

Issues Related to Employees at Telecommunication Companies in Yemen and the Role of Management Information Systems in Solving It

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Abstract

In this days, organizations invest in management information systems because they provide economic value to the business. While the adoption of management information systems in the organizations, especially in Yemen is still dealing with issues in field of successful adoption. In other hands, the Telecommunications industry today is a key enabler of productivity across economies and societies. In context of Yemen, the telecommunication sector is a strategic and vital sector being of direct link with the citizen and public and private institutions alike. The sector has witnessed substantial change and developments during the last ten years. However, There are a lot of issues in telecommunication companies in Yemen. This paper aims to shed some light on issues related to employees at telecommunication companies in Yemen, and the role of management information systems in solving these issues.

Keywords: *Employees, Telecommunication Companies, Yemen, Management Information Systems*

1. Introduction

1.1. Telecommunication Industry in Yemen

The Telecommunications industry today is a key enabler of productivity across economies and societies. The Telecom industry is not only a significant contributor towards the economic activities of countries, but also towards the growth of other industries. In recent times, developing nations have witnessed significant transformation within this sector due to the impact it has had on their economies. The telecom industry is an interesting industry to study, not only due to its volatile nature in terms of technological breakthrough and its policies, but also due to the high growth rate of this industry over the past few decades and the significant contribution of the industry to the economies of these nations [1].

Telecommunication industry in Yemen comprises of local telephone, international telephone, cellular phone, and internet. In addition, the numbers of subscribers in the different means of telecommunications in Yemen are increasing. The numbers of subscribers were added at a rapid pace, which adds to the growth and importance of the industry. That indicates that, the telecommunication one of the most lucrative sectors today. Table 1 shows the number of subscribers in the different means of telecommunications in Yemen.

Table 1. Number of Subscribers in the Different Means of Telecommunications: 2011- 2013

Year Item	2011	2012	2013
Local Telephone	1,075,312	1,103,807	1,093,305
International Telephone	111,085	115,240	156,294
Cellular Phone	12,349,860	13,893,265	17,423,000
Internet	810,750	857,970	1,093,492

Source: Annual Statistical Bulletin of Public Corporation for Wired, and Wireless Telecommunications [2].

According to Annual Statistical Bulletin of Public Corporation for Wired, and Wireless Telecommunications [2] Cellular Phone is the most used in Yemen than the different means of telecommunications.

According to Embassy of the Republic of Yemen in Washington [3] telecom is one of the most promising sectors available in Yemen for trade and investment. A recent regional study showed that the Yemeni GSM (Global System of Mobile) market is growing very rapidly compared to the markets in other Arab countries. Yemen's mobile-cellular market has four operators: Sabafon, MTN Yemen, Y Telecom, and Yemen Mobile. Yemen Mobile provides cellular services through a CDMA network, while the other operators use GSM technologies. Sabafon, and MTN companies launched mobile-phone services in early 2001 after winning 15-year licenses at a cost of USD 10 million each in mid-2000. The expansion of their network, which currently covers about 60% of the population, by a French firm, Alcatel, is continuing. In May 2004, the Ministry of Telecommunications announced operations for a third mobile telecom provider, Yemen Mobile, which was owned exclusively by the Ministry until 55% of the company's shares were put for sale in mid of 2006. Yemen Mobile started operations on the CDMA (code division multiple access) protocol.

The widespread use of mobile phone technologies by society can be clearly seen across all walks of life in Yemen. Nowadays, the new generations look further to have updated mobile phone service, as they prefer to finish their work faster. Hence, the mobile phone is one of the ways to expedite tasks. Therefore, mobile phones seem to be a very important device for almost all people [4].

Between 2005-2013, Yemen improved its mobile communications services as the number of mobile telephone subscribers jumped from 2,277,553 million in 2005 to 17,423,000 million in 2013. Table 2 shows the number of subscribers in the Cellular Network between 2005-2013.

