

# A study on the role of relational information processes and technology usage in customer relationship management(CRM) in the State Tax Organization (Case study: Tehran office of VAT)

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## Abstract

This study deals with the role of relational information processes and technology usage in customer relationship management CRM in The State Tax Organization. It is based on the applied design and for the nature of the data collection, it is descriptive. The population of this study consists of experts in General Dept. of VAT in Tehran. Random sampling was used for selecting the data after considering Morgan–Kerjesi table. For data analysis, the structural equation model and path analysis was used in particular. The results showed that customer orientation is associated with the use of technology of CRM and customer management system based on relational data processing, environment technology of environment, and using the customer contact technologies. CRM has a significant positive impact on customer relationship performance. Also, there is no meaningful effects by the orientation of customer relationship on relational data processing, and Customer Management System CRM on the usage, CRM technology, the environment dynamics, the information processing relational and relational data processing, and the performance of customer relationships.

**Keywords:** customer relationship management, technology, relational information processing, orientation of customer relationship, customer oriented management system, environment dynamics.

## Introduction

Today, government agencies are experienc-

ing, on the basis of new information technologies, some changes on the organization as the mission is to answer the people in less time and with best quality and lowest cost, and to carry out customer relationship management, the CRM is the best possible way to achieve this goal. CRM and internal transparent communication within and outside the organization defines and offers many advantages such as continuous, 24-hour information and services, cost reduction, increase in efficiency and considering efficiency to organizations.

Mr Sam Walton known to Wal-Mart Says thatcustomer is the only person who can deport us, from the CEO to the rest of the staff!. Customer relationship management is the operational business philosophy to attract and retain customers, the customer value, keep customers loyalty and keep them and implement customer-centric strategies. CMR improves relationships with customers, focusing on comprehensive picture of how the integration of customer value, requirements, exceptions and behavior through data analysis by focusing on interaction with the customer. Organizations, by using CRM, can shorten the sales cycle and increase and establish closer ties and more customer loyalty and also increase the revenue. Therefore a customer relationship management system can help to retain existing customers and to attract new customers. Farhangi defines CRM as a mixture of sales, marketing, service and support strategy, processes and technology to provide customer service.

Today, customer relationship management is an attracted subject due to globalization, an increased competition, market maturity and

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rapid advances in technology and business. Managing customer relationships is a key business strategy as the result of which the company focuses on your customers' needs as the need for survival. Increasingly competition and declining customer loyalty led the company from product-centric to customer-driven. Here, the most focus is on the customer needs characteristics of the product (Liou, 2009).

Customer Management Relationship, as a process, is composed of supervision of customer data collection of appropriate management and evaluation of data and finally creation of advantage from actual information extracted by interactions with the managers. (Kim et al, 2010; 317)

### Statement of the Problem

Marketing experts defines marketing aim as to improve the profitability of relationship of marketing through the company's vision to change the emphasis of marketing and attracting new customers to maintain long-term bonds by increasing the use of effective management of customer relationship. Improvement in information technology has led the organizations toward new solutions to Technology for CRM for managing the relationships with customers . Managing client is trying to define the customers' needs and behaviors in order to pave the way for identifying a strong relationship with them.

In some cases, due to false information, processing technology, by using the CRM results, has been disappointing. So, studying the organizational information processing CRM (Relational data processing) can clarify the role of technology of CRM and helps the organizations.

Given the important role that tax plays an important role as a tool to achieve financial goals of the states and plays an important role in international affairs, and according to the Department of Planning, the share of the tax in financing the government is more than 68% and even in countries including Australia, Italy, South Korea, it is more than 90% but it is over 30% in Iran. To this end, and with an emphasis on the issue, most research conducted have focused on tax policies and laws. Therefore, this

paper deals with the role of relational information processes and technology usage in customer relationship management (CRM) and aimed at increasing the efficiency of the tax levy.

### Theoretical Literature

Today the companies, in addition to making strategies to attract new customers and doing business with current customers, try to maintain a permanent relationship with them to make the profession. In addition, along with increase of competition and the increase in expectations of the seller, it enables the use of customer relationship management tools (CRM), while increasing your market share, the customer satisfaction and continuous are met and convert them into loyal customers and this can bring the key competitive advantage for the organizations.

