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*RESEARCH PAPER CONDUCTED ON
ASSESSMENT OF MANAGEMENT
INFORMATION SYSTEM APPLICATION*

(The case of flour factories in Nazareth)

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ABSTRACT

Management Information System is regarded as among those organizational system components, which (if not properly used and implemented) bring an adverse effect on the sustainability of the organization. Management information system began to be developed in 1969's and one characterized by the use of information system to produce managerial report (Ralph M. Stair 1998). The objective of this study is assessing the application of management information systems in private and government owned wheat flour companies. Failure to compete in highly market competition and experiencing poor organizational performance are the two typical problems arising from absence or utilizing primitive management information system application in many organizations. This cross - sectional study was conducted in east showa zone in the town of Nazareth. Data gathering techniques such as interview and questionnaire were used. On the basis of these, particularly qualitative data were gathered which were analyzed by applying different statistical methods. The study found poor /primitive application of management information systems in the selected organizations. Additionally, the industry hardly deployed computer based information system .

Library
Nazareth

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CHAPTER ONE

INTRODUCTION

Management Information System emerged with functions of organization prior to the wide spread of computers. The system was highly informal in setup and utilization. And many organizations found it too costly to maintain hug data. Advances in hardware and software enhanced the evaluation of management information system. It is far to be developed in 1960's and are characterized by the use of information systems to produce managerial report. (Ralph M.Stair, 1998) .

Management information system begins where computer science ends. (Lel.1998). Computer scientist's deserve accolades for developing and delivery over more advanced forms of technology; hardware technology; software technology and net work technology. Yet because no technology implements itself, there is more to management information system than just information technology. (Weldy L.corrie and Bob Calliar, 1998). Similarly. Most scholars might agree that we are by now on our way through the transition from at industrial economy to an information economy (Weldy L. currie and Bob coniar, 1998). Consequently in today dynamic and turbulent business environment the significance and role of management information system is paid a great attention.

Basically the focus of management information system is on operational efficiency. Marketing, production, finance and other functional areas are supported by management information system ,and linked through a common database. And management information system (MIS) provides

standard reports generated from the transaction processing system. (Ralph M. Stair and George-.W. Reynolds. 1998).

The application and role of MIS through organizational functional units is exemplified by comparing different biological systems function in our body and the integrated works /activities accomplished by financial units (departments) in an organization that both do the pursuit of similar objectives.

Information is the raw material for managerial work a large part of the manager's information comes from or concerns the environment, external to the organization. Thirty chief executives in Canadian publishing and Telecommunication industries, their environments and use information in decision-making were studied. (National computers and Information center/ science and Technology Vol. L. No_3 Jan 1995).

Because of this, Information system has been vital component of successful business firms. According to James O.Brien (1993). Information system functions the following

- ❖ A major functional area of business that is important to business success as the functional of accounting. Finance, Marketing, and manufacturing
- ❖ An important challenge to affecting operational efficient, employee productivity and moral, and customers service and satisfaction.
- ❖ Major part of the resource of an organization and its costs of deing business thus posing a major reserve management challenges.

Having this in mind, MIS helps an organization achieves its goals by providing managers with insight into the regular operations of the businesses so that they plan, organize, lead, and central more efficiently and effectively.

Now days the application of MIS has a great contribution for the successfulness of many business firms in the world. As literatures indicated big firms like Toyota and Mitsubishi in Japan IBM, Wal-Mart Owens and Owens in USA, and Indian Agriculture extension program are beneficiaries of MIS application (INTERNET2001).

From Ethiopia context, MIS application is, of course, at its infant stage. It is believed that Ethiopian Airline might be mentioned to be the first organization that deployed MIS application. This could be because of the organizations size, age (more than half a century) nature and scope of service provision- worldwide. Coffee plantation and development enterprise is also the second national big government owned organization that began using computer for operational activity next to Ethiopian Airline.

Inspite the fact that there are many privates and government owned business firms today, MIS application may not be sound. The reason for this might have been different political, social, economical and technological circumstances of the country.

Finally, the study aimed at assessing the application of MIS in organizations where the study is conducted, wheat flour companies in the town of Nazareth.

1.1 Background information of the study

Except few (the two government owned", the majority of the organizations in the industry where this study was conducted were established back in early 1980's.

Because of governments economic policy, free market, which opened a new era to businesses in domestic as well as foreign market, business firms got an opportunity to satisfy the request of the customers. This in turn let the emergence of new firms in the industry and aggravate the completion. However fierce the completion is, none of the firms in the industry is experiencing modern management information system yet. This is due to different factors, which will be dealt with later in the paper.

1.2 Significance of the study

The main significance of this study is to be a reference for further studies.

As similar studies in previous time have not been conducted in firms which are engaged in the some industry, this study enables other researchers to mention it as a base and improved necessary deficiencies that this study failed to conduct with. This study can also be useful for the organizations to make necessary improvement based on the recommendation of the study.

1.4 OBJECTIVE OF THE STUDY

The general objective of the study focuses on assessing the application of Management Information systems in private and government owned wheat flour companies in the town of Nazareth.

And, specifically, the study aims at :

- developing awareness about computer based information system,
- Indicating them the best way of handling processing of inputs (information within and out side of the organizations/ producing out puts to the purpose of decisions making.
- In identifying the currently existing situation of MIS in the organizations like
 - Information handling systems and techniques
 - usage of MIS components such hard ware, software, people and data
- Identifying key factors affecting the implementation of MIS
 - Creating awareness about information MIS and information

1.4 STATEMENT OF THE PROBLEM

The absence or poor application of management information system in these wheat flour factories resulted in sever problems that have an adverse effect ~~on the~~ on the organizations' daily as well as long run planning and operations.

The occurrence of poor organizational performance, failure to keep on their businesses in competitive market, the existence of less quality of work and product; and finally unable to develop modern data base management are the typical problems stem from the absence or poor application of management information system in these factories.

1.5 SCOPE OF THE STUDY

This study was conducted in the town of Nazareth in six flour factories. Regarding to the scope of the study, the main aim of its is assessing the application of management of information system in the mentioned organizations. In addition to this, the study tries ,of course, to deal with the performance of organizations in the industry.

1.6 Limitation of the Study

Since most of the organizations on which this study was conducted are private owned, leaving of information (data) especially financial related matters was undesirable and impossible to them. This is arised from the fear (threat) that they (organizations) have from fierce competition in the industry. This has brought an influence on the study (Scope) at all, particularly lack of sufficient quantitative data made the study refrain from discussing the performance of each organization in detail.

CHAPTER 1.7 Methodology

The study was conducted between February 8 to March 8 in 2002 in east Showa zone, the regional state of Oromia, in the town of Nazareth. Four privates and two government owned wheat flour factories were selected. As the study was conducted in industry level rather than in a single organization, this chapter is aimed at depicting the materials and methods used in conducting the study.

Hence, information which are supposed to give answer to the topic of this study were collected. The most significant internal sources of data for management information system are the organization's various transactions processing systems (Ralph M. Stair, 1998). This information could be financial marketing, manufacturing, human resource management and so forth. Data collected from sources mentioned above are both primary and secondary data.

As a result of this, data collection techniques as questionnaire and interviewing top management bodies and employees were used. The questionnaire was prepared in English, and contains both close ended and open-ended questions.

Regarding to sampling. Stratified sampling was used. This is one of the major types of sampling commonly used. It is used because a relatively small sample, simple random sampling might result in some members of the population being significantly.

Under or over presented stratified sampling over comes this problem as each identifiable strata of the population is taken into account. (Jill Hussey and Roger Hussey ,1997) Sample units of the study were drawn from employees at the managerial area of each department in each organization.

Therefore, concerning sample size of the study, there is no clear cut answer for the current sample size. It depends on the purpose of the study, and the nature of population under scrutiny. Thus, a sample size of thirty is held by many to be minimum number of cases if the researches plans to use some form of statistical analysis on his data, through methods are available for the analysis of samples (Louis Cohen and Lawrence Manion ,1998). There fore in this study the total population of each organization in average /12/ percent is taken.

The questionnaire enabled to gather qualitative data. So, by applying different methods of data analysis the collected data were changed and interpreted into meaningful form. Finally, depending on the data collected, descriptive data analysis method was used. It refers to the transformation of the raw data into a form that will make them easy to understand and interpret (William J. Zikmend).

1.8 DEFINITION OF TERMS

1. Competitive market:- a market environment in which business firms engaged in supplying similar product
2. Computer Based information system:- an information system which is composed of hardware software, databases, telecommunications, people, and procedures and that are configured to collect, manipulate, store and process data into information

- ✓ 3. Data:- recorded measures of certain phenomenon
- ✓ 4. Data Base Management:- is a collection of software programs that stores data, organize them into records, and allows access to the data into a uniform way
- ✓ 5. Descriptive Analysis:- the transportation of raw data into a form that will make them easy to understand and interpret; rearranging, ordering, manipulating data to provide descriptive information.
- ✓ 6. External environment:- an environment that holds all the forces outside an organization's boundaries that help make it unique and that are to some extent under the control of management.
- ✓ 7. Information:- data that have been processed and that have meaning
- ✓ 8. Internal environment:- is all that the elements within an organization's boundaries that help make it unique and that are to some extent under the control of management
- ✓ 9. Management information system, (MIS):- is an information system that can help an organization to achieve its goal by providing managers with insight into the regular operation of the organizations
10. Open system:- is a system that is in an external environment and that needs to receive feedback from that environment to change and to continue to exist.
11. Operating environment:- is one which involves factors in the immediate competitive situation that provides many of the challenges a particular firm faces in attempting to attract or acquire needed resources or in striving to profitably market its goods and services
12. Remote environment:- is an environment composed of a set of forces that originate beyond and usually irrespective of any single firm's operating situation that is political, economic, social, technological, and industry factors,
13. Stake holders:- are groups directly or indirectly affected by the ways in which business is conducted and managers conduct themselves

14. Statistical analysis:- the transform of data into a form that will make them easy to understand through different statistical application

Chapter two

LITERATURE REVIEW

This chapter of the study tries to point out some already conducted studies /Research, and deals with what their finding look alike with regard to this study.