Table 2. The Number of Subscribers in the Cellular Network between 2005-2013

Year	Subscribers
2005	2,277,553
2006	2,977,781
2007	4,348,264
2008	6,445,033
2009	8,312,773
2010	11,085,344
2011	12,349,860
2012	13,893,265
2013	17,423,000

Source: Annual Statistical Bulletin of Public Corporation for Wired, and Wireless Telecommunications [2].

In addition, the competition between companies operating in this field led to the expansion of mobile telephone service coverage to include all governorates and diversified services. Competition in service prices, therefore, increased public demand on these services. Table 3 shows the Cellular Network Operating lines by companies: 2011 - 2013. According to Table 3 there is intense competition among cellular phone companies in Yemen. In addition, the table indicates that, the numbers of subscribers in the different Cellular companies in Yemen were increasing at a rapid pace.

Table 3. Cellular Network Operating Lines by Companies: 2011 – 2013

Company	Operating Lines	Year
Yemen Mobile	4,267,965	2011
	4,099,352	2012
	4,529,000	2013
Sabafone	3,093,502	2011
	4,000,000	2012
	5,421,000	2013
MTN	4,562,019	2011
	4,974,903	2012
	5,777,000	2013
Y	426,374	2011
	819,010	2012
	1,696,000	2013
Total	12,349,860	2011
	13,893,265	2012
	17,423,000	2013

Source: Annual Statistical Bulletin of Public Corporation for Wired, and Wireless Telecommunications [2]

Yemen Mobile, this mobile phone CDMA2000 system: the company is the only operator of Yemen's CDMA2000/1x system Although from its beginning studies, the establishment and the full support of the Ministry of Communications, but it has been privatized later. Yemen Mobile numbers begin with 77 and its 421-03 networking code and the number of subscribers according to 2013 statistics is 4,529,000 subscribers.

Sabafon mobile phone system GSM: this company is granted with a license from the Yemeni Ministry of Communications, has also been allocated network code 421-01 and numbers begin with 71 and the number of subscribers according to 2013 statistics is 5,421,000 subscribers.

MTN (Spacotel of the former) mobile phone system GSM : this company is granted with a license from the Yemeni Ministry of Communications , has also been allocated network code 421-02 and numbers begin with 73, and the number of subscribers according to 2013 statistics is 5,777,000 subscribers.

Y mobile phone GSM mobile: recently this company has been awarded a license from the Yemeni Ministry of Communications, has also been allocated network code 421-04 and numbers begin with 70 and the number of subscribers according to 2013 statistics is 1,696,000 subscribers.

1.2. Significant Contribution of Telecommunication Sector

There has been an explosion in the number of mobile subscribers and connections in the Arab States over recent years. Unique subscriber penetration rates are now above the global average and the region is also seeing increasing adoption of connected devices. The

general availability of mobile services has changed the way people live, and brought communications services to previously unconnected populations. However, beyond the provisions of basic communications services, mobile technology has a key role to play in social and economic development across the region, and particularly in developing countries. The widespread availability of mobile devices and higher speed mobile network coverage is opening up new opportunities for businesses, consumers and governments. Mobile already makes a significant contribution to the social and economic development of the Arab States. Further to the direct economic impact, the income generated by the mobile industry has a multiplier effect on the rest of the economy. This is because a significant proportion of the wages, taxes or profits paid out by the industry are subsequently spent across other sectors of the economy. This results in other economic sectors also benefiting from the value added generated by the mobile ecosystem. Mobile technology facilitates productivity improvements for many workers and businesses, for example, by speeding up access to information, allowing better decision making in the sales process, reducing unproductive travel time, and facilitating improved logistics for businesses and workers in services, manufacturing and agriculture [5].

In context of Yemen, the telecom sector is a strategic and vital sector being of direct link with the citizen and public and private institutions alike. The sector has witnessed substantial change and developments during the last ten years. The infrastructure of telecommunication sector has witnessed distinctive progress in the recent years [6]. Telecommunication industry contributes significantly to the Yemeni economy by providing more opportunities for economic development and plays an important role in the rapidly changing environment, while enhancing the production capability of the country. In addition, the telecommunications sector is an interesting sector in Yemen due to high growth rate of this sector over the past few decades compare the other sector. Telecommunication sector revenues alone accounted for 13 % of Yemeni GDP [7]. That's mean, the telecommunication sector is an important sector affect on Yemeni economy.

