

Perspective

Financial accounting of ISO 9001:1994 based on quality information system

*S.R. Devadasan, N. Kathiravan
M. Sakthivel, K. Kulandaivelu
and G. Sundararaj*

The authors

N. Kathiravan and **G. Sundararaj** are both Lecturers, **K. Kulandaivelu** is a former Junior Research Fellow, all at Department of Mechanical Engineering, PSG College of Technology, Coimbatore, India.

S.R. Devadasan is an Assistant Professor in the Department of Production Engineering, PSG College of Technology, Coimbatore, India.

M. Sakthivel is a Teacher/Research Associate at Anna University, College of Engineering, Salem, Tamil Nadu State, India.

Keywords

Total quality management, Sustainability, Information systems, Financial accounting

Abstract

Cites the importance of quality information system (QIS) in attaining the ultimate goals of TQM. Presents the essence of QIS by describing a typical real time example. Points out that practitioners show little interest in QIS implementation as its results are seldom financially sensed. Views that a system to financially account the performance of QIS would contribute significantly towards sustaining TQM projects. Briefs the efforts made to develop the system to financially account ISO 9001:1994 based QIS and validate the same. Brings out the various financial accounting documents, including income and expenditure account and balance sheet pertaining to ISO 9001:1994 based QIS financial accounting system. Concludes by claiming that the work has shown promising results, but further research is required to bring out much more valuable contributions.

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Introduction

One of the major managerial philosophies that conquered and revolutionized the organizations throughout the world during the last century is total quality management (TQM). The world witnessed the emergence of TQM principles when quality gurus like Juran, Deming, Crosby, Fiegenbaum and so on brought out various quality improvement oriented approaches on improving quality from 1950 onwards. Thereafter, both theorists and practitioners began to refer to TQM principles with curiosity. During the 1980s, TQM was viewed as a magical approach that would aid in attaining a higher level of competitiveness. After some years, there was apprehension that TQM projects had not yielded the expected results. For example, Cutler and Kleiner (1997) and Ahire *et al.* (1996) have cited the surveys which claim that nearly two-thirds of the TQM projects have failed worldwide. On the other hand, there were number of studies (Zairi, 2001) reported in literature which confirm that TQM philosophy indeed yields results from the point of view of continuous quality improvement. These contradicting reports indicate that TQM is powerful as a philosophy, but more effort must be exerted so that it delivers good results in practice. One such effort that is often missed in TQM projects is the exploitation of quality information system (QIS). Although the world witnessed the power of information system management during recent years due to the explosion of information technology revolution, the TQM field is yet to derive the benefit of implementing QIS. However, practitioners would appreciate a QIS project, only if its performance is sensed through financial values. In order to fulfill this requirement, we carried out a research project in which we designed and developed a system

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for financially accounting ISO 9001:1994 based QIS as a means to sustain TQM projects. The details of this research project are briefly presented in this paper.

TQM, information system and performance assessment

A study on the contribution of quality gurus indicated that all of them emphasise the involvement of all elements of the organisation, namely personnel, functions and resources to attain continuous quality improvement (Kathawala, 1989). Achieving this phenomenon in today's complex enterprises is not easy as these elements are scattered within and outside the organisations. Particularly organisations that undertake global operations place their resources in different parts of the world. In this situation, the need for exploiting information systems in TQM projects is felt. Ironically, but for Juran, no other quality guru has explicitly emphasized the application of information system in continuous quality improvement projects. Whereas it is not so in the case of the general management field in which the information system has been subjected to active research and development during the past five decades. Until recently the packages on enterprise resource planning (ERP) have been popular among engineering and management professionals (Themistocleus *et al.*, 2001). ERP principles are nothing but the representation of the refined form of management information systems (MIS) (Bodnar and Hopwood, 2001). Such kind of importance has not been shown in TQM projects due to the main reason that practicing professionals tend to avoid implementing any project or mechanism which does not explicitly offer financial gains. Hence, the majority of the TQM practitioners are of the wrong impression that information systems employed for improving quality do not offer any kind of benefits. However, the fact is that an information systems employed for attaining a higher degree of quality would bring about numerous benefits but the majority of them assume intangible forms. Hence it is high time that TQM projects are sustained by introducing a model to the practitioners, which would enable them to gauge the performance of information