Management information systems are computer-based systems that provide information and support for effective managerial decision-making. Like operations information systems these systems are comprised of software, hardware and humanresources . (Richard L.Daft, 1997,Pg 688). The sound integration of the above three compenents of the firms management information systems such as personal information system, marketing information system, manufacturing information system and financial information system brings the entire enhancement of each firms daily activity and performance in an industry. Similarly, both Anderson (1992) and Walsham (1993) explore the history of the development of management information systems in industry, (Internet, 2002). In looking at the theory. They both consider the philosophical implications of its development. In Anderson's case he believes there are eight historical schools of thought that under pine the philosophical basis of the structure, functions and performance of organizations. These are:

- ❖ Scientific management
- ❖ Administration management
- ❖ Human relations movement
- ❖ System Approach
- ❖ Contingency Approach
- ❖ Matrix organization (originally used by NASA) ✓

- ❖ mechanistic organization ,
- ❖ and adoptive organic

The focus for Walsham's work is organizations. For his research he uses case studies. One of the things he considered is the use of metaphor, especially organizations as machines, with the emphasis on economic, physical or information processing aspects. The view also reflects early views of what management itself was all about. What was interesting in the case studies was the way companies develop management information system strategy to meet control need it was a coping strategy. He conducted that computer based information systems embody interpretive schemes in the sense that they provide ways of viewing the world and thus making sense of it. They also reflect norms and values concerning what are desirable states of the world or what can be achieved. Finally, they provide a facility that can be used in the control and co-ordination of material and human resources. (internet. 2002).

Moreover, literatures indicate an effective management information system can give an organization a competitive advantage and a long-term strategies edge over another organizations lacking such systems.

Developing a new MIS or modifying an existing one doesn't always result in a competitive advantage. In most cases, Simply obtaining software equipment that any competitor can acquire will not yield long -term advantage. Putting the MIS to effective use; however, may provide a firm that best know what data to obtain (and how to relate it properly) and when and in what form to present it to which managers achieve the most significant advantage through MIS. This advantage can have significant impact on costs, profits, customers services, and new products. CSX rail carrier company in the United states with revenue over 9 billion dollar and some 46.000 employees can be the best example of this, competitive advantage.(Ralph M. Stair ,1998)

Concerning to the information what managers need in perform management roles (interpersonal roles, informational role and decisional

role), how information system help, Mintzburg's studies of top level executives showed that they did not get much help from computer based information systems. Instead, they relied primarily on verbal information systems gathered from telephone calls, personal contracts, and meetings; However, improvements in office automation systems and executive information systems have been aimed at making information systems more attractive, easy to use, and helpful to top executives and other managers. (James A. O'Brien (1996) Page,358), similar to Mintzburg's studies, this study has also found that organizations in the industry are less dependent on computer based information system. It is shown on Table 2

Literature also pointed that the exchange of information is the lifeblood of product development. For instance, when an electronic Company's a circuit designers know what the casing designers are doing, they design a better fitting circuits for the casing. And when the casing designs knew what the circuit designer need, they design a casing where it is easier to put in a better circuit. Such flows of information allow for experimentation and innovation, for that reason, many companies encourage feedback and iteration in their product development processes. This is known as concurrent engineering (Harvard Business Review, Jan 2001). This, indeed, showed how much information flow within on organization has a great contribution for the development of new product which inturn leads a company to be best competitor in the industry. However, according to the finding of this study in table 14 about new product development, 44 % of the responses in the industry shows that marketing information has an interesting contribution to new product development. More over, the flow of information among organizational unit plays a great role to this activity

Another supportive literature about people's in the organization and the manner of their understanding about information was studied by Peter Drucker. In his article "the new society of organization" Peter Drucker suggested that as more and more organizations become information based, People increasingly act as responsible decision makers. Managers must be prepared to abandon everything they know" Drucker argues, because organization will be under constant pressure to improve every thing they do continuously. Innovation will be key. Change will be constant . In this environment the ability to capitalize on knowledge, gained from information will be more critical than remembering the producers of the past (Ralph M. stair, 1998). Where as regarding to this,, the finding in this study as indicated in table 5, peoples understanding about information system is quite poor. And the percentage computation to this variable in the industry is 85%

Apart from what have already been explained, information has always been available for investment activity and in general for national development. Though this is a bite far away from the core idea and topic of the study, it has been found better to disclose the stand of some countries regarding to information. Some nation's act protests indigenous business firms from exposing data about their financial standing. For instance, Act 365 in Ghana, protests indigenous business firms not to expose data about their financial standing. Relating to this, the deputy minister of Trade and Industry of Ghana Abu-Bukor Sidiq said the ministry faces the problem of lack of data on industry. This makes it difficult for prospective investors to get information on areas they want to invest in. However, according to him, efforts are being made to upgrade facilities of the management information system of the ministry to ensure that information is always made available when required. (Sub-Saharan informer, Feb 2002).

Moreover, some literatures found that MIS application on other sectors of nation brings valuable contribution for the successfulness of it. For example, Kelly (1970) introduced some useful parameters that seem very appropriate for the education sector. His list giving the parameters for a successful management information system is,

- The cost and affordability
- Implementation time
- Flexibility in handling information
- Possibility for expansion without re-designing
- Provide a database to encourage a planning climate
- Reporting only when necessary , and
- Responsiveness.

Chapter three

Analysis and Results

The findings of the study are based upon the analysis of the responses of staffs in six wheat flour companies in the town of Nazareth. An average of 12% of the total respondents in each organization were interviewed and responded with the help of questionnaire.

Concerning to sources of information to the organization in the industry 92% of the total responses shows that both internal and external sources of information are used. In line with this, the major two (especially external) sources of the information to the industry are suppliers and customers that account 95% and 85% of the responses respectively. In contrast to this, the industry is least dependent on computer based to its sources of information as shown in table 2. Regarding to techniques used to gather information, the industry is well accustomed to newspaper, radios and TV that hold 56%, 47% and 38% of responses respectively. Dealing with computer based information systems, the industry hardly deployed it. As table 6 shows the reasons behind to failure to use computer based information system are lack of trained people, lack of hardware and software, less understanding of information system, and other similar factors that encompasses 93% , 92% ,85% and 15% respectively. Of the 73 respondents in the industry 74% (54) responded that the industry doesn't use experts knowledge for decision making, Where as the rest 26%(19) of the respondents agree that firms in the industry use expert's knowledge for decision making as table 6 shows.

Taking inputs to different organizational units into account the highest of these computed in industry to personnel information system as shown

in table 7. Is 88% of the total responses given. Similarly, to financial information system shown in table 11 holds 95% of the responses. And to marketing information a system 94, and 47% of the responses show information about different production activities of competitors in the industry is gathered both formal and informal ways.) The later two figures are shown in table 14 and table 15 respectively.

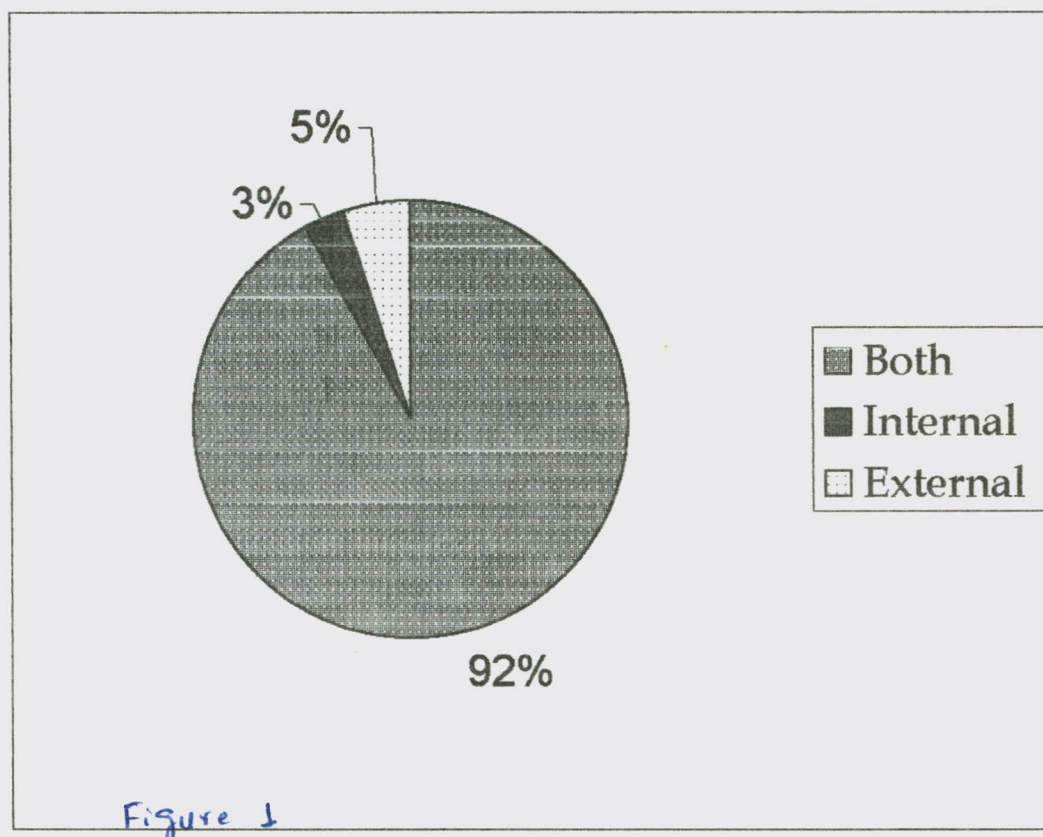
Finally, 76% of the total responses in the industry shows that organizations accept, critics, comments and feedback with the help of different methods (ways) particularly, suggestion box that encompasses 70% of the responses given in the industry as shown in table 10.