2. Issues Related to Telecommunication Companies

Over the past decades, organizations in a global environment face stiff competition to survive and sustain their competitive advantage. In order to accomplish that, organizations today must provide a high level of quality performance to the customers. In reaction to sharp levels of increased competition, many businesses are forced to restructure their labor-management practices, motivate employees and attract them to engage their jobs in order to improve work performance [7]. There are a lot of issues in telecom companies, and this issues differ from researcher to another based on context.

According to Afshan, *et al.*, [8] training is main issue affect on employee performance telecommunication sector. If organizations invest in right type of employee training it can enhance employee performance as well as competencies and skills. In addition, training is seen as a useful means of coping with changes fostered by technological innovation; market competition, organizational structuring and most importantly it plays a key role to enhance employee performance. According to Odembo [9] employee satisfaction is becoming more challenging for companies including those in the telecommunication industry. Saeed, *et al.*, [10] indicates that the main issue in telecom companies is the level of satisfaction of the employees. An organization with good management would consider its employees its assets and the primary source and portal to productivity and financial gains.

In case of telecommunication companies in middle-east especially in Yemen, there are many factors hinder the high level of the employees satisfaction and performance. For example, telecommunications companies in Yemen used management information systems to collect, process, store, and retrieving the information as needed for aim

improve the employees performance. But some of the employees in the telecommunications companies are not satisfied with using the system, and others do not sense the usefulness of the system. In addition, the company offers insufficient supports to the employees to use of the system. Moreover, the companies don't offers adequate training to use the management information systems. The previous reasons causes a negative impact on the performance of the employees. According to Al-Qurashi [11] in context of telecommunication companies in Yemen top management support, and training are key factors that affect on employees performance. According to Al-Omari [12] in context of telecommunication companies in Gaza, training (the sessions) is one of the important factors that increase user awareness of the capabilities of system. According to Al Haderi [13] in context of Yemen, information quality could enhance the employee's and manager's intention to use or adopt the technology when they received this information is usefulness, ease of use and it helps them to achieve the organization goals.

In addition, Hashed, *et al.*, [4] mentioned that level of customer satisfaction as important issue in telecommunication companies in Yemen. In addition, mentioned that perceived quality, perceived value, and corporate image as important factors affect on customer satisfaction.

In other hands, Belhaj [7] mentioned the absenteeism of employees as one of the issues in telecommunication sector in Yemen. Where, absenteeism, reduces effective service capacity, increases waiting time, waste a lot of financial resources, lost outcomes, disturb management and colleagues at work and disturb work schedule which effect on performance and services provided. Consequently, that issue affect on productivity and performance of employees in telecommunication sector.

This paper focused on the issues that related to employees at telecommunication companies in Yemen and the role of management information systems in solving it.

3. Importance of MIS in Organizations

Management information system is one of the most important tools in any organization, which aims to provide reliable, complete, accessible, and understandable information in a timely manner to the users of the system. According to Hashim, *et al.*, [14] no doubt, the management information system play an imperative role for development, and when it is used to improve employee's performance. Management information system plays the life blood role for an organization as no human can survive without it. According to Hasan, *et al.*, [15] management information system is type of information systems that take internal data from the system and summarized it to meaningful and useful forms as management reports to use in managerial decision making. According to Al-Mamary, *et al.*, [16] management information system serves the management level of the organization, providing managers with reports or with on-line access to the organization's current performance and historical records. According to Nowduri & Al-Dossary [17] every business organization in this era, needs management information system to keep track of all business activities. According to Dinesh & Ragel [18] organizations are developing their own management information system for more efficient management. According to Al-Mamary, *et al.*, [19] the use of the management information systems has become necessary for any organization to improve efficiency, productivity, and improve performance in general.