In recent years, along with developments in information and communication technology, we have seen the concept of customer relationship management (CRM ) as an important approach in business aimed at returning the era of personalized marketing. This is a fairly simple concept stating that different customers need various products and services, and instead of mass marketing, they focus on individual markets and organizations one by one. In this approach of the person to person, any customer information (e.g, previous purchases, their needs and desires ) for framing goods and services are used. This approach is the result of improvements in information technology.

The bases of CRM is the relationship marketing, customer rights, profitability and satisfaction through the creation of business process management. As it is believed by Boos, because customer preferences and buying habits are different, CRM has been created if all the customers were alike, and there had been little need to CRM. Consequently, understanding the drivers of customer and customer requirements helps the organization in making specific recommendations to improve overall customer value to help its maximization . (Chen and Popvich, 2003) .

Experts and theorists have different views for customer relationship management that can be classified into four general groups including

strategies, technologies, processes and information systems. (Thompson,2004) .

CRM is a set of methodologies, processes, software and systems that helps institution and companies in the creation of effective and organized management of customer relationship(Barnett,2001, p.30).

Customer relationship management is regarded as a process consists of monitoring clients (such as appropriate data collection of them), management, and evaluation data and finally, creating real advantage from information extracted in dealing with them(Hampe and Swatman, 2002).

Customer relationship management is a comprehensive business and marketing strategy that integrates process technology and all business activities around the customer(Feinberg and Romano, 2004,p.99).

CRM is not a totally new concept in marketing and it is based on three aspects of marketing management including customer orientation , relationship marketing , and database marketing.

CRM's strength lies in its required foundation including robust databases, network speed, ERP automation of back office function ,Internet acceptance, and communication technology. CRM is an enterprise-wide business strategy designed to optimize revenue and customer satisfaction by organizing the institution around customer segments.(Fayerman,2002)

Bose (2002) pointed out that CRM is an integration of technologies and business processes that are adopted to satisfy the needs of any customer during any given interaction(S.F.King&T .F.Burgess,2008).

Kincaid (2003) pointed out that customer relationship management is “the strategic use of information, processes, technology, and people to manage the customer’s relationship with your company(Marketing, sale, services, and Support) across the whole customer life cycle” (Yan tu, Zijiang Yang, 2013).

CRM Customer focuses on business strategy to provide more personal service to every customer and increase its loyalty for customer relationship management and leverages technology to coordinate interactions with the aim of building loyalty of long-term uses. The last decade technological progress has made business to customer relationship. CRM is a busi-

ness strategy for integrating all aspects of the business environment of the power of technology with the aim to build loyalty and long-term clients will benefit.

Making one-to-one valuable customers effective communication to the individual customer account information (Katler, 1997).

Armstrong (2004) describes CRM as “The general process of creating and maintaining profitable relationships with customers by providing more value for their customers satisfaction”. Successful customer Relationship Management entails all of the necessary communication, coordination between customers (Turban et al, 2004).

It is tried to be useful in the process of identifying, attracting and keeping the best one for the customer relationship management clients. Customer Relationship Management is a process of continuous type for creation and application of knowledge to create and maintain among the consumer relations, having the highest returns (Zablah et al, 2004, p.480 )

By definition, an effective system of CRM enables the organization to have a good insight about customer behavior and performance (King & Burgess, 2008, 422).

Customer relationship management as a process consists of monitoring customer, appropriate data collection, data management and evaluation, and finally making “The real advantage of the extracted data in their interactions. (Kim et al, 2010,317).

It can be concluded from the above definitions, customer relationship management is business strategy to optimize profitability, customer satisfaction and income, based on the principles of organizing customer needs and customer service oriented and customer oriented process.

Relational information processing includes information processing, systematizing capturing and using customer information so that a company should try to establish a relationship with the customer through poor communication by weak relation, loss of data and minimizing excessive and inappropriate use of information (Jayachandran et al, 2005 ).