Table -1 Percentage computation of organizations' source of information

No	Name of Organizations	Internal source	External source	Both
1	Yerer	1/15= 7%	0/15=0%	14/15=93%
2	Nazareth	0/12=0%	2/12=17%	10/12=83%
3	Brothers	2/12=17%	0/12=0%	10/12=83%
4	Africa	0/11=0%	0/11=0%	11/11=100%
5	Yisalemush	0/11=0%	0/11=0%	11/11=100%
6	Samson	1/12=8%	0/12=0%	11/12=92%
Industry average		4/73=5%	2/73=3%	67/73=92%
Range		17-0=17%	17-0=17%	100-83=17%

On the table shown above the average source of information to the organizations at the industry level worthies 92% to both (internal and external), 3% only to external sources and 5% is only to internal sources. Moreover, the range of each source of information is similar

(17%). This indeed, shows the difference between the highest percentage and the lowest in the industry.



Pie-Chart shows percentage competition of organizations source of information

Table 2 External sources of Information (Percentage at industry level)

No	Name of organization	Sources of information				
		Government	Suppliers	Customers	Competitors	Computer based
1	YERER	15/15=100%	15/15=100%	13/15=93%	7/15=47%	4/15=27%
2	Nazareth	12/12=100%	12/12=100%	11/12=92%	6/12=50%	0/12=0%
3	Brothers	3/12=33%	11/12=92%	10/12=83%	0/12=0%	0/12=0%
4	Afira	5/11=45%	10/11=91%	10/11=91%	2/11=18%	0/11=0%
5	Yisalemush	4/11=36%	11/11=100%	9/11=82%	0/11=0%	0/11=0%
6	Samson	4/12=33%	10/12=83%	9/12=75%	6/12=50%	0/12=0%
Industry average		43/73=59%	69/73=95%	62/73=85%	21/73=29%	4/73=5%
Range		100-33 = 67%	100-83 17%	83-75= 18%	50-0 50%	27-0 27%

The table show above depicts the relation between each organization in the industry and its sources of information such as government, supplies, customers, competitors and computer based.

In the industry, almost all organizations are highly dependent on suppliers and customers for the external sources of information as compared to the other sources. This is observed by looking at column 2 and 3 in the table or the computation of industry average in the same columns, 95% and 85%. Incontrast to this, organizations are least dependent on computer based system for the sources of information which is shown by 5% of the response in the industry.

Similarly, the existence of the least figures of the range 17% and 18% in column 2 and 3 respectively indicates how much each organizations sources of information (suppliers and customers) percentage computation one very close to each other

Figure 2 Graphical presentation of external sources of information

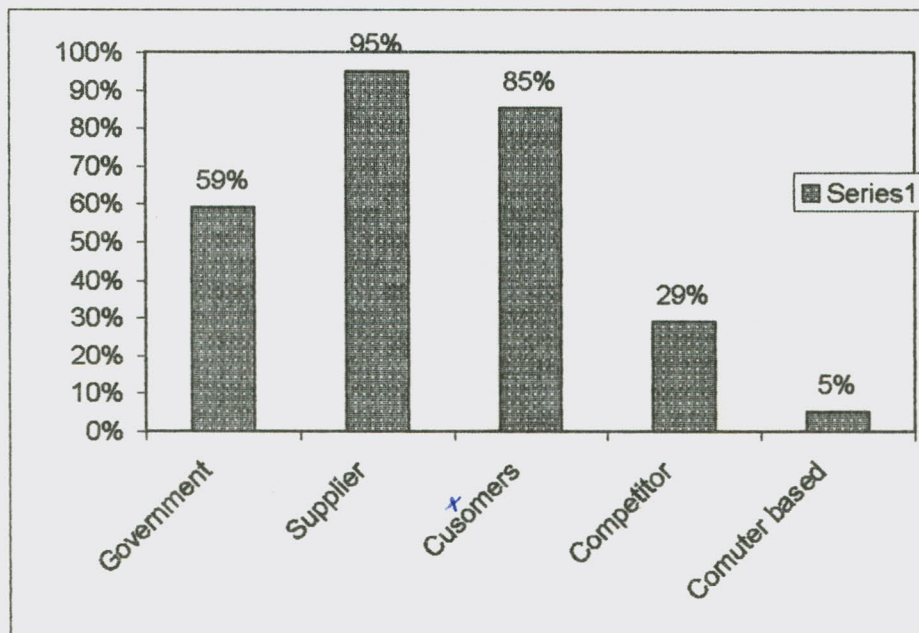


Table 3 Tabular presentation of percentage computation of information gathering techniques (ways)

No	Name of organization	Ways used to gather information					
		Expo.	TV.	News paper	Internet	Radios	Other
1	Yerek	2/15=13%	9/15=60%	13/15=87%	10/15=67%	13/15=87%	2/15=13%
2	Nazareth	3/12=25%	2/12=17%	3/12=25%	0/12=0%	9/12=75%	0/12=0%
3	Brothers	0/12=0%	11/12=92%	2/12=17%	0/12=0%	4/12=33%	0/12=0%
4	Africa	1/11=9%	4/11=36%	7/11=64%	0/11=0%	3/11=27%	2/11=18%
5	Yisalemu sh	0/11=0%	0/11=0%	4/11=36%	0/11=0%	5/11=45%	6/11=55%
6	Samson	10/12=83%	2/12=17%	12/12=100%	0/12=0%	0/12=0%	1/12=8%
Industry average		16/73=22%	28/73=38%	41/73=56%	10/73=14%	34/73=47%	11/73=15%
Range		83-0 83%	92-0 92%	100-17 83%	80-0 80%	87-0 87%	55-0 55%

Among the given ways used to gather information newspaper, Radios and TV held the first three average percentage 56% 47% and 38% in the industry respectively. The least of these (ways) figure is 14% lies on internet (i.e only 14% of the total responses) shows that the industry uses internet.

Table -4

	Ways (Medias) used to gather information					
	Expo	TV	New papers	Internet	Radio	Other
Responses permedia in the industry	16	28	41	10	34	11
Total Responses in the industry	140	140	140	140	140	140
Industry average	16/140=11%	28/140=20%	41/140=29%	10/140=7%	34/140=24%	11/140=8%