The growing utilization of management information system may encourage employees to increasingly use management information system to help them perform tasks and manage work. Understanding the impact of management information system on the performance of users is very crucial for all organizations because it can improve performance either organizational or individual. According to Allingham & O'connor [20] organizations have been developing and implementing computer-based management information systems (MIS) at an increasing rate for the last 35 years. However, evidence

indicates that many computer-based MIS are not as successful as they should be and many may be considered failures. There has been much research to investigate organizational factors, individual differences, user involvement and their relationship to MIS success, and in particular, one indicator of MIS success, user information satisfaction (UIS). According to Igbaria & Tan [21] user satisfaction is an important factor affecting system usage and that user satisfaction has the strongest direct effect on individual impact.

4. MIS in Yemeni Telecommunication Companies

Data are the lifeblood of today's organizations, and the effective and efficient management of data is considered as an integral part of organizational strategy [22]. Earlier, the organizations employed the manual system for collecting, processing, and storing the information. However, for the last few years the organizations stored huge amount of information, structure of today's organization management systems are more complex. Some organizations stored information of more than one million customers, as in the case of telecom companies. Hence traditional methods such as the use of paper work and files to store the data are no longer relevant. It is necessary to adopt management information systems to enable these organizations to control this huge amount of information and provide it for all managerial levels in timely manner as needed [23].

According to Nath and Badgujar [24] a great number of organizations could not operate properly and successfully without the implementation of management information system. Management information systems make it possible for organizations to get the right information to the right people at the right time in the right form by enhancing the interaction between the people's organization. In addition management information system allows information to move between departments instantly, reducing the need for face-to-face communications among employees, thus increasing the responsiveness of the organization. According to AL-Gharaibeh & Malkawi [25] the role of management information system in companies is manage the data, organizing, and retrieving of the information which help the organization to provide services faster, and market more accurate and easier, which affect also the level of performance.

In context of telecommunication companies in Yemen, management information systems in general enables to collect, processing and storage of the information; with overall purpose to make that information available on demand in the required format. Telecommunication companies used modern computers and advanced servers connected to an advanced network, this network connects all network communications centers to each other. The system is connected to the main server so that the data is stored in the files on a central server. So it is easy to retrieve data when needed. In addition, telecommunication companies can't work without management information systems as the number of subscribers in these companies more than million subscribers, so it's hard to save their data using the manual method (using files). As we know that telecommunication companies are saving the subscriber data (name, card number, *etc.*) in a database where the subscriber can go to any branch in any city to inquire. Management information systems assisted in automating tasks. Automation can save time, money, resources, reduce employee's staff, and enhance organizational workflow. In addition assist in increased individual productivity, effectiveness, increase customer satisfaction, efficiency of the work, and the individual performance [26]. According to Heidarkhani, *et al.*, [27] automation systems in the companies help managers control the flow of information in organizations. According to O'Brien & Marakas [22] automation systems enhance team and workgroup communications and productivity.

5. Types of MIS in Yemeni Telecommunication Companies

5.1. Introduction

For the last twenty years, different kinds of information systems are developed for different purposes, depending on the need of the business. In today's business world, there are varieties of information systems each plays a different role in organizational hierarchy and management operations [28].

The organizations the last few years, stored huge amount of information, structure of today's organization management systems are more complex. Some organizations stored information of more than one million customers, as in the case of telecom companies. Hence traditional methods such as the use of paper work and files to store the data are no longer relevant. It is necessary to adopt management information systems to enable these organizations to control this huge amount of information and provide it for all managerial levels in timely manner as needed [23]. According to Asemi, *et al.*, [29] management information system was one of the major computer based information systems. Its purpose is to meet the general information need of all the managers in the firm or in some organizational subunit of the firm. According to Sekhar and Babu [30] management information system is a collection of people, tools, procedures and software to perform various business tasks at various levels in the organization. According to Al-Mamary, *et al.*, [19] the use of the management information systems has become necessary for any organization. According to Al-Mamary, *et al.*, [31] management information system one of the most important tools in any organization, which aims to provide reliable, complete, accessible, and understandable information in a timely manner to the users of the system. According to Nowduri & Al-Dossary [17] management information systems was a computer based information system that provides for management oriented reporting based on transaction processing and business operations of the organization.