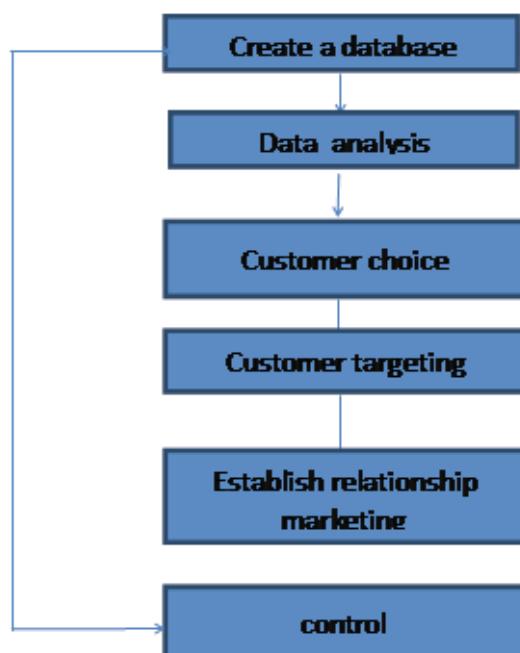
Relational communication process includes five aspects of reciprocity information, data capture, data integration, information access and using information. Information bilateral

relations ensures effective communication, capture and data integration, data loss prevention and may reduce the information overload and limit access to information and data obtained in this way and to makes sure that they consistently meet customer information for CRM.

Technology components of CRM are plans for any company to support the company's sales and marketing services, data collection and organization of programs which help the integration and analysis of data (2001 Greenberg).

### Steps for providing Service in Customer Relationship Management

At the first stage of providing service for customer relationship management, information bank based on information and data for the clients are provided. Then, information collected in data bank are analyzed based on different techniques. The targeted clients are specified according to the criterion for profitability. In the next step, the marketing mixture is designed for the targeted clients. Then, using the previous steps for creating the customers relationship and finally the relationship marketing, the interested results are evaluated and assessed. The process for providing the customers relations management can be as follows:



#### Research Background

Keltman et al (2007), in a research titled

“the capabilities of preferred CRM for promoting performance in banking” concluded that for the purpose of a successful execution of CRM programs, there is no need for integration of technical and human capabilities and business.

Research on CRM marks the importance of knowledge management, culture change and readiness to develop technology-oriented organizations (King & Burgess, 2008) .

Shahrai et al, (2009) did a study entitled “Evaluation of customer relationship management in Iran banking system” They concluded that the role of customer relationship management at bank of Iran and weaknesses, strengths, and goals of the executive and the central role of the client as essential and vital elements to keep the bank active. Banking today requires the new techniques, effective customer marketing, new technologies, customer service and relevant services for making every bank in the condition that is more successful in competitive market for attracting resources and sustainability of resources and thus survive the bank with high efficiency permanency. In many cases, the banks' relation with the customer will be cut due to the bank's bad behavior toward the customers. To fulfill marketing and customer-oriented philosophy, banks should pay attention to the needs of staff and especially the Iranian banking system should meet the services required by the country's current population and accelerate growth of market in the country's economic condition for providing the country economic welfare.

SalarZehi and Vamiri (2001) conducted another research entitled “A study on evaluation of the factors affecting the deployment of customer relationship management in insurance companies”. The aim of the study was to analyze factors influencing the establishment of the customer relationship management process in the insurance companies. Results obtained from the analysis of the data indicated that four factors of focusing on main and key customers, attention on knowledge management, organizing business processes and enjoying modern technology effects establishment successful customer relationship management in insurance companies. It has been also found that the organization of business processes require more attention than the other factors.

MehrabiJavad et al (2009) conducted a



study titled “presenting an integrated model of customer relationship management (CRM) in Bank Mellat” and they presented an integrated model for the implementation of customer relationship management (CRM) Bank Mellat.

### Objectives of the study

The main objective of the study is to identify the role of relational information processes and technology use in customer relationship management (CRM) and provide an integrated model in this area. Other purposes of this study are as follow:

- Effect of orientation of customers relation on processing of relational information relating
- The effect of orientation of customers relation on relational information processing
- Effect of effect customers relation on technology of customer relationship management.
- Effect customer oriented management system on usage of CRM Technology
- Effect of relational data processing on performance of customer relationship
- Effect of Environmental dynamism on relational data processing
- Effect of Environmental Dynamism on the use of technology of CRM
- Effect of Environmental Dynamism on the performance of customer relationship
- Effects of Technology CRM usage on Performance of Customer Relationship

### Conceptual Model

- The basic model of research by Jayachandran and colleagues (2005) was formed to develop a model based on this proposed action by the researchers and will evaluate the nine hypothesis.