Figure 3

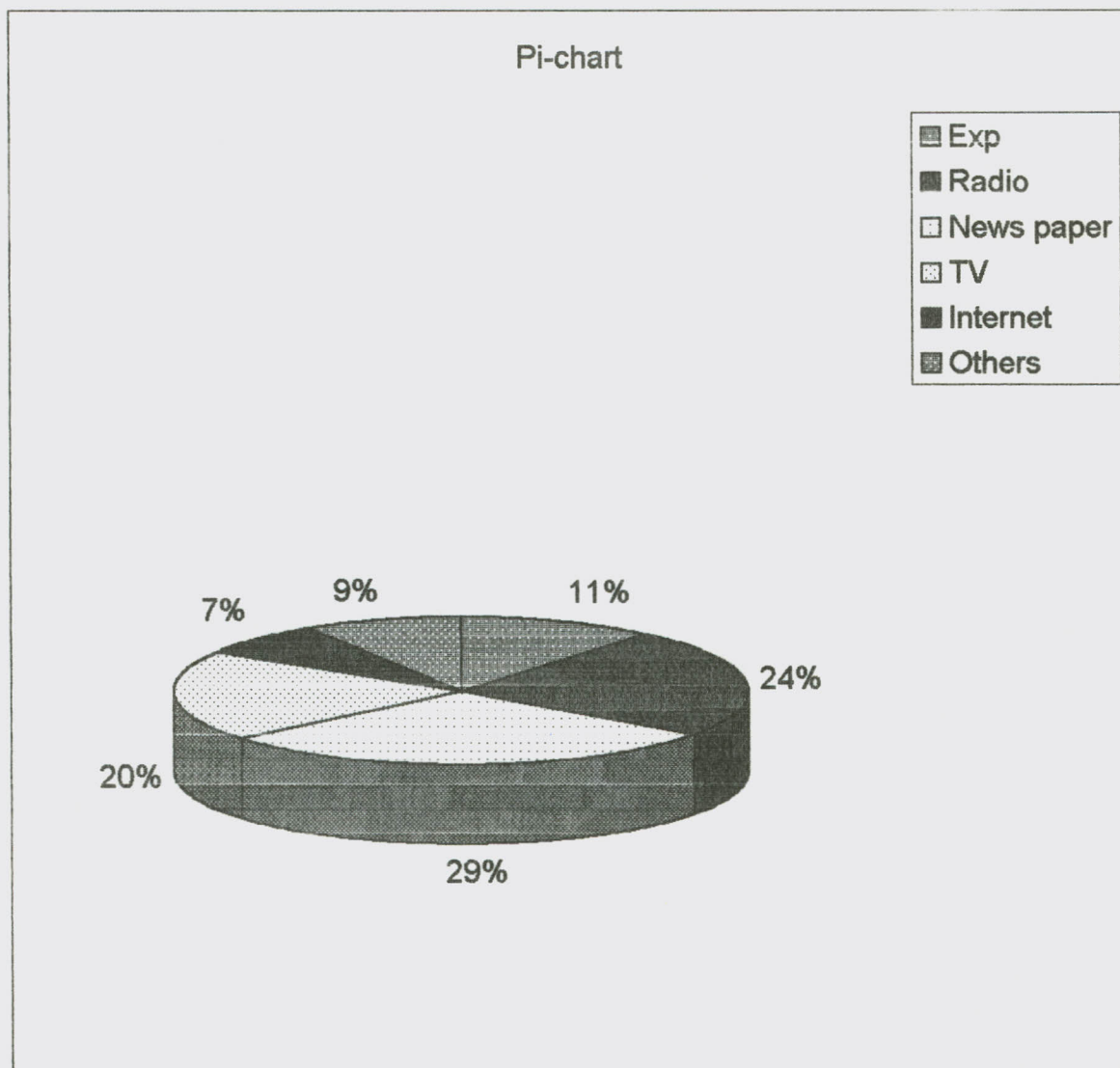


Table -5 Percentage computation of failure to use computer based information system.

No	Name of the organization	Lack of trained people	Lack of hardware & software	Less understanding about IS	Other
1	Yerer	12/15=80%	13/15=87%	10/15=67%	2/15=13%
2	Nazareth	11/12=92%	10/12=83%	10/12=83%	1/12=8%
3	Brathers	12/12=100%	10/12=83%	10/12=83%	2/12=17%
4	Africa	11/11=100%	11/11=100%	11/11=100%	2/11=18%
5	Yisalomush	11/11=100%	11/11=100%	10/11=91%	2/11=18%
6	Samson	11/12=92%	12/12=100%	11/12=92%	2/12=17%
	Industry average	68/73=93%	67/73=92%	62/73=85%	11/73=15%
	Range	100-80 20%	100-83 17%	100-67 33%	18-8 10%

The above table depicts the percentage computation of failure to use computer based information system (CBIS). Concerning the industry level, the highest figure to the second column (lack of trained people) encompasses 93% in average, And, 15% of the total responses holds "other" factors that make the industry fail to use CBIS.

In understanding about information system in the industry the highest figure 33% shows that there is a wide gap between organizations that

have best understanding of IS and least (poor) understanding of it (organization 4).

Figure 4 Graphical presentation of failure to use computer based information system at industry level

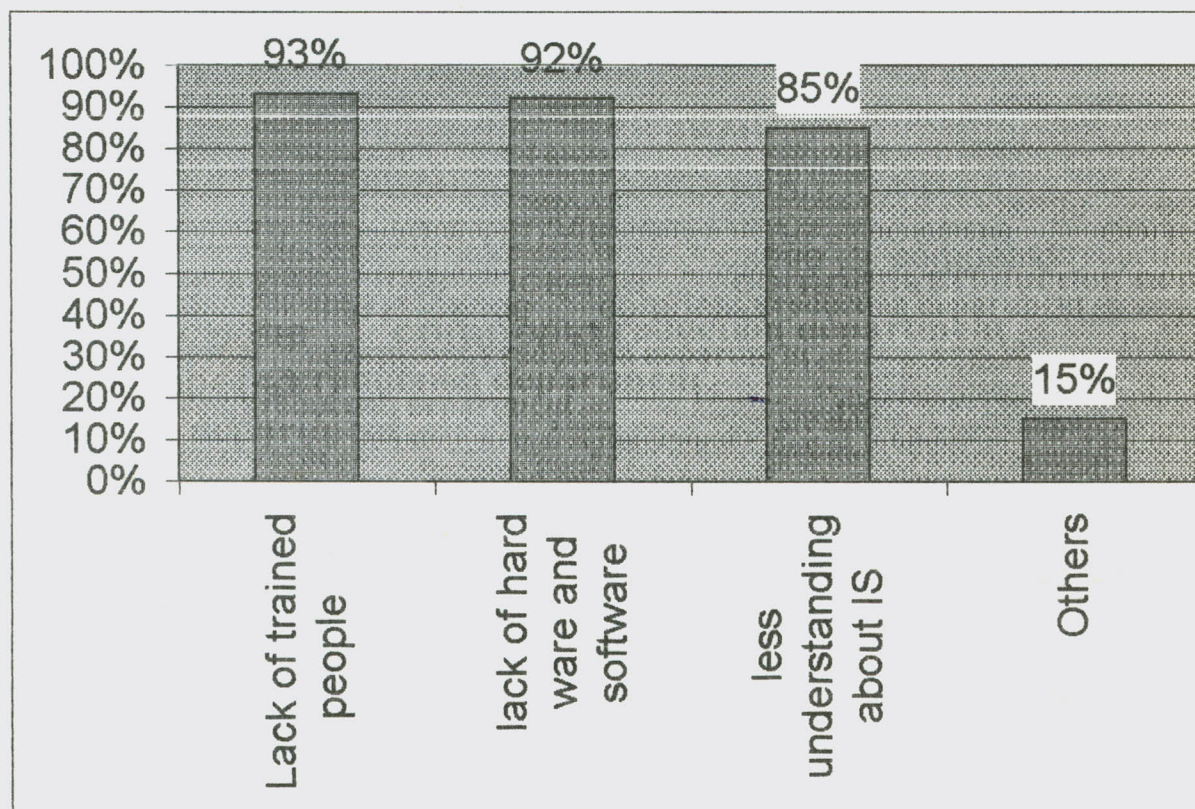


Table 6 Percentage computation of responses to expert's knowledge

Is there Expert's knowledge	Organization industry						
	Yerer	NAZAR ETH	Brothers	Africa	Yisalemush	Samson	Industry average
Yes	10/15=67%	6/12=50 %	3/12=25%	0/11=0%	0/11=0%	0/12=0%	19/73=26%
No	5/15=33%	6/12=50 %	9/12=75%	11/11=100%	11/11=100 %	12/12=100 %	54/73=74%
Total	100%	100%	100%	100%	100%	100%	73/73=100%

The figures in the table show how much each organization in the industry use expert's knowledge to assist decision making

Among the organization in the industry only three of them use Expert's knowledge for decision Making. However, 67% of the responses in the first organization (yerer) is the highest which is followed by 50% and 25% in the second and third organization respectively.

Personal Department

Table-7

No	Name of organization	Application form	Appraisal (performance)	Biographic data	Appointment letter	Other
1	Yerer	4/4=100%	4/4=100%	1/4=25%	3/4=75%	1/4=25%
2	Nazareth	3/3=100%	2/3=67%	1/3=33%	1/3=33%	0/3=0%
3	Brothers	2/3=67%	1/3=33%	0/3=0%	1/3=33%	0/3=0%
4	Africa	2/2=100%	0/2=0%	0/2=0%	1/2=50%	0/2=0%
5	Yisalemush	2/2=100%	1/2=50%	0/2=0%	1/2=50%	0/2=0%
6	Samson	2/3=67%	2/3=67%	0/3=0%	1/3=33%	0/3=0%
Industrial average		15/17=88%	10/17=59%	2/17=12%	8/17=47%	1/17=6%
Range		100-67 33%	100-0 100%	33-0 33%	75-33 42%	25-00 25%

Inputs to personal information system are computed in percentage form as the table shows. Taking the industry level in to consideration the highest average percentage computation of inputs is application form in column one which worthies 88%, and the least of this figure is shown in the last column 6%.

The range 100 % in column two shows there is a wide gap between organization 1 and organization 4 in the industry that uses appraisal (performance) form and that doesn't at all