systems in TQM projects. But, extreme care has to be taken while developing such a model as it should be practically viable, compatible and should enable easy readability. Moreover, practitioners are sensitive to see the results in financial values. Hence such models should portray the performance of information systems in achieving continuous quality improvement in the form of financial values. Over the last several centuries practitioners are accustomed to read the financial performance of their organisations through the statements designed by financial accounting professionals. Two such statements, which are always referred to are: profit and loss account; and balance sheet. Hence TQM practitioners also will find it convenient to read the performance of an information system in TQM projects, if its performance is depicted through these most frequently referred to financial statements.

QIS in TQM projects

QIS is nothing but the information system employed for attaining continuous quality improvement (Juran and Gryna, 1997). Therefore, the principles and methodologies of MIS are to be applied in TQM projects to develop QIS. The basic principle of MIS is the process of converting data into information (Davis and Olson, 1985). The application of MIS in a typical manufacturing environment is illustrated here by citing an example. Let us consider a manufacturing unit of an enterprise in which about 500 persons are employed. The employee details of this unit are known as data. Let us assume that the works manager of this unit needs to know the names of the employees who have undergone training on gear cutting operations. The names are furnished to the works manager by processing the employee data. The result of processing is given out as the list containing the names of the employees who have undergone training on gear cutting operations. This list is information to the works manager. The method followed to prepare this list is known as the "model". Normally the efficiency of MIS is measured in terms of the time of delivery, the correctness of information and reachability to the right person. When these features of MIS are applied only to quality improvement related activities, then that system is called QIS.

The effectiveness of QIS in TQM projects is illustrated by extending the above example. Let us assume that there are 50 machines in the manufacturing unit mentioned in this example. Each operator of the machine is given a job-card to enter the details of the number of raw pieces fed and the number of pieces rejected. At the end of the working hours, operators are directed to hand over the job-cards to the supervisor. The supervisor has to follow a method (in other words a "model") to process these job-cards, so as to release two lists. One list will contain information on machine-wise rejection rates and the other will contain information on hourly rejection rate. These lists are information to the works manager, who can identify the machine which leads to the highest rejection rate and the time duration in which operators make maximum rejections. This information will be utilised by the works manager and supervisor to improve the quality by overcoming the deficiency in the machine and/or timing of operation. Thus there are quite a number of events which require data collection and subsequent processing so that the necessary information is obtained to attain continuous quality improvement in TQM projects.

QIS and quality strategies

TQM is a philosophy (Chin and Poh, 1999). There are very few models available to holistically implement TQM philosophy. Presumably due to this reason, researchers are currently involved in integrating strategic management principles with TQM philosophy. Few researchers have brought out models fulfilling these criteria under the title "strategic quality management" (SQM) (Madu *et al.*, 1994; Tummel and Teng, 1996; Aravindan *et al.* 1996). After analysis it was found that the SQM model proposed by Aravindan *et al.* (1996) is most comprehensive and exhaustive comparable to other SQM models. The unique feature of this SQM model is that it specifically facilitates identifying quality strategies. Hence, adoption of this SQM model, while developing QIS, paves the way for a modular kind of approach. In other words, developing the following nine information subsystems pertaining to each quality strategy separately

and finally integrating them can aid in developing QIS in stages:

- (1) quality circle information system;
- (2) failure appraisal information system;
- (3) quality cost information system;
- (4) zero defect information system;
- (5) customer feedback development information system;
- (6) quality system elements monitoring information system;
- (7) training and education information system;
- (8) chained quality auditing information system; and
- (9) quality counseling information system.

Due to lack of space, detailed description of the above subsystems of QIS has not formed the scope of this article. Before beginning this research project, we considered different approaches of developing QIS. One approach was that the QIS could be developed for all the above subsystems simultaneously. This approach was found to be practically not feasible, as networking among subsystems would not be effective due to a higher level of information density. Hence, it was decided to initiate the work by developing QIS for the most effective quality strategy. It was also decided that after ensuring the successful working of the most effective quality strategy, QIS for remaining quality strategies may be developed and networked among themselves by linking the nodes between them.

