

The Effect of Customer Relationship Management Adoption on Financial Performance: An Empirical Study

أثر تبني إدارة علاقات الزبائن على الأداء المالي: دراسة ميدانية

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Received: 10/11/2020

Accepted: 23/12/2020

Published: 31/12/2020

Abstract:

The purpose of this study is to examine the impacts of customer relationship management dimensions on financial performance. The research employs a survey-based method. Using a 22-item questionnaire and convenience sampling method, the data were collected from 112 employees and managers. Multiple linear regressions were used to test the proposed hypotheses. The results showed that the key customers focus; knowledge management; and technology-based CRM have a positive and significant impact on financial performance of organizations. However, CRM organization does not have a significant impact on financial performance. The findings can improve organizations managers' understanding of the vital role that CRM play in improve financial performance.

Keywords: Knowledge Management; Financial Performance; Customer Relationship; Customer Services.

JEL Classification Codes: M31.

ملخص:

الغرض من هذه الدراسة هو فحص أثر أبعاد إدارة علاقات الزبائن على الأداء المالي. يستخدم البحث طريقة قائمة على المسح. باستخدام استبيان مكون من 22 بنداً وطريقة اختيار العينات الملائمة، تم جمع البيانات من 112 موظفاً ومديراً. ولاختبار الفرضيات المقترحة تم استخدام الانحدار الخطي المتعدد. كشفت النتائج أن التركيز الرئيسي على الزبائن؛ إدارة المعرفة؛ وإدارة علاقات الزبائن القائمة على التكنولوجيا لها تأثير إيجابي ودال معنوياً على الأداء المالي للمؤسسات. ومع ذلك، فإن تنظيم إدارة علاقات الزبائن لا يمارس تأثير دال معنوياً على الأداء المالي. يمكن أن تحسن النتائج فهم مدراء المنظمات للدور الحيوي الذي يمكن أن يلعبه إدارة علاقات الزبائن في تحسين الأداء المالي.

كلمات مفتاحية: إدارة المعرفة، أداء مالي، علاقات الزبائن، خدمات الزبائن.

تصنيفات JEL: M31.

INTRODUCTION:

The contemporary marketing places the customer at the heart of marketing strategies, where the focus is on a customer-oriented approach; in which frontline employees focus on satisfy customers' needs in a distinctive way. Customer relationship management (CRM) is one of the most important approaches to contemporary marketing. CRM has become one of the leading business strategies in the new millennium (Kim et al., 2003). The objectives of CRM system are to increase the customer satisfaction and customer loyalty and thus increase customer revenue and enhance profitability and improve the overall performance of the organization.

In today's time, CRM is extensively believed as connected with performance of organizations. Several studies have empirically examined the link between CRM and organization's performance in different sectors across different countries (Akroush et al., 2011; Eldesouki & Wen, 2018; Kebede & Tegegne, 2018; Reinartz et al., 2004; Sin et al., 2005; Zeynep Ata & Toker, 2012) and have confirmed a significant positive relationship between these two variables. However, Reimann et al., (2009) found that CRM does not affect firm performance directly. Rather, this relationship be mediated by differentiation and cost leadership. Also, the results of Abid Ullah et al., (2020) support the impact of CRM adoption on marketing performance, but not financial performance. Similar findings were obtained by Zeynep Ata & Toker (2012) who found that CRM adoption affect organizational marketing performance significantly, but not financial performance.

Although CRM has emerged as important approach to customer retention management and increase profitability, very little research has been conducted to address the effect of CRM on financial performance in the Algerian context. In service sector, service organizations that want to become profitable need to investigate the relationship between the CRM adoption inputs and financial performance outcomes. This research aims to be a contribution to a better understanding of how CRM dimensions can enhance the organization's financial performance. The topic of this research is important for at least two reasons. First, there is a research gaps in the Algerian context, as a result of lack of prior research studies on the topic. Second, some previous studies confirming the positive relationship between the two variables. While some studies have not found any relationship between them, which require further investigation.

Based on the above, the problematic of the study hovers around the following central question: what is the effect of customer relationship management adoption on financial performance? In order to answer this research question the following sub-questions are formulated: (1) what is the effect of key customer focus dimension on financial performance?; (2) what is the effect of CRM organization on financial dimension performance?; (3) what is the effect of knowledge management dimension on financial dimension performance?; and (4) what is the effect of technology-based CRM dimension on financial performance? The rest of this paper is organized as follows. Section 1 presents the literature review and hypotheses development. Section 2 describes the methodology used in this paper. Section 3 presents results and discussion. Ultimately, we present the conclusion.