Figure 5

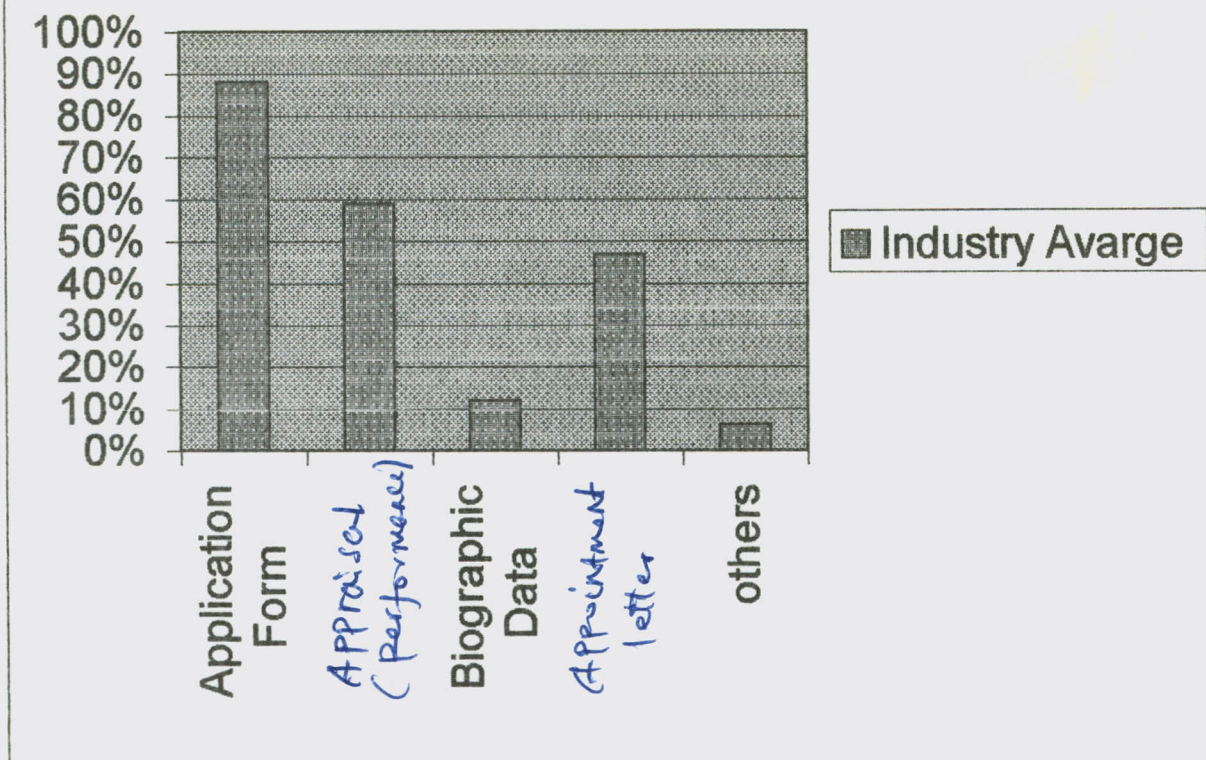


Figure-5 Graphical presentation of input to personnel information system

The graph shows the average percentage computation of inputs to personnel information system in the industry. The highest figure computed to "application from", 88% of the total responses. However, the least of these is 6% of the responses given to "Other" personnel inputs.

Table 8 Existence of computer based information system

		Name of organization						
Yerer			Nazareth	Brothers	Africa	Yisalemush	Samson	Industry Average
	Yes	1/4=25%	-	-	-	-	-	1/17=6%
	No	3/4=75%	100%	100%	100%	100%	100%	16/17=94%
	Total	4/4=100%	3/3=100%	3/3=100%	3/3=100%	2/2=100%	3/3=100%	17/17=100%

The above table shows whether each organization in the industry use computer based information system to process personnel inputs. Only 25% of the responses in the first organization show the existence of CBIS. But, the rest of the given organization do not entirely use CBIS (100% of the responses).

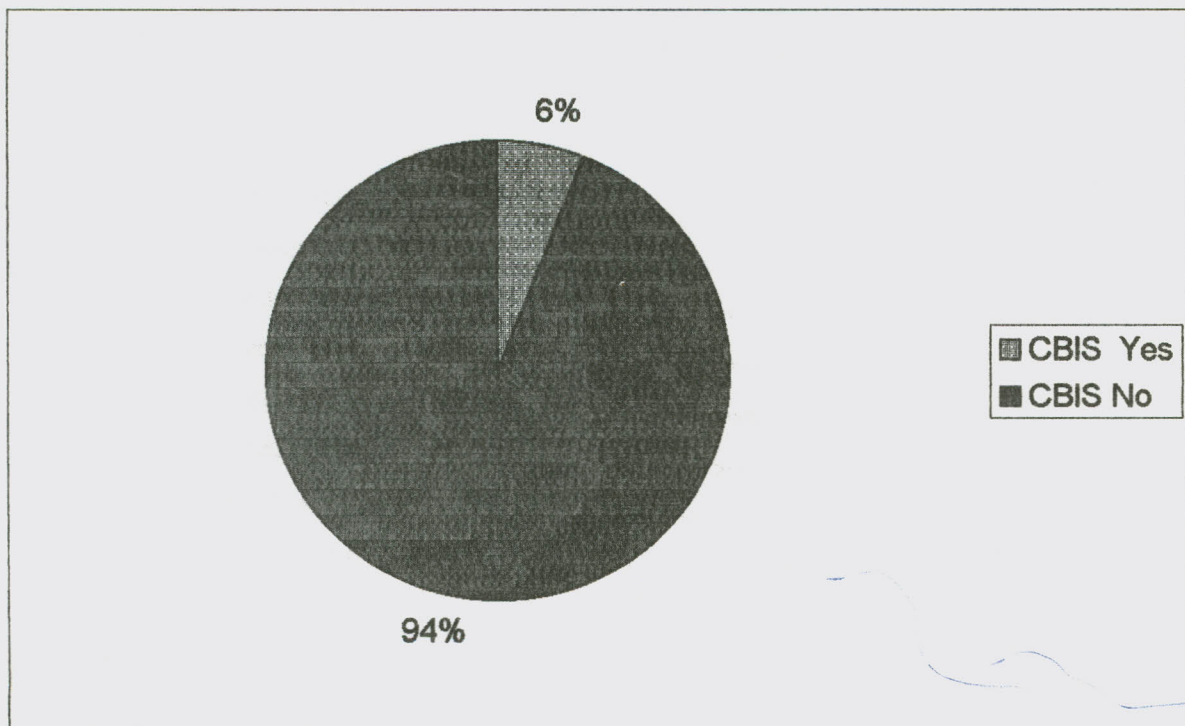


Figure 6

The shaded region of the pie chart shows that only 6% of the total responses in the industry feel that there is computer based information system application where as the un shaded part, 94%, depicts that the organizations in the industry do not use CBIS for processing of inputs to personnel activity.

Table 9 Acceptance of critics, comments and feedback per Organization

	Name of the organization						Industry
	Yerer	Nazareth	Brothers	Africa	Yisalemush	Samson	Industry Average
Yes	4/4=100	2/3=67%	1/3=33%	½=50	2/2=100 %	3/3=100 %	13/17=76%
No	-	1/3=33%	2/3=17%	½=50	-	-	4/17=24%
Total	100%	100%	100%	100%	100%	100%	17/17=100%

We can see from the table the extent that each organization in the industry is volunteers to accept comments, critics and feed back from employees. 76% of the total responses show that organizations in the industry are willing to accept critics, comments, and feedbacks.

Where as the rest 24% shows that they are not.

Figur -7

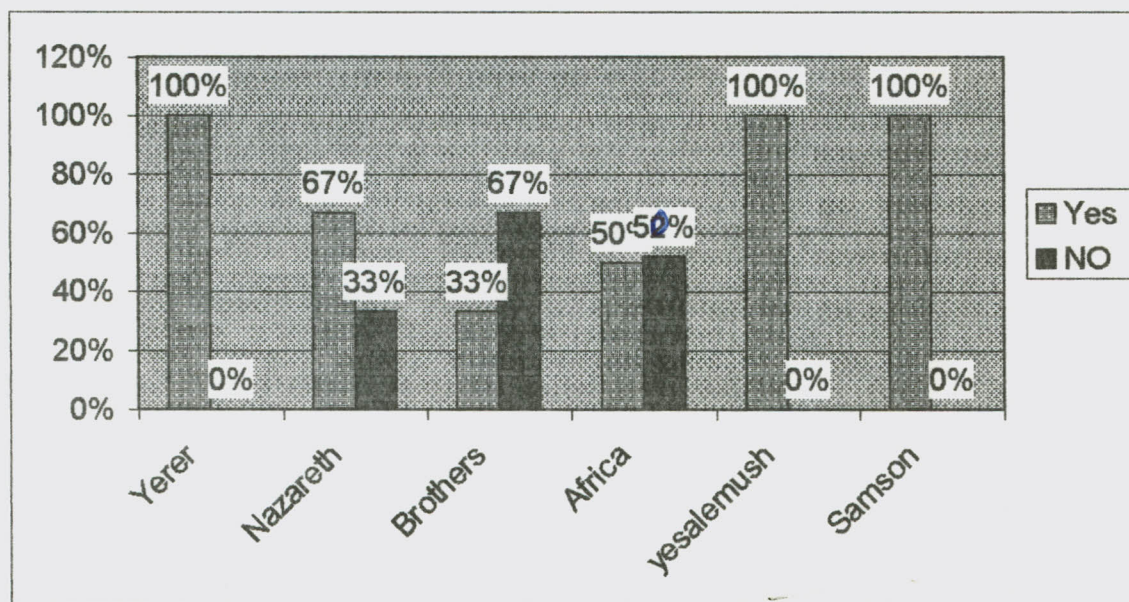


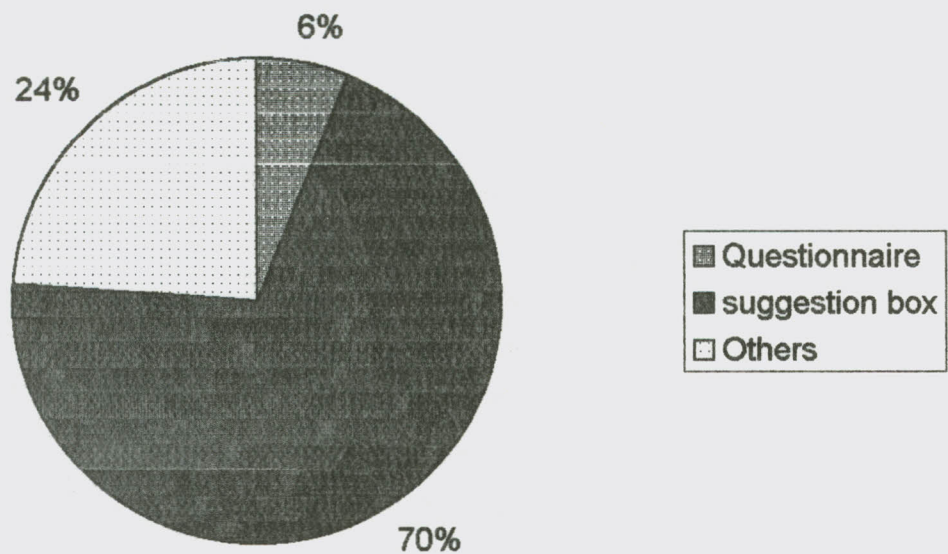
Table-10

Handwritten signature

No	Name of the organization	Techniques used to accept critics, comments and feedback			
		Questionnaire	Suggestion box	Interview	Other
1	Yerer	1/4= 25%	3/4=75%	-	-
2	Nazareth	-	3/3=100%	-	-
3	Brothers	-	2/3=67%	-	1/3=33%
4	Africa	-	2/2=100%	-	-
5	Yisalemush	-	-	-	2/3=100
6	Samson	-	2/3=67%	-	1/3=33%
Industrial average		1/17=6%	12/17=70%	-	4/17=24%