In Telecom, management information system is one of the effective systems for collecting and managing the data for an organization. The major objective of management information system is to improve the overall performance and working capacity of an organization by using the concept of information technology in an effective way [32].

Management information systems (MIS) data is generally summarized from the day-to-day operational data of the organization. Most part of the management information systems database is collected from different subsystems of the organization. The subsystems may be human resource system, production management system, finance system, sales management system, project management system *etc.* [33]. According to Hall [34] there are different types of management information systems such as financial management systems, marketing systems, distribution systems, and human resource systems.

In context of telecommunication companies, the common types of management information systems that used are accounting information systems, finance information systems, human resource information systems, customer relationship management system, and billing system. Figure 1 shows the common types of management information systems in Yemeni telecommunication companies.

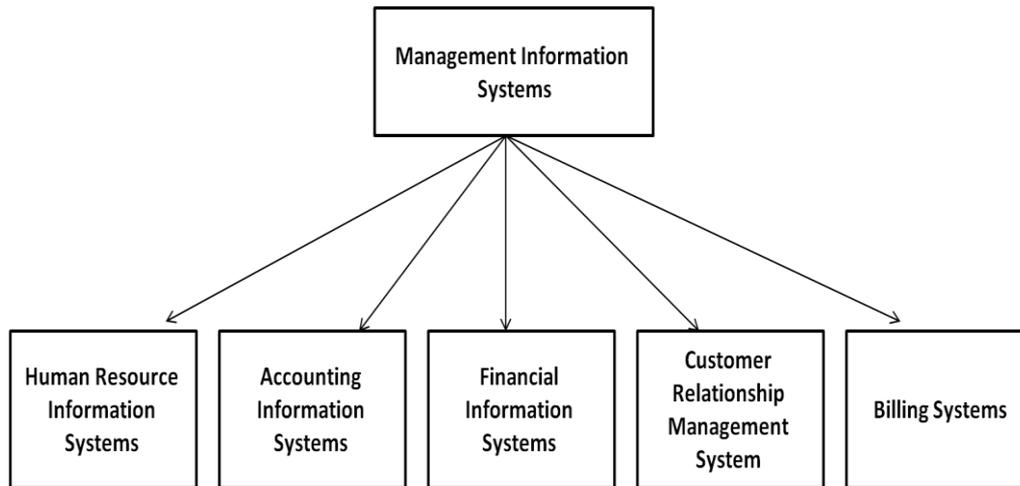


Figure 1. The Common Types of Management Information Systems in Telecommunication Companies

5.2. Common Types of MIS in Telecommunication Companies

5.2.1. Human Resource Information Systems

With the increasing effect of globalization and technology, organizations have started to use information systems in various functions and departments in the last decades. Human resources management is one of the departments that mostly use management information systems. Human resources information systems support activities such as identifying potential employees, maintaining complete records on existing employees and creating programs to develop employees' talents' and skills [35].

Human resources information systems (HRIS) are systems used to collect, record, store, analyze and retrieve data concerning an organization's human resources, but it is not merely reduction of administrative procedures. The importance of human resources information systems is multifaceted, ranging from operational assistance in collecting, storing and preparing data for reports, simplifying and accelerating the processes and controlling the available data, reducing labor costs for human resource departments, and providing timely and diverse information to the management of the company, based on which it is possible to make quality strategic decisions related to human capital [36].

According to Karimidizboni [37] human resources information systems are the process of producing, organizing, storing and distributing manpower information to help the organization managers at various levels, in order to make proper decisions. Nowadays the majority of successful companies are using human resource information systems to support daily operations of human resources. According to Aggarwal & Kapoor [38] human resources information systems is an integrated system necessary to collect, record, store, manage, deliver and present data for human resource and hence promotes effectiveness of human resource system.