A careful study indicated that the most effective quality strategy is monitoring of quality system elements. The reason is that this strategy is widely applied since many companies situated throughout the world have installed ISO 9000 series quality system models. As these models dominate TQM programmes in modern companies, the work on developing QIS was initiated by referring to the ISO 9001:1994 quality system model. Among all the ISO 9000 series quality system models (ISO 9001:1994, 9002:1994 and 9003:1994), ISO 9001:1994 covers the maximum number of quality system elements. ISO 9001:1994 deals with 20 clauses. One of the reasons for ISO 9000 series models failing to evolve expected results is that these quality systems are not supported by QIS to the required extent. Hence a QIS developed to support ISO 9000 series quality system models would be useful to get the

authentic results of their implementation. Further, an accounting system, which would gauge the performance of such QIS from the financial point of view, would be a monitoring device and a meaningful solution for sustaining TQM projects.

Elements of financial accounting

Readers will be able to appreciate the work presented in this paper only if they possess preliminary knowledge of financial accounting procedures. But it is expected that the majority of the readers of this journal will be seldom exposed to the financial accounting procedures. Hence it is thought that it will be necessary to describe here, briefly, the traditional financial accounting procedures followed in organisations. The initial stage of financial accounting procedures is marked by book-keeping. Largely the double entry method of book-keeping is adopted worldwide (Gupta and Gupta, 1994; Bodnar and Hopwood 2001). The salient features of this method are described here. According to this method each financial transaction is entered in two accounts. Two major columns are opened in all accounts. The left side column is called as debit column and the one at the right hand side is called as credit column. Fundamentally accounts are classified into three types, namely nominal, personal and real accounts. The nominal accounts are meant for accounting expenditure and gains. The personal accounts are used for accounting transactions involving individual persons. Financial transactions involving non-movable properties are accounted in real accounts. Entering the details of financial transaction in accounts in credit and debit columns is known as posting. The posting rules followed to enter the details in the three different types of accounts are shown in Table I. After posting the details in accounts the extracts are drawn and checked

Table I Accounting entry rules (double entry method)

Nominal accounts	Debit the expenses Credit the gains
Personal accounts	Debit the receiver Credit the giver
Real accounts	Debit what comes in Credit what goes out

whether the debit and credit sides tally. This process is known as trial balancing. Errors, if any, in posting are rectified while trial balancing.

After trial balancing, trading, profit and loss accounts are prepared to identify whether the company transactions have resulted in financial profit or loss during the specified period. In the case of non-profit organizations, instead of these accounts, only the income and expenditure account is prepared. In both cases finally financial profit or loss is extracted covering a specific period. This will be utilized while developing the balance sheet, which contains the details of liabilities on the left-hand side and the assets on the right-hand side. The balance sheet forms the final document of the financial accounting system, which is meant to project the financial status of the company. The financial accounting documents do not reveal the value of apparent financial performances such as work culture, motivation, employee attitude, etc.

QIS and financial accounting

Designing the financial accounting system of ISO 9001:1994 based QIS formed the first major work of this research project. This task was posing numerous difficulties and challenges due to two main reasons. The first reason was that the awareness of QIS among TQM professionals was almost missing. In the literature also, no model of QIS, exclusively supporting the working of ISO 9000 series quality system models, is available. Hence, it became a necessity to carry out a parallel activity by which ISO 9001:1994 based QIS was designed. Accordingly, against each clause of ISO 9001:1994, the subsystem of QIS was developed. This was followed by identifying the account heads for financially accounting the performance of the corresponding subsystem of QIS. These tasks demanded critical thinking and consumed excessive time. The second reason was that the input and output of the majority of the activities that are required for developing and maintaining ISO 9001:1994 based QIS assume intangible forms. This increased the difficulty, as it was required to devise models to convert intangible performance into financial values. Reference was made to the