Except one the majority of the organizations in the industry one well familiar with suggestion box as the figure in the table shows (70%). However, we cannot observe any one of the organizations that uses /conduct interview for similar activity (gathering information).

Figure 8



The pie- chart shows percentage. Computation of techniques used to accept comments, critics and feedback.

Table 11 Finance department

No	Name of the organizations	Inputs to financial information system				
		Cash sale	Credit sale	Payment voucher	*GRN	Sales Voucher
1	Yerer	5/5=100%	5/5=100%	5/5=100%	5/5=100	5/5=100%
2	Nazareth	2/3=67%	3/3=100%	3/3=100%	3/8=100%	2/3=67%
3	Brothers	3/3=100%	2/3=67%	1/3=33%	2/3=67%	2/3=67%
4	Africa	3/3=100%	3/3=100%	1/3=33%	3/3=100%	2/3=67%
5	Yisalemush	3/3=100%	2/3=67%	1/3=33%	2/3=67%	3/3=100%
6	Samson	3/3=100%	3/3=100%	2/3=67%	1/3=33%	3/3=100%
Industrial average		19/20=95%	18/20=90%	13/20=65%	16/20=80%	17/20=85%

*GRN= Goods Receiving Note

Five major financial inputs are shown in the table. The average usage at the industry level is computed. Hence, 95% of the total responses in the industry shows that firms in the industry are highly accustomed to use Cash sale. Comparing to payment voucher which encompasses the least percentage. Moreover, more than 65% in average, all firms in the industry are highly user of the mentioned financial inputs.

Figure 9.

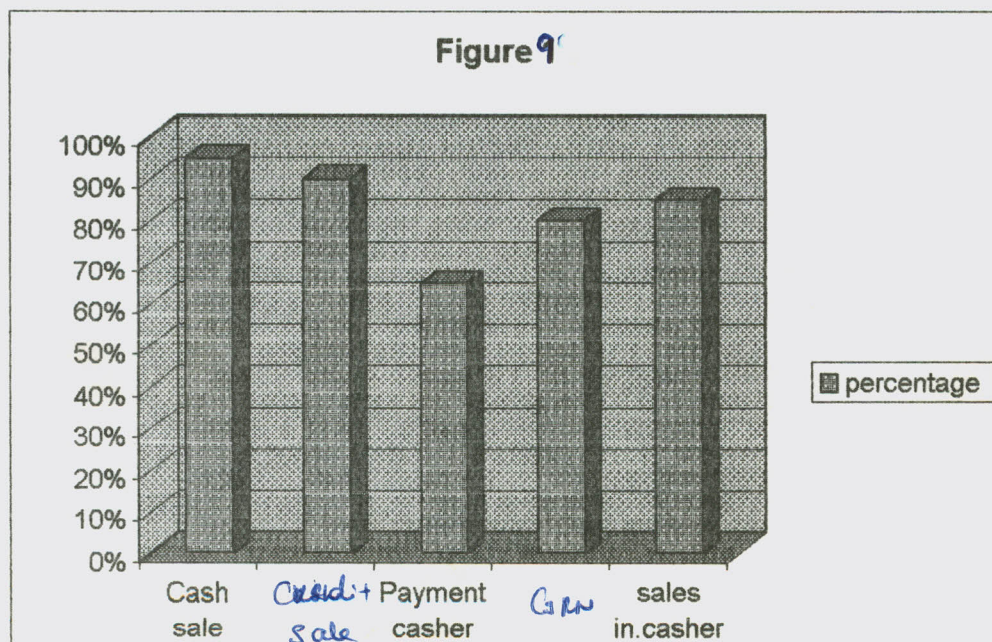


Table 12 users of financial statements of the organization

No	Org. name	Employees	Customers	Suppliers	Owner	Labor union	Government	Management
1	Yerer	4/5=80%	3/5=60%	1/5=20%	-	3/5=60%	5/5=100%	5/5=100%
2	Nazareth	1/3=33%	2/3=67%	2/3=67%	-	1/3=33%	3/3=100%	3/3=100%
3	Brothers	-	1/3=33%	1/3=33%	3/3=100%	-	1/3=33%	3/3=100%
4	Africa	-	1/3=33%	2/3=67%	3/3=100%	-	2/3=67%	3/3=100%
5	Yisalemush	-	-	1/3=33%	3/3=100%	-	1/3=33%	3/3=100%
6	Samson	-	-	-	3/3=100%	-	1/3=33%	3/3=100%

The above table displays the percentage computation of the organizations major internal and external users of financial statements such as income statement, balance sheet, cash flow and fund flow statements.

It is only in the first two organizations that employees have an opportunity to be users of financial statements which is shown by 80% and 33% of the responses respectively In the rest of four organizations but organization 1 and 2, 100% of the responses shows that owners are users of financial statements. The reason is that of course, these organizations are private owned. It is only in the first two organizations that labor union has an access to use financial statements mentioned earlier. Finally, in all organizations management is the typical user of financial statements shown by 100% of the responses.

Marketing Department

Table -13

No	Marketing Activities					
	Name of <i>Organizations</i>	Product development	Product distribution	Price decision	Promotions Effectiveness	Others
1	Yerer	2/3=67%	3/3=100%	3/3=100%	3/3=100%	1/3=33%
2	Nazareth	1/3=33%	2/3=67%	3/3=100%	—	-
3	Brothers	3/3=100%	2/3=67%	3/3=100%	3/3=100%	1/3=33%
4	Africa	1/3=33%	2/3=67%	3/3=100%	2/3=67%	-
5	Yisalemush	2/3=67%	1/3=33%	2/3=67%	1/3=33%	-
6	Samson	1/3=33%	3/3=100%	3/3=100%	-	-
Industry average		10/18=56%	13/18=72%	17/18=94%	9/18=50	2/18=11%

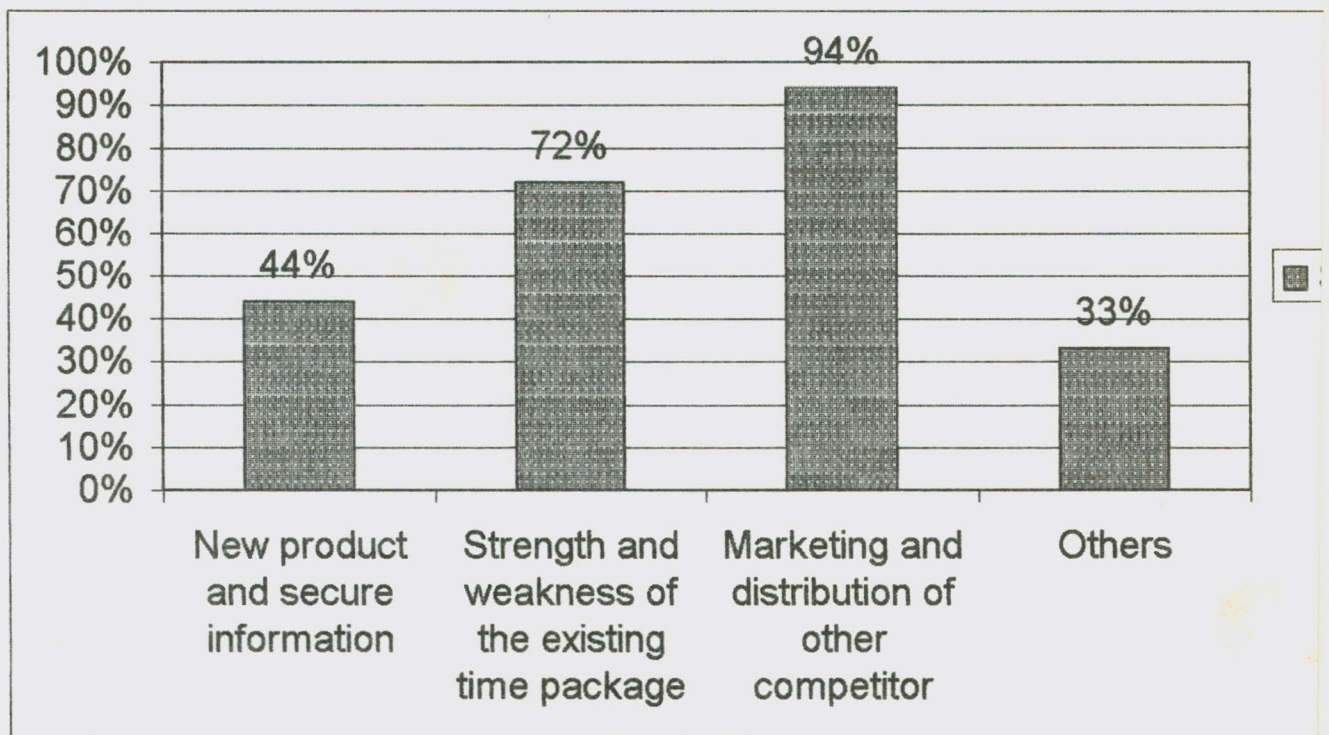
The significance of marketing information to managerial (marketing) activities as shown in the table can be easily understood. Therefore, concerning the industry average group 94% of the responses show that how much marketing information is deployed for the purpose of price decision. Next to price decisions, product distribution 72% the second highest figure in the table. However, the least figure held by other marketing activities , 11% .