According to Laudon & Laudon [39] the human resources function is responsible for attracting, developing, and maintaining the firm's work force. Human resources information systems support activities such as identifying potential employees, maintaining complete records on existing employees, and creating programs to develop employees' talents and skills.

In telecommunication companies, human resource information systems responsible for collection, recording, storage, analysis and retrieval of data related to employees. In addition, human resource information systems support activities such as maintaining complete records on existing employees, preparing employees data in report form, and creating programs to develop employees' talents and skills.

5.2.2. Accounting Information Systems

The accounting function is responsible for maintaining and managing the firm's financial records such as receipts, depreciation, payroll *etc.*, [40]. According to Shim [41] the fundamental task of accounting software was to automate the routine chore of entering and posting accounting transactions. This information is organized in an electronic format so as to produce financial statements and can be accessed immediately to assist in the management of the firm.

Accounting information systems (AIS) are a tool which, when incorporated into the field of information and technology systems, were designed to help in the management and control of topics related to firms' economic-financial area [42]. The accounting information system is the frame of practical accounting activity, as it tracks the events of the enterprise, supplies data for the managers' decisions, and organically contributes to the reports for the managers, to the financial statements, to compiling the expense management systems and last but not least to the controlling reports [43]. Accounting information systems subsystems process financial transactions and non financial transactions that directly affect the processing of financial transactions. Accounting information systems is composed of three major subsystems: (1) the transaction processing system which supports daily business operations with numerous reports, documents, and messages for users throughout the organization; (2) the general ledger, financial reporting system which produces the traditional financial statements, such as income statement, balance sheet, statement of cash flows, tax returns, and other reports required by law; and (3) the management reporting system which provides internal management with special-purpose financial reports and information needed for decision making such as budgets, variance reports, and responsibility reports [35].

In telecommunication companies, accounting information systems responsible for managing the company records such as receipts, depreciation, payroll *etc.* Accounting information systems is the systems that collect, record, store, analyze and retrieve of accounting transactions.

5.2.3. Financial Information Systems

Financial management information systems usually refers to computerization of public expenditure management processes including budget formulation, budget execution, and accounting with the help of a fully integrated system for financial management of the line ministries and other spending agencies. The role of Financial management information systems is to connect, accumulate, process, and then provide information to all parties in the budget system on a continuous basis [44]. Financial management information systems can improve public sector management by providing real-time financial information to managers in order to enhance their decision-making capabilities [45]. Finance function is responsible for managing the firm's financial assets, such as cash, stock, bonds, other investment [41].

The financial accounting information system provides managers the financial accounting information on which policy formulation is based on, the development of business plans and the control of activities within the organization and has the purpose of answering legal external requirements and accounting standards. To satisfy the necessary conditions in order to benefit from a reliable financial accounting information system, the conditions that ensure the equity and viability of information must be observed (reality, versatility, concision, synthesis ability, opportunity, operability, precision and safety, efficiency, security, *etc.*) and eliminates the major deficiencies of the system in exploitation (distortion, filtering and redundancy of the information). Finance and accounting represent the specialized management function responsible for collecting, recording and analyzing financial data and for presenting statements and financial

information of all types of managers and other people in the organization and / or persons outside it [46].

In telecommunication companies, financial information systems responsible for managing the company financial assets, such as cash, stock, bonds, other investments. A financial information system is the systems that collect, record, store, analyze and retrieve of financial information.

5.2.4. Customer Relationship Management System

Today, customers are in charge. It is easier than ever for customers to comparison shop and, with a click of the mouse, to switch companies. As a result, customer relationships have become a company's most valued asset. These relationships are worth more than the company's products, stores, factories, Web addresses, and even employees. Every company's strategy should address how to find and retain the most profitable customers possible. Managing the full range of the customer relationship involves two related objectives: one, to provide the organization and all of its customer-facing employees with a single, complete view of every customer at every touch point and across all channels; and, two, to provide the customer with a single, complete view of the company and its extended channels. Customer relationship management software helps sales, marketing, and service professionals capture and track relevant data about every past and planned contact with prospects and customers, as well as other business and life cycle events of customers [22].