-As the state tax organization collection is the only organization responsible for collecting the taxes, there is no competition between this organization and other for collecting taxes, so there is no reason initial conceptual model in this research and intensity of competition is removed.

### Research Hypotheses

H1) Customer relationship orientation has a meaningful and positive effect on relational information processing.

H2) customer relationship orientation has a positive and meaningful effect on the use of technology of CRM.

H3) customer oriented management system

has a positive and meaningful effect on relational data processing.

H4) customer oriented management system has a positive and meaningful effect on technology of CRM usage.

H5) dynamism of environment has positive and meaningful effect on relational information processing.

H6) dynamism of environment has positive and meaningful effect on Use of Technology-CRM

H7) the dynamism of environment has positive and meaningful effect on the customer relationship Performance.

H8) relational data processing has positive and meaningful effect on the performance of customer relation.

H9) Use of Technology of CRM has positive and meaningful effect on Customer relationship Performance

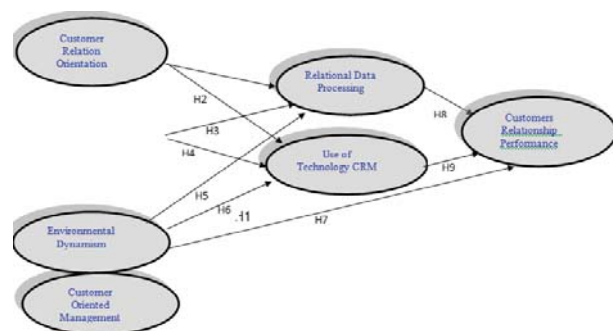


Figure 2. Conceptual model of the research.

### Methodology

The research method is descriptive-survey. The study is descriptive as the percentage describing the variables shows their impact on the implementation of customer relationship management system.

This research is of applied type by considering the fact that this research is aimed at presenting the model for studying the role of processing relational information and usage of technology in CRM in STO and its application effects on all decision making by the experts and managers.

### Data collection methods

Field data collection is done by using questionnaires and to collect information related to

the literature, library, reading books and Internet and thesis and internet were used.

### Validity of the questionnaire

Since Cronbach's Alpha is usually quite adequate for assessing the reliability of measurement instruments and internal coefficient between its elements, it was used for determining the reliability of the questionnaire in this study. Table 1 shows the results

**Table 1. Cronbach's alpha coefficients on each of the dimensions of study in the questionnaire**

Research Variables	Alpha	Result
Customer relationship performance	0.815	+
Customer based management system	0.831	+
Environmental dynamics Criteria	0.825	+
Relational Information Processing	0.879	+
Customer relations orientation	0.620	+
Use of Technology of CRM	0.858	+
Total Questions	0.881	+

### Targeted Population

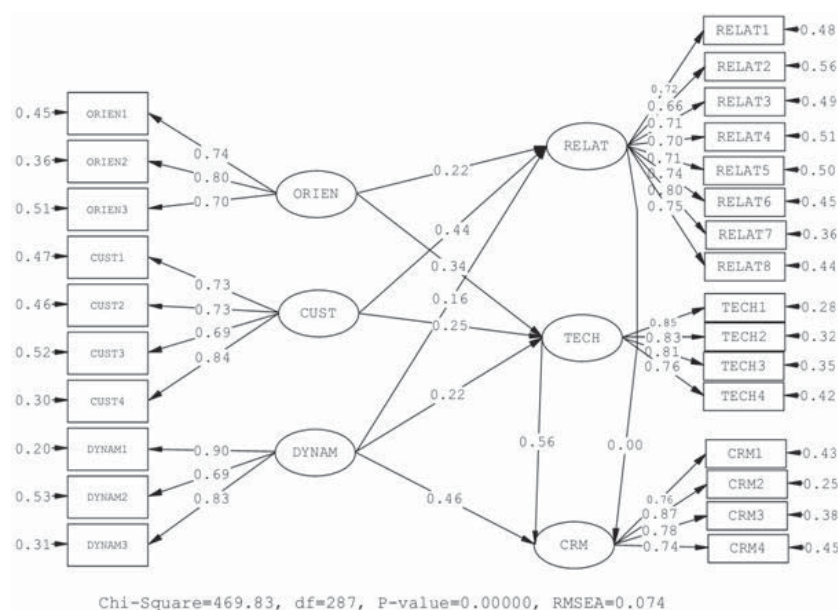
The research targeted population were 180 experts from the STO of Tehran VAT randomly selected and the sample size was 118 based on Morgan model.

