewed.

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<sup>23</sup> Reverse credit – Where a purchasing dealer has returned the goods to the seller for any reason, the input tax credit claimed already on the purchase by the dealer shall be liable to reversal of tax credit on such goods returned, in the manner as may be prescribed.

- **ITC on closing stock**

ITC available on the closing stock held by the dealers on 31 December 2006 under the TNGST Act<sup>24</sup>, was allowed to be availed within the next six months and the closing stock as on 31 December 2006 was captured in the system.

Audit scrutiny indicated that the software did not have provision to restrict the availing of the ITC on closing stock against the eligible closing stock while permitting the dealer to avail of such credit in the next six months. Data analysis showed that in 1,648 returns, the ITC availed of by the dealers in the monthly returns was more than the eligible amount of the ITC on closing stock resulting in excess claim of the ITC of Rs. 47.20 crore. Failure to validate the ITC credit availed of after the implementation of TNVAT Act against the ITC as per closing stock declared initially resulted in availing of excess ITC.

The department replied (August 2009) that this was due to data entry error initially while feeding the data and those cases had been referred to the assessment circle concerned. The differential amount had been collected in other cases. The fact remains that the data entry errors are yet to be corrected in the system.

- **Exempted goods**

The TNVAT Act stipulates that no input tax credit shall be allowed in respect of sale of goods specified in the Fourth Schedule which are exempt under Section 15. The system did not have the provision to validate/disallow the ITC claimed for the purchase of exempted goods.

Data analysis indicated that in respect of 1,032 returns, claim of ITC for Rs. 9.80 crore had been preferred by the dealers in respect of the exempted goods.

After this was pointed out, the department stated (August 2009) that the claim may be due to error in entry of commodity codes. The fact remains that the system should have been so designed that any ITC claim in respect of the exempted goods should have been derived from the details available rather than allowing for data entry.

- **Capital goods**

The TNVAT Act provides for allowance of the ITC credit on capital goods and the capital goods were identified with a specific commodity code, viz., 2025. The system allowed entry of commodity codes other than 2025, viz., 301, 2067, 2041 etc to indicate the capital goods.

Data analysis indicated that in 4,136 returns, the software allowed ITC credit for goods with codes other than 2025 indicating the absence of validation check in the program.

After this was pointed out, the department replied (August 2009) that in respect of goods under commodity code 301, notices were issued to disallow the claim of the ITC. The reply is not tenable as though all these three

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<sup>24</sup> Tamil Nadu General Sales Tax Act – The Act which was in existence prior to implementation of TNVAT Act (1.1.2007).

commodities are eligible for the ITC, the same could not be classified as capital goods.

**The Government may consider incorporating proper input/validation control to avoid incorrect data entry.**

### **2.3.9 Other points of interest**

#### **2.3.9.1 Saleable Forms**

Saleable forms viz., Form C is issued for interstate purchases, Form F is issued during stock transfer between branches. These are issued to the dealers during inter state purchases for availing of concessional rate of tax.

Audit observed the following discrepancies:

- The database has the details about the cost of different types of the saleable forms. The cost of a form is to be extracted by the system automatically from the database to populate the relevant field. However, it was noticed that the system allowed manual intervention to input the cost of the saleable forms and that too at the rates even lower than the prescribed rate. This resulted in short collection of revenue of Rs. 2.08 lakh in 67,466 forms.
- Though the saleable forms were issued to 63,737 dealers, the usage details were available only for 5,597 dealers. As the information of usage of the saleable forms is incomplete, proper usage of these forms could not be verified through the system.
- Audit noticed the existence of 158 different types of dummy values in the book series number of the saleable forms. Further 11,761 forms valuing Rs. 2.27 lakh were also sold using these dummy book series number.

After this was pointed out, the department replied (August 2009) that the dummy series entered were data entry errors and since the issues were made using dummy series numbers, the usage detail of such forms could not be verified through system.

**The Government may consider capturing complete information regarding usage of saleable forms in the system to verify their genuineness. Necessary input control may be put in place to avoid entry of dummy series number.**

#### **2.3.10 Conclusion**

Audit observed that user requirement specifications were not identified nor was there any documentation of the system development. Thus, it could not be identified whether the control deficiencies pointed out in audit were due to deficient identification of user requirement or inadequacies in system development. Absence of any testing of the system indicated a deficient system implementation strategy by the department. Deficient mapping of business procedure, deficient input control and validation checks have made data incomplete, inaccurate and unreliable. In the absence of provision to

make corrections of errors made during e-filing of returns, the accuracy and utility of the data available in the system could not be verified.

### **2.3.11 Summary of recommendations**

The Government may consider:

- providing a separate provision in the system for capturing the details of various taxes/various elements to ensure the correctness of tax collection;
- providing a system which automatically captures the return information from the details of purchases and sales entered manually and ensure mapping of business procedures and restricting repeated manual entry to improve integrity of the data;
- incorporating proper input control to avoid incorrect data entry;
- redesigning the software to adopt the closing balance of the ITC of the previous month as the opening balance of the succeeding month and putting in place suitable controls at higher level for effecting corrections; and
- incorporating proper input/validation control to avoid incorrect data entry.