principles followed by the accounting professionals to convert intangible values into financial values while accounting human resources (Gupta and Gupta, 1997). However, this methodology was found to be unsuitable for financially accounting ISO 9001:1994 based QIS. Hence, completely new models had to be developed from scratch without referring to any reference model. However, it was found that few activities were tangible in nature and could be accounted without any difficulty. For example, the stationery required to process the data so as to get the required information that would be available in tangible form and could be financially accounted without any difficulty. Hence developing financial accounting procedures pertaining to tangible values was comparatively an easier task. In order to convert intangible values into financial values, Likert's scale of rating method was adopted. A practical problem that was experienced was the non-availability of the required data in companies as there has been no practice followed to account for the activities of information system management. Even in ERP packages no provision has been made to financially account for the performance of those packages themselves. ISO 9000 series quality system models also have not emphasized financial accounting of the performance of these models. With this background situation, with greater difficulty, a framework of the model for financially accounting ISO 9001:1994 based QIS was developed. The salient features of this framework are presented in the next section.

Framework

The framework of financial accounting system for ISO 9001:1994 based QIS was designed by considering three major accounts, namely data, processing and information against each clause of ISO 9001:1994 standard. The logic behind this approach is that, in order to execute each clause, efforts are to be made to collect relevant data, which need to be processed to obtain the right information. These three stages of activities are to be financially accounted. As a sample, the approach followed to design the system for financially accounting the information system pertaining to the subclause number 4.1.1 of ISO 9001:1994 is presented in this section.

Clause number 4.1.1 of ISO 9001:1994 stipulates the formulation of quality policy which reads as, "The supplier's management with executive responsibility shall define and document its policy for quality, including objectives for quality and its commitment to quality. The quality policy shall be relevant to the supplier's organizational goals and the expectations and needs of its customers. The supplier shall ensure that this policy is understood, implemented and maintained at all levels of the organization". Table II is the information accounting table developed to identify all the related attributes concerning this stipulation. QIS activities related to the above stipulation are to be accounted under the three account heads, namely "management responsibility data account", "management responsibility processing account" and "management responsibility

Table II Information accounting table pertaining to clause 4.1.1. of ISO 9001:1994

Clause number: 4.1.1	Title: quality policy
Information requirement	Quality policy should be informed to all employees and customers
Data	Quality policy statement is signed by the top management and preserved with adequate security
Data processing methods	1. Posters on quality policy statement 2. Appraisal meeting 3. Printing monthly calendar/diary with quality policy printed on it 4. Badges/banners with quality policy statement 5. Quality policy statement in computer screen
Information (outcome)	Adequate knowledge on quality policy

Accounts identified

- | | |
|---|---|
| 1. Management responsibility data account | Management responsibility information account |
| 2. Management responsibility processing account | |

information account". The details that are to be accounted under these heads are shown in Table III and enumerated in following three subsections.

Management responsibility data account

As shown in Table III, the expenses connected with preserving the original copies of the quality policy statement signed by the top management are to be accounted in this account. The expenses incurred for maintaining the quality policy statement with security are also to be accounted under this account. A careful study of these expenses would indicate that some of them are tangible in nature and others are intangible in nature. The journal entry rules followed to account for these expenses are shown in Table IV. As indicated, in the designed QIS financial accounting system, two types of cash-books are to be used. One type of cash-book is termed as "cash-book – tangible". In this cash-

book, the tangible receipts and payments are to be accounted. In "cash-book – intangible", the intangible receipts and payments such as utilisation of employee service, computer hours, employees' increased knowledge, etc. are to be accounted.

Management responsibility processing account

As shown in Table III, under this account, expenses connected with disseminating the quality policy are accounted. Most of these expenses are tangible in nature and the remaining intangible in nature. The journal entry rules formulated are given in Table V.