Table- 14 Marketing information from external environment (industrial Analysis in percentage form)

No	External information				
	Name of the organization	New product and secure information	Strength and weakness of the existing line package	Marketing and distribution of other computation	Others
1	Yerer	1/3=33%	3/3=100%	3/3=100%	1/3=33%
2	Nazareth	-	2/3=67%	3/3=100%	-
3	Brothers	3/3=100%	3/3=100%	2/3=67%	1/3=33%
4	Africa	2/3=67%	1/3=33%	3/3=100%	2/3=67%
5	Yisalemush	1/3=33%	2/3=67%	3/3=100%	-
6	Samson	1/3=33%	2/3=67%	3/3=100%	2/3=67%
Industry average		8/18=44%	13/18=72%	17/18=94%	6/18=33%

The highest percentage computation regarding to industry average, 94%, depicts that external information like marketing and distribution of other competitors is highly gathered and employed by organization in industry. Where as other marketing information from external environment contributes only 33% of the responses.

Figure 1D

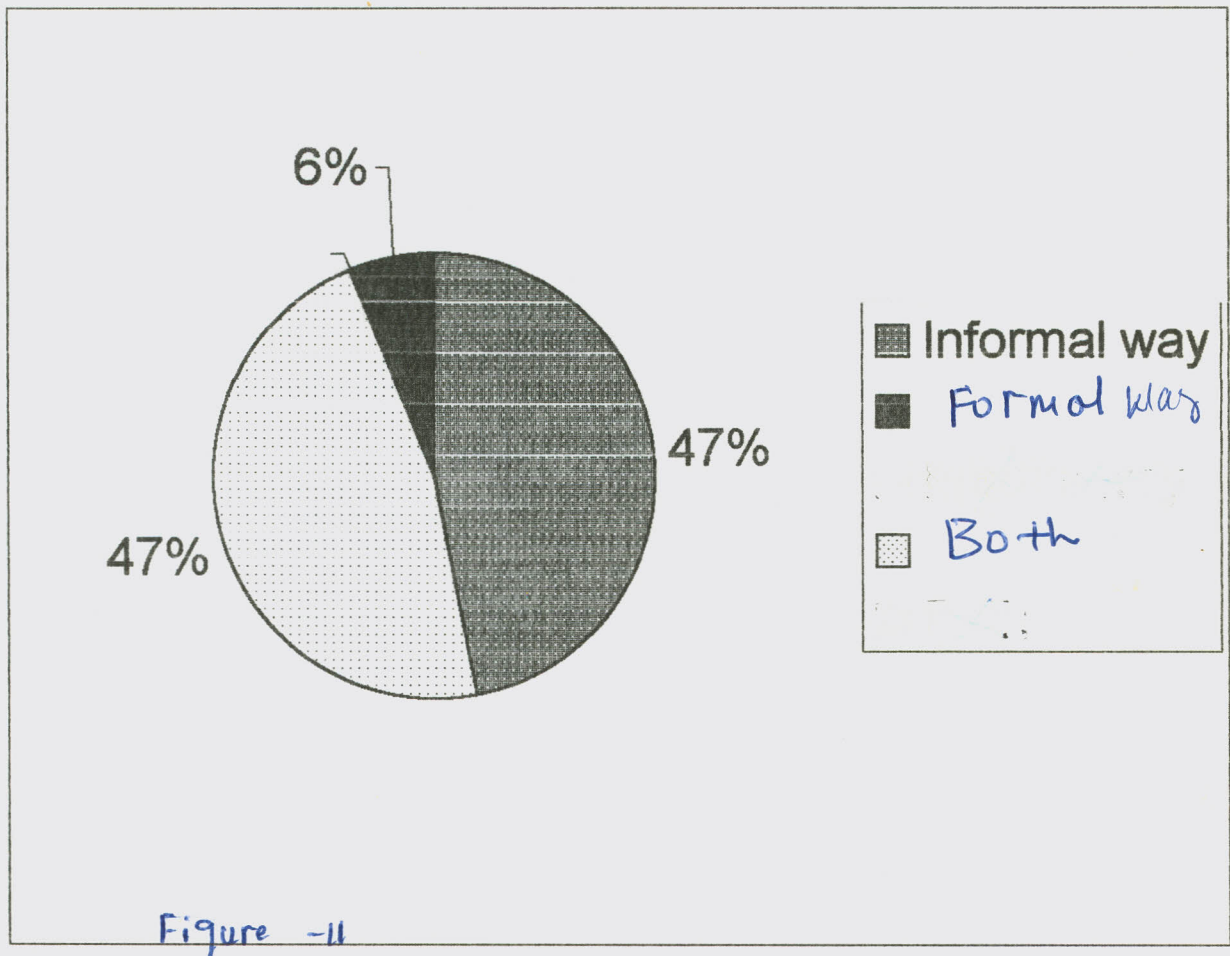


Production department

Table- 15 Percentage Computation of Information gathering about production activity of other competitors.

No	Variables	Formal way	Informal way	Both
1	Human power skills	1/18=6%	6/18=33%	11/18=61%
2	The nature of machines	-	13/18=72%	5/18=28%
3	Raw material used	2/18=11%	4/18=22%	12/18=67%
4	Production volume	2/18=11%	9/18=50%	7/18=39%
5	Work schedule	-	10/18=56%	8/18=44%
	Industry Average	5/90=6%	42/90=47%	43/90=47%

For normal production activity information about the above given five variables in the table gathered in such three different manners as formal way, informal ways or both. So, as the industry average depicts in the last row of the table. It is only 6% of the total responses (18) shows formal way of gathering information about the given variables. Also, 47% both in the second and the third column show informal way and “both” (formal and informal) ways of information gathering.



Pie-chart shows the percentage computation of manners used to gather production activity of other competitors

3.1 Discussion

Sources of information to organizations in the industry have been grouped into three different categories such as internal, external and both internal and external sources of information. Internal sources of information include organizational units (department), employees, and management. Where as external sources of information include customers, government, suppliers and competitors. It is of course, genuine that any organization keeps its operation in open system that it has a direct and indirect interaction with external environment. This has clearly been shown in table 1, which computes 92 % of the responses in the industry. The organization's external sources of information particularly suppliers and customers that holds 95% and 85% of responses respectively in figure 2 strengthens this reality (i.e. how much the organizations are highly dependent on external environment by far than internal for their existence in competitive and dynamic environment). External environment consists of two in to interactive and interrelated segments such as the operating environment and remote environment that affect the firms' strategic options but are typically beyond the firms control. As per to the findings of this study, firms in the industry use different ways to gather information from external environment. Hence, as shown in figure 3 news paper, radio and TV are the three major media that are highly used for this activity. It is shown that 29%, 24% and 20% of the total responses (140) of the above these medias respectively used.

In spite the fact that the successful integration of major components of computer based information system had a sound implication to the

achievement of management information systems, it is unlikely to observe this in firms in the industry where this study was conducted, The majority of the organizations in the industry are unable to use computer based information system. The typical reasons for this are lack of trained people in the industry of which average computed 93% of the responses, lack of hardware and software 92%, less understanding of information system, and other similar factors which holds 85% and 15% of the total responses respectively.

Concerning to input to personnel information system, "application form" accounts the highest of all, 88%. Each organization's percentage computation to impute, application form is $\geq 67\%$ of the total responses. This indeed, shows how much application form is highly deployed as compared to the other imputes for human resource activities. Apart from this, acceptance of critics comments, and feedback (CCF), it has been found that 76% of response in the industry shows that firms in the industry do it where as the rest 24% of the total responses doesn't agree with this activity idea. The best way to accomplish acceptance of critics, comments and feedback in the industry is with the help of suggestions box 70% of the responses realize this in table 10.

Stake holders such as customers, government, management etc in table 13 are the major users of financial information's in the industry. Financial statements, balance sheet, profit and loss (income statement), cash flow, and found flow statements are prepared in each organization either in annual, semi annual, or quarterly, Management in each organization is 100% user of financial statements. Only in the first two governmental organizations as shown in table-12 column 7 that labor union has an access to use financial statements, 60% and 33% respectively.