Organizations have increasingly recognized the importance of managing customer relationships, and many organizations are turning to customer relationship management (CRM) to better serve customers and facilitate closer relationships with them [47]. Modern information and communication technologies offer a variety of support options for the efficient handling of customer relationships. Customer relationship management systems have been developed, which are designed to support the processes in the areas of marketing, sales and service [48].

Customer relationship management focuses on managing all of the ways that a firm deals with its existing and potential new customers. Customer relationship management is both a business and technology discipline that uses information systems to coordinate all of the business processes surrounding the firm's interactions with its customers in sales, marketing, and service. The ideal customer relationship management system provides end-to-end customer care from receipt of an order through product delivery and service [40].

Customer relationship management can help organizations manage customer interactions more effectively to maintain competitiveness in the present economy. As more and more organizations realize the significance of becoming customer-centric in today's competitive era, they adopted customer relationship management as a core business strategy and invested heavily. Customer relationship management, an integration of information technology and relationship marketing, provides the infrastructure that facilitates long-term relationship building with customers at an enterprise-wide level [49]. According to King & Burgess [50] customer relationship management systems can help organizations manage customer interactions more effectively.

Customer relationship management systems are a group of information systems that enable organizations to contact customers and collect, store and analyze customer data to provide a comprehensive view of their customers [51]. Customer relationship management is a combination of people, processes and technology that seeks to understand a company's customers. It is an integrated approach to managing relationships by focusing on customer retention and relationship development. Customer relationship management has evolved from advances in information technology and organizational changes in customer-centric processes [52].

In telecommunication companies, customer relationship management systems can help organizations manage customer interactions more effectively, and provide better serve to customers. Customer relationship management system is a type of management information systems that enable organizations to contact customers and collect, store and analyze customer data to provide a comprehensive view of their customers.

5.2.5. Billing System

Billing systems are key competitive weapons for telecommunications companies [53]. A billing system is a combination of software and hardware that receives call detail and service usage information, grouping this information for specific accounts or customers, produces invoices, creating reports for management, and recording (posting) payments made to customer accounts. Billing systems are composed of interfaces (Network, Marketing, Customer Care, Finance, *etc.*) computers, software programs and databases of information. Computers are the hardware (computer servers) and operating systems are used to run the programs and process. Network interfaces are the hardware devices that gather accounting information (usage) from multiple networks, convert it into detailed billing records, and pass it on to the billing system [54].

Billing and collection systems hence are critical for ensuring financial sustainability and for achieving cost recovery, especially if a service provider is looking to expand services and improve the equity of service provision [55]. According to Romanus [56] the telephone billing system is mathematical, statistical and logical processes carried out on figures of data obtained from concern telecommunication customers with a view to producing information about billing status due for each customer which can be displayed as a summary report. The billing system could be designed to cater for the needs of government agencies, private companies, public institutes.

In telecommunication companies, billing system is key competitive weapons. A billing system is a combination of people, hardware, software, and network that grouping the information for specific customers, produces invoices, creating reports for management, and recording payments made to customer accounts.

6. Conclusion

Telecommunication sector is one of the most promising sectors available in Yemen for trade and investment. Competition between companies operating in this field led to the expansion of service coverage to include all governorates and diversified services. Competition in service prices, therefore, increased public demand on these services. In addition, telecommunications sector is an interesting sector in Yemen due to high growth rate of this sector during the last fifteen years. Telecommunication industry contributes significantly to the Yemeni economy. Where, the revenue of this sector accounted for 13 % of Yemeni GDP. In other hand, there are a lot of issues that related to employees performance in this sector. Management information system is one of the most important tools in Yemeni telecommunication companies that help to solve these issues and improve the employees performance.

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