Management responsibility information account

In this account, the gains obtained by processing quality policy data are accounted. The gain obtained by the company in this case is the value increase of employees who

Table III Details to be accounted for executing QIS of Clause 4.1.1 of ISO 9001:1994

Activities with the title of the account in parentheses	Particulars	Projected financial values in Indian Rupees
Quality policy data (Management responsibility data account)	Files and stationary (Indian Rs.100 + 100)	200
	Employee service:	100
	Computer hours: (if required)	100
Quality policy processing (Management responsibility processing account)	Hangers on quality policy statement (cost of making board and painting quality policy)	500
	Cabin boards (10 numbers) (Indian Rs.150 each)	1,500
	Annual maintenance cost of these hangers	100
	Printing diaries and monthly calendar with quality policy statement (Indian Rs.10 for calendar + 50 for diary + 10 for quality policy)	3,500
	Printing quality policy in magnetic card (Rs.10 for 50 cards)	500
	Banner printing (Indian Rs.500 for each for two banners)	1,000
Quality policy information (Management responsibility information account)	A Likert's scale may be used to rank the employees' and customers' knowledge on quality policy	

Table IV Journal entries for management responsibility data transactions – quality policy

Date	Particulars	Dr. Indian Rupees	Cr. Indian Rupees
Dec. 31, 2000	Quality Management responsibility data A/c. Dr.	400	
	To cash-intangible		200
	To cash-tangible		200
	(Being the expenses incurred towards stationery, computer hours and employee service while preserving and maintaining quality policy)		

Table V Journal entries for management responsibility processing transactions – quality policy

Date	Details	Dr. Rupees	Cr. Rupees
Dec. 31, 2000	Quality management responsibility processing A/c. Dr. To Cash Tangible (Being the expenses incurred towards making boards, printing diaries and calendars)	7,100	7,100

have gained knowledge on the company's quality policy. This causes the employees to develop the attitude to work towards attaining the ultimate goals of the company. Such gain can be purely measured only in terms of intangible values. In this case, a questionnaire may be developed for checking the knowledge obtained by the employees on the company's quality policy. After assessing the knowledge of employees, a financial value may be assigned using a suitable formula. The company's asset increases in the form of employees' knowledge on the quality policy. The journal entry rules formulated to post the gain obtained from management responsibility information are given in Table VI. The financial accounting system of QIS, covering all the clauses of ISO 9001:1994, was designed by following similar methods described in this section. Followed by this, the format of income and expenditure account shown in Table VII was designed. As shown, the data and processing accounts are shown in the expenditure side, whereas information accounts are shown in the income side. If the income is more than the expenditure, then profit will result by implementing ISO 9001:1994 based QIS. If it is otherwise, loss will result. The balance sheet designed is shown in Table VIII.

Case study

In order to ensure the validity of the designed financial accounting system of ISO 9001:1994 based QIS, a leading printing machinery manufacturing company situated in Coimbatore City in India was approached.

Coimbatore is a small city located in the Tamil Nadu State of India. Coimbatore is known for its small volume industrial activities. Most of the companies in Coimbatore are involved in manufacturing motors, pumps and textile machinery. In addition to this, a considerable number of textile mills are also functioning in Coimbatore. During the past five years, few of the Coimbatore based companies got them accredited to ISO 9000 series models. Many Coimbatore based companies support research projects carried out by academics. This shows the interest of Coimbatore based companies towards adopting a scientific approach. Though Coimbatore is known for its versatile industrial activities, there have been no considerable efforts on manufacturing of printing machinery. Only one printing machinery manufacturing industry, "Autoprint Machinery Manufacturers Limited" (hitherto referred to as Autoprint), is being run in Coimbatore. Though the printing industry is a major dominating entity in the manufacturing arena, not much research has been carried out in this segment. Hence, interest was shown to test the validity of the designed ISO 9001:1994 based QIS financial accounting system at Autoprint. The conducive environment in Autoprint towards exercising continuous quality improvement led to further motivation to conduct this case study.