For the purpose of price decision in comparison to the other marketing activities in table 13 shown, marketing information has a great contribution. Because firms in the industry are engaged in the same business, the price change by one firm sensitively (immediately) affect the overall industry. Moreover, the dynamic of the external environment compels firms in the industry to adjust themselves to cope with the threats and challenges they face. 94% of the total responses in the industry clearly shows the major external information to the organizations is knowing the marketing and distribution of other competitors. This is shown in table 14. Information about production activity of other computations is gathered in two ways, formal way and informal way or both .

Chapter four

Conclusion and Recommendations

Information has always been the basis of business organizations. The importance of information as resources for any kind of development activity is recognized by and realized by organizations, and nations all over the world. Properly arranged and managed information system and its function improves the efficiency and effectiveness of the business sector. Information is becoming a resource just like finance and people. It is; however, a resource which enables management to improve the efficiency of the business with which other resources are used. The organizations have to focus on timely, accurate (free from error,) valuable information for the sake of strategic- making and implementation. Vice president for production marketing, finance and human resource (personnel) have important strategy making and strategy implementation responsibility responsibilities. (Thompson Strick land, 1996). However, MIS is for many designed data net work used to provide managers with timely and useful information for effective planning and control. The system is especially designed so that managers get only the information they need in the most useful form possible (Richard M. Hodgetts, 1991).

4.1 Conclusions

The major emphasis of this study has been for assessing of the application of management information system in wheat flour factories in the town of Nazareth. Based on the analysis of facts the following conclusions are drawn.

A) Every organization in the industry is highly dependent up on both in internal and external environment . With the help of different communication media firms in the industry do the is best in assessing

and collecting information about from the over changing external and internal environment. However, regarding to MIS application in the industry major components of it such as people, data, hard ware and software have not been given a great attention. Though the required data come from both internal and external environment, the lack of or extremely poor application of them have contributed it own negative impact on the introduction and development of MIS. Because of this the output of the system is hardly available to decision-makers in such efficient and adequate manner.

B. Almost in every aspects of the variables taken in the result section of the study it is observed that private owned organizations have show less performance concerning MIS application as compared to the first two government owned. Take for instance, percentage computation of less understanding about information system in private owned organization is found $\geq 83\%$ this is also true for others. Further more, no response in the analysis in table 6 shows that private organizations except Yerer, Nazareth and Brothers (private owned) use experts knowledge to assist manger for decision making

C. There is a tendency of cost increment to the over all organizations which would be stem from failure to use computer based information system. Because MIS has a great advantage for firm is comparative advantage which inturn brings reduction of cost, enhancement of profitability, Productivity, and quality of products the organization produces .

4.2 Recommendations

The importance of management information system has recognized in modern societies. Management information system is becoming an indispensable factor for success of an organizations. Therefore, the top

management and other functional managers of these wheat flour factories where this study was conducted have to take a series of measures to the significant of management information system to the activities of the organization.

Based on the analysis of facts and findings the following are recommended to upgrade the development and contribution of MIS.

1. Selection and train of personnel is recommended. Although computerized societies are often pictured as machine with human subservient technology, computer exists to serve people and to aid managers in reaching decisions. In addition, they can not execute given tasks without the assistance of skilled information system professionals. More over, since the success or failure of information service in organizations, and the strategic benefits of information system rests and requires skilled man power in the different areas such as Human resource, marketing, Finance and personal, the development and training of personnel is indispensable.
2. For real application of hardware and software the procurement of hard ware and software should takes place as it is mentioned earlier in the analysis and result section of the study. One of the findings for failure to use computer based MIS is the absence of hardware and software. Hence, firms in the industry has to bridge this gap.
3. Firms in the industry has to develop a culture of using experts knowledge for decision making particularly to key decision that significantly affect the overall organization. Because this enables the firms to improve the efficiency of operation, produces new products and services, looking for customers and suppliers new business relationships.

4. Managers in the organizations have to encourage the flow of information feedback among functional unit; and between organization and external environment. MIS needs feedback to do job. Because feedback is an indicator of how current performance rates when compared to set of standards with effective feedback, continuing adjustment in the activities activates of the system can be made to assure that the system archive it goal. Parallel to this, structure change has to be made. Because it enables to run operations smoothly, improve over all coordination and control; and facilitate the flow of information among section within the organizations.

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Appendix

QUESTIONNAIRE

1. Name of the organization
2. The organization was established-----
3. The type of the organization
Private----- Governmental-----
4. How many employees are there in your organization
Permanent----- Seasonal-----
5. Sources of information to your organization
Internal----- External----- Both-----
6. External sources of information to information to your organization
Government----- Suppliers----- Customers-----
7. The following ways of information gathering are used
Conference----- Expo----- TV-----
News paper----- Internet----- Radio----- Others-----
8. Is there computer based information system in your organization?
9. If No because
 - Lack of trained people-----
 - Lack of software and hard ware-----
 - Less understanding about information system-----
 - Other factors -----
10. Does your information system use expert's Knowledge to assist?
Decision making process?
Yes----- No-----
11. Are activates (works) accomplished as per to the planned schedule?
Yes----- No----- Rarely-----

12. The organization

	Productive	Efficient	Net efficient	Not productive
In 1993	-----	-----	-----	-----
In 1994	-----	-----	-----	-----
In 1991	-----	-----	-----	-----
In 1990	-----	-----	-----	-----
In 1989	-----	-----	-----	-----

13. Is there any irregularities (intentionally done mistake) in your organization?

14. The quality of the organization produces

Main product -----

By product -----

Others -----

15. The performance of the organization

Excellent ----- Very good ----- good -----

Poor ----- Very poor -----

16. Types of product the organization produces

Main product -----

By product -----

Others -----

17. Comparing to competitors the selling price charged to our product is

Very high ----- High ----- Fair ----- Low ----- Very low-----

18. Are employees satisfied with there work?

Yes ----- No ----- Do not known-----

19. What necessary documents are examined (taken in to consideration) to give? Training to employment in your organization?

20. For decision made by top level management the most preferable information Is from.

External environment ----- With in the organization ----- Both -----

✓ Arseni

To personnel Department

1. The following inputs to personnel information system are used

personnel application form ----- Appointment letter -----

Appraisal (performance report) ----- Appointment letter -----

Biographic data ----- Others -----

2. Is there computer based information system to process these inputs?

Yes ----- No -----

3. The coordination between personnel department and other departments

Within the organization is

Excellent ----- Very good ----- good -----

Poor ----- Very poor -----

4. Does the organization accept critics comments and feedback from employees?

Yes ----- No -----

5. How do you receive (gather) the information on No.4?

Through questionnaire ----- By interviews -----

Using suggestion Box ----- Other method -----

6. Do employees avail themselves (come to work) in time?

Yes ----- No -----

7. Are employees avail paid salary (wages)

More than enough ----- Fair ----- Very low -----

Satisfactory ----- Low -----

8. Do employees get

	Yes	No	Rarely
--	-----	----	--------

Incentive	----	-----	-----
-----------	------	-------	-------

Bonus	-----	-----	-----
-------	-------	-------	-------

Salary increment	----	-----	-----
------------------	------	-------	-------

To Financial Department

1. What are inputs to your financial information system?

2. How do you assure the accuracy of these information?

3. Is there computer based financial information system?
Yes _____ No _____
4. What are the possible problems resulted from not to use computer based financial
Information system?

5. What benefit you get from applying computers based financial information
system?

6. What types of financial statements are prepared?

7. How often?
Yearly _____ quarter _____ Semiannually _____ Monthly _____
8. How is the cash control management of your organization?
Very strong _____ Strong _____ Weak _____ Very Weak _____
9. Who are external and internal users of financial output of your organization?

10. What is the financial obligation of your organization?

11. How is the nature of tax imposed on your organization?
Profit tax _____ %
Property tax _____ %
Income tax _____ %

me 2/20

To Marketing Department

1. The purposes of marketing information to managerial activity in your organization are

Product development _____ product distribution _____

Price decision _____ promotional effectiveness _____

Others _____

2. Possible sources of marketing information within the organization are

Purchases system _____ Manufacturing system _____

Accounting system _____ Inventory system _____

Credit system _____ other _____

3. How do you gather information from your customers and suppliers?

Using questionnaire _____ Visiting _____ Work shop _____

By interview _____ Meeting _____

Through telephone _____ others _____

4. The organizations sales volume and productivity

	Sale (in Birr)	Profit	Loss (net profit)
In 1993	_____	_____	_____
1992	_____	_____	_____
1991	_____	_____	_____
1990	_____	_____	_____
1989	_____	_____	_____

5. Marketing information from external environments (secures) to the organization are: -

New product and secure information _____

Strength and weakness of the existing line package _____

Marketing and distribution information of other competitors _____

Others _____

6. How much research and development department contributes for the short run and long run planning of the organization?

Excellent _____ Very good _____ Good _____

Less _____ Very less _____ not contribute _____

To Production Department

1. How do you gather information about the manufacturing activity of other Competitors?

	<i>Formal way</i>	<i>informal way</i>	<i>Both</i>	<i>None</i>
- The human power skill	_____	_____	_____	_____
- The nature of machines (Type, age, strength)	_____	_____	_____	_____
- Raw materials used	_____	_____	_____	_____
- Production volume	_____	_____	_____	_____
- Work schedule	_____	_____	_____	_____

2. How many quintals are produce per day in average? _____

3. Is your production activity computerized?

Yes _____ No _____

4. Types of data used for production activity from

Marketing department _____

Financial department _____

Human department _____

5. Is your product qualified as compared to the other competitors?

Yes _____ No _____



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