### Demographic information of the sample

According to the results obtained, it can be concluded that the maximum age of the interviewees belongs to the people over 40 years. Also, the largest number of the people were those with bachelor's degrees and also the least one belong to those with the lowest degree of high school completion and married and also the most part of the interviewees are men.

### The main research hypothesis test by path analysis (structural part of the model)

One of the most powerful and the most appropriate methods of analysis in behavioral science research is the multivariable analysis. Because they are of multivariate nature and cannot be of two-variable method (each time one independent variable with a dependent variable is examined). Accordingly, in this study to confirm or refute the hypothesis, structural equation modeling and path analysis were used in particular. Pathway analysis (structural model) is a technique that shows the relationships between variables (independent, mediating and dependent) simultaneously. Purpose of path analysis is to identify causality (impact) between the conceptual model variables. Structural model below shows the relationship between "customers relation orientation", "customer oriented management system", "environment dynamism variables", "relational Information Processing", "using technology of CRM", "Customer Relationship Performance" "customer relationship management".



**Figure 3. The structural model in an estimated standard**

**Table 2 .Frequency of respondents in terms of gender - Education - Age and marital status**

Variable		Fre- quency	Percent- age
Sex	Man	83	70.3
	Woman	35	29.7
Education	High School	3	2.5
	Associate's	4	3.4
	Bachelor's	70	59.3
	Masters and Above	41	34.7
Age	21-30	39	33.1
	31-40	56	47.5
	41-50	20	16.9
	Over 50	3	2.5
Marital Status	Married	73	62
	Single	45	38

**Proposed research model**

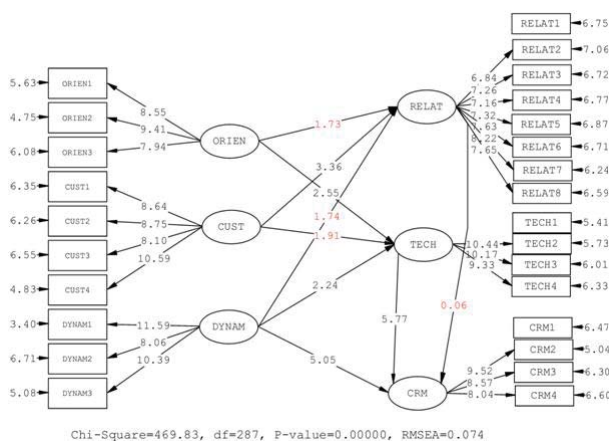
After analyzing and studying data, it has been found that the variable of customer relationship orientation has a positive and meaningful effect on customer relation performance, so, based on these findings, in the researcher proposed model, the effect of this variable is identified with the performance Customer Relationship

**Recommendations based on the research findings**

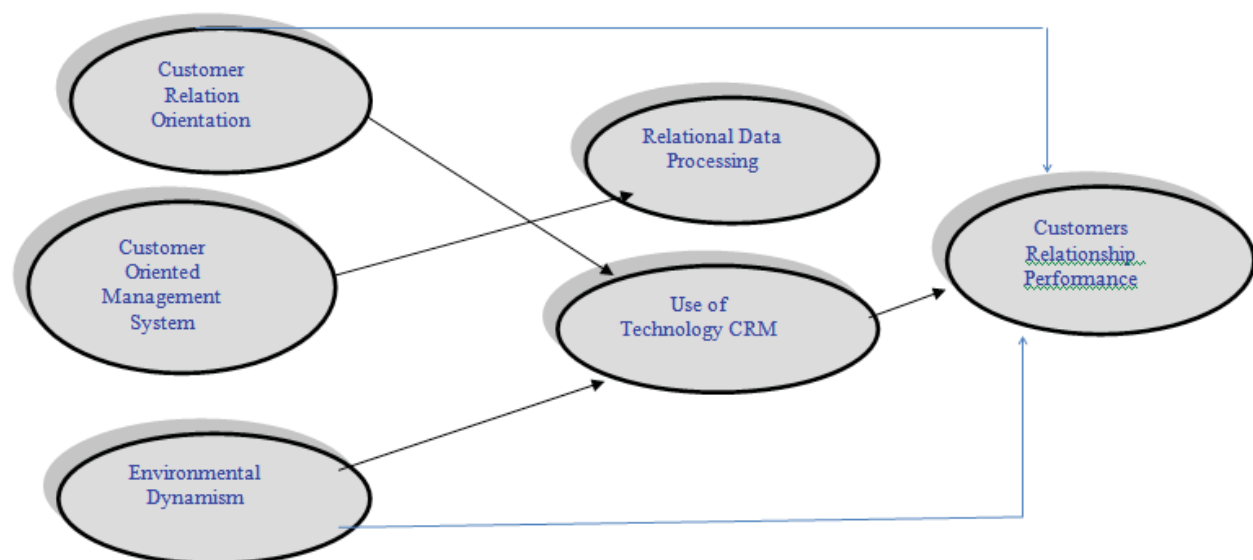
**Recommendations in relation to the variable of customer relationship orientation**