Autoprint is involved in manufacturing offset printers of two brands and sizes. During the past year, efforts have been made to install ISO 9002:1994 quality system model. When approached, the general manager carefully went through the proposal of this research

Table VI Journal entries for management responsibility information transactions

Date	Details	Dr. Rupees	Cr. Rupees
Dec. 31, 2000	Quality information system A/c. Dr. To management responsibility information A/c. (Being the increase in quality information system value due to the gain obtained from management responsibility information)	100,800	100,800

Table VII Income and expenditure account of ISO 9001:1994 based QIS

Expenses	Amount in Indian Rupees	Income	Amount in Indian Rupees
Management responsibility data	4,300	Management responsibility information	100,800
Management responsibility processing	9,800		
Quality system data	2,775	Quality system information	100,800
Quality system processing	1,700		
Contract review data	1,050	Contract review information	21,600
Contract review processing	225		
Design control data	3,925	Design control information	21,600
Design control processing	1,000		
Document and data control data	375	Document and data control information	22,464
Document and data control processing	200		
Purchasing data	1,225	Purchasing information	16,200
Purchasing processing	575		
Control of customer-supplied product data	775	Control of customer-supplied product information	18,000
Control of customer-supplied product processing	275		
Product identification and traceability data	1,025	Product identification and traceability information	15,840
Product identification and traceability processing	250		
Process control data	2,425	Process control information	12,888
Process control processing	800		
Inspection and testing data	3,725	Inspection and testing information	7,200
Inspection and testing processing	1,125		
Control of inspection, and test equipment data	725	Control of inspection, and test equipment information	16,200
Control of inspection, and test equipment processing	275		
Inspection and test status data	1,075	Inspection and test status information	14,400
Inspection and test status processing	375		
Control of non conforming product data	1,025	Control of non conforming product information	10,584
Control of non conforming product processing	325		
Corrective and preventive action data	775	Corrective and preventive action information	8,100
Corrective and preventive action processing	275		
Handling, storage, packaging, preservation and delivery data	675	Handling, storage, packaging, preservation and delivery information	8,100
Handling, storage, packaging, preservation and delivery processing	275		
Control of quality records data	450	Control of quality records information	7,200
Control of quality records processing	125		
Internal quality audits data	1,075	Internal quality audits information	7,920
Internal quality audits processing	425		
Training data	850	Training information	8,100
Training processing	250		
Servicing data	775	Servicing information	6,480
Servicing processing	275		
Statistical technique data	1,075	Statistical technique information	5,760
Statistical technique processing	425		
Value addition	381,161		
	430,236		430,236

project and granted permission to collect relevant data. Although Autoprint professionals extended excellent support, it was a very difficult task to collect the required data due to the large gap that exists between research and practice. Even ISO 9000 series

standards have not insisted on installing QIS to support the performance of quality systems. Hence, the awareness of the importance and need of installing QIS was not prevailing among the quality engineering professionals of Autoprint. Hence, in the

Table VIII Balance sheet of ISO 9001:1994 based QIS

Liabilities	Amount in Indian Rupees	Assets	Amount in Indian Rupees
Capital – tangible		QIS hardware	
Capital – intangible		QIS software debtors	
QIS output		Employee knowledge	
Creditors		Goodwill	
Cash overdue – tangible		Cash tangible – in hand	
Cash overdue intangible		Cash intangible – in hand	

beginning, a suggestion cum questionnaire was used to collect relevant financial data on quality policy transactions. The Autoprint professionals went through this sheet and suggested the change in financial values and responded to the questions given. Later, even this could not be done, as Autoprint professionals found it difficult to grasp the framework of the designed ISO 9001:1994 based QIS financial accounting system. Moreover, due to the regular work schedule, the competent Autoprint professionals were unable to spend much time in the company itself to provide data. Hence they took the details to their homes and estimated the financial values by doing homework. Because of these genuine difficulties, the data collection process proceeded with the sluggish trend. At one point of time, it became inevitable to project the values based on the working style prevailing in Autoprint. The collected and derived financial values were substituted in journal entries and subsequently postings were made in ledgers. Sample journal entries with financial values are shown in Tables IV-VI. As mentioned earlier, these entries represent the expenses and efforts that are required for formulating information system pertaining to quality policy and the gains derived out of the management responsibility information. The ledgers showing the corresponding postings are shown in Tables IX-XIV. After postings, a trial balance was drawn in which debit and credit sides tallied.