The findings showed that customer relationship orientation has a significant positive effect on using technology of CRM (and the relationship with the customer performance). Therefore, organizations, particularly the General Administration of VAT in Tehran are recommended to consider this variable as an important factor affecting the performance of customer relationship. The following factors are effective in this regard:

- 1) Creating a culture in order to communicate with customers on the need to pay taxes on one hand can create a desire in the people to pay taxes on time and in the long term it can lead to improvements in the quality in relation to the customer relationship management.
- 2) In the organization, the customer should be considered as the first priority and the need to respect the customer and the customer's corporate culture should be institutionalized.



**Figure 4. Structural model at significance level**



3) The management of the organization should include the customer orientation in the strategic plans of the organization and thereby contribute to the creation of customer culture within the organization.

4) Establishing a good relationship with customers should be regarded as a value in the organizations.

### *Recommendations based on the variable of dynamism of the environment*

As it is known, the collection and analysis of data indicated a positive direct effect on the dynamics of the variable of technology of CRM, therefore, the importance of this variable can be

considered essential for the organizations. Given these findings, the General Administration of VAT in Tehran recommended that:

1) Basic changes in technology of CRM and updating customer relationship management systems can improve the performance of customer relations.

2) Creating a new service in relation to CRM by use of new and efficient ideas paves the way for easier interaction with customers, and this leads to the development of organizational dynamics and performance and improves the customer relationships.

3) The organizations should make use of the opportunities created by technological changes.

**Table 3. Summary of results.**

Hypothesis	Effect	P	Approval or rejection
1) Customer relationship orientation has meaningful and positive effects on relational information processing	0.22	1.73	-
2) customer relationship orientation has positive and meaningful effect on the use of technology of CRM	0.34	2.55	+
3) customer oriented management system has positive and meaningful effect on relational data processing	0.44	3.36	+
4) customer oriented management system has positive and meaningful effect on technology of CRM usage	0.25	1.91	-
5) the dynamism of environment has positive and meaningful effect on relational information processing	0.16	1.74	-
6) dynamism of environment has positive and meaningful effect on technology of CRM usage	.022	2.24	+
7) the dynamism of environment has positive and meaningful effect on the performance customer relationship.	0.46	5.05	+
8) relational data processing has positive and meaningful effect on the performance of customer relationship .	0.00	0.06	-
9) Use of Technology of CRM has positive and meaningful effect on the performance customer relationship	0.56	5.77	+



### Recommendations based on the variable of technology of CRM

As it is known, after the collection and analysis of data it has been determined that using the variable of CRM technology has a direct and positive effect on performance of customer relationship, so the importance of this variable can be considered essential for organizations. Given the above findings, the General Administration of VAT in Tehran recommended that:

1) Since the volume of data and information of the VAT offices in Tehran is very high, CRM Technology support can be in the form of data analysis in helping the managers and strategists in the organization.

2) Implementing CRM technology in organization for supporting services can help to speed up the performance of services.

3) Implementation of customer relationship management system to support the marketing can promote the citizens tax culture to pay taxes so that people, will have a type of win to win in relation to on-time tax payment.

4) Organizations should use Technology of CRM to support sales, marketing, services and analysis and assess the operation of information technology implementation costs.

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