Followed by this profit and loss account, and balance sheet shown in Tables VII and XV were developed. As shown, these

statements indicate the promising benefits that Autoprint will get if ISO 9001:1994 based QIS is implemented. Moreover, considering the available projected data, the balance sheet shown in Table XV has been developed. If QIS is implemented in Autoprint, there may be investment on capital (both tangible and intangible), QIS software and hardware. Also there may be debtors and creditors concerned with QIS implementation. In addition, goodwill of the company may improve after the installation of QIS. All these factors may be incorporated, by following appropriate journal entries. The format of balance sheet showing these additional transactions is shown in Table VIII.

Conclusion

After completing the research project reported in this paper, we realised that this work represents only the first stage in sustaining a TQM project through financial accounting of QIS. This is because the awareness over the need of installing QIS based on ISO 9000 series models is totally missing among the manufacturing community. Hence, it is sensed that in order to enable the practitioners to nourish the benefits of ISO 9001:1994 based QIS financial accounting system presented in this paper, many more stages of work have to be carried out in future. In these kinds of future endeavors, installation of QIS itself should be considered as the first task. But the historical trend indicates that the top management

Table IX Ledger showing the entries corresponding to quality policy data in management responsibility data A/c

Date	Particulars	Amount in Indian Rupees	Date	Particulars	Amount in Indian Rupees
Dec. 31, 2000	To cash intangible	200			
	To cash tangible	200			

Table X Ledger showing the entries corresponding to quality policy data processing in management responsibility processing A/c

Date	Particulars	Amount in Indian Rupees	Date	Particulars	Amount in Indian Rupees (continued)
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Table XI Ledger showing the entries corresponding to management responsibility information in management responsibility information A/c

Date	Particulars	Amount in Indian Rupees	Date	Particulars	Amount in Indian Rupees
Dec. 31, 2000	To balance c/d	100,800	Dec. 31, 2000	By quality information system	100,800
		100,800		By balance b/d	100,800

Table XII Cash book – intangible

Date	Particulars	Amount in Indian Rupees	Date	Particulars	Amount in Indian Rupees
			Dec. 31, 2000	By management responsibility data A/c	200

Table XIII Cash book – tangible

Date	Particulars	Amount in Indian Rupees	Date	Particulars	Amount in Indian Rupees
			Dec. 31, 2000	By management responsibility data A/c	200
			Dec. 31, 2000	By management responsibility processing A/c	7,100

Table XIV Quality information system account

Date	Particulars	Amount in Indian Rupees	Date	Particulars	Amount in Indian Rupees
Dec. 31, 2000	To management responsibility processing A/c	100,800			

Table XV Balance sheet

Liabilities	Amount in Rupees	Assets	Amount in Rupees
1. Cash overdue – tangible	20,450	Quality information system	430,236
2. Cash overdue – intangible	28,625		
3. Value addition	381,161		
	430,236		430,236

personnel tend to accept most of the practices only due to business lucrative compulsions. For example, ISO 9000 series models are still being installed by many organizations mainly for enhancing the company image and thereby obtaining more profits. This happens

merely due to the popularity enjoyed by ISO 9000 series standards in almost all parts of the world. Hence we suggest that the International Organisation for Standardisation (ISO) make initiative in this direction. To be more precise, we anticipate

that, if ISO releases a subsidiary standard on QIS, then the practitioners will show interest in QIS. If the financial accountability of the QIS is also ensured, then the organisation will ensure profitability. As hinted at under the case study, despite the excellent support extended by Autoprint professionals, perfect validation of ISO 9001:1994 based QIS financial accounting system could not be achieved. Lack of awareness of QIS prevented the Autoprint professionals from understanding the features of the ISO 9001:1994 based QIS financial accounting system. Hence, we have a plan to visit some more companies and collect data and substitute them in the framework of the ISO 9001:1994 based QIS financial accounting system. We believe that this attempt will enhance the validity of the ISO 9001:1994 based QIS financial accounting system, developed and reported on in this paper. To conclude, we would like to claim that, by carrying out this research work, we have made a good beginning, at least academically, to emphasize the importance of QIS in ISO 9000 series quality system models and their financial accountability in sustaining TQM projects.

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