1. Literature Review and Hypotheses Development

1.1. Customer Relationship Management

Bradshaw & Brash (2001) see CRM to be "a management approach which enables organizations to identify, attract and increase retention of profitable customers by managing and retaining relations with them". Also, Kotler & Keller (2009) see CRM as the process of carefully managing detailed information about individual customers and all customer "touch points" to maximize customer loyalty. Rababah et al., (2010, p.223) defined CRM as "the building of a customer-oriented culture by which a strategy is created for acquiring, enhancing the profitability of, and retaining customers, that is enabled by an IT application; for achieving mutual benefits for both organizations and customers". Recently, Kotler & Armstrong (2018, p. 38) defined CRM as "the overall process of building and maintaining profitable customer relationships by delivering superior customer value and satisfaction". CRM is defined from a strategic perspective by Payne & Frow (2013, p.207) who state that:

"CRM is a cross-functional strategic approach concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments. It typically involves identifying appropriate business and customer strategies, the acquisition and diffusion of customer knowledge, deciding appropriate segment granularity, managing the co-creation of customer value, developing integrated channel strategies and the intelligent use of data and technology solutions to create superior customer experiences".

The four stages of CRM system suggested by Kim et al., (2003) are: (1) customer knowledge; (2) customer interaction (3) customer satisfaction; and (4) customer value. Factors that influence the successful deployment of CRM systems include (Wilson, Daniel, & McDonald, 2002, p.193): the need for project approval procedures; the need to manage for the delivery of the expected benefits; the importance of prototyping new processes, not just information technology; and the need to leverage models of best practice. According to Jaber & Simkin (2017, p.1020) the six factors that exist behind adoption of CRM in the Arab world context are: segmentation analysis, clear direction and objectives, performance measurement, rewarding usage, managing project changes, and knowledge management.

In addition, the four dimensions of CRM suggested by Yim et al., (2004) are: (1) key customer focus; (2) CRM organization; (3) knowledge management; and (4) technology-based CRM. A study by Yim et al. (2004) revealed that managers need to think beyond the technological components of CRM and focus on four key CRM dimensions to significantly enhance customer loyalty and sales growth. Table 1 shows the CRM dimensions as mentioned in few previous studies.

Table (1): Dimensions of CRM

Authors	CRM dimensions
Yim et al., (2004); Sin, Tse & Yim (2005); Akroush et al. (2011) ; Al-Azzam (2016)	Key customers focus, CRM organization, knowledge management, technology-based CRM.
Zeynep Ata & Toker (2012)	Customer-centric management, CRM organization, operational CRM.
Azzam (2014)	Service quality, employee's behavior, customer data base, solving customer problems physical environment; and social network interaction.
Fernando & Karunanithy (2015)	Trust, communication, commitment, and promise.
Al-Qeed, ALsadi & Al-Azzam (2017)	Customer satisfaction, customer loyalty, customer attraction, customer retention, customer value, customer culture, customer knowledge.
Bashir (2017)	Physical environment, behavior of the employees, trust, CRM technology.
Eldesouki & Wen (2018)	Customer retention, customer satisfaction, customer feedback and data warehousing.

Source: Prepared by the author based on previous studies

1.2. Financial Performance

Organization performance refers to the level of success of the organization in achieving its objectives through the use of various resources it has (Ismanu & Kusmintarti, 2019). Performance measures can be divided into two types, financial and non-financial. According to Merchant & Van der Stede (2007, p.440) accounting-based performance measures come in two basic forms: (1) accounting profit measures, such as net income, operating profit, earnings before interest, tax, depreciation, and amortization; and (2) accounting return measures, such as return on investment (ROI), return on equity (ROE), return on net assets (RONA), or risk adjusted return on capital (RAROC). Some companies seek to improve their financial performance by improving customer retention rate (Bodenberg, 2001). In this study the organization's financial performance was measured through four dimensions includes sales volume; profitability; volume return on investment; and market share.

1.3. Relationship between CRM Dimensions and Financial Performance

1.3.1. Key Customer Focus and Financial Performance

Customer focus can help organization to improve sales, profits, and performance. According to Sin et al., (2005, p.1267) key customer focus dimension has four aspects, including customer-centric marketing, key customer lifetime value identification, personalization, and interactive co-creation marketing. According to Latyshova et al., (2015, p.639) the customer focus is a function of the following characterizing factors: (1) worded commitment to a customer; (2) the worth of an offer to the customer is higher than the average at other competitors; (3) knowing of customer's needs and requirements; (4) regular check of customer's satisfaction; and (5) after sale maintenance and service.

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Yim et al. (2004) found that focusing on key customers has an indirect effect on customer retention and sales growth through customer satisfaction. Also, Cai (2009) found that organizational customer orientation has a positive impact on customer relationship practices, which subsequently impacts production performance and customer satisfaction, production performance and customer satisfaction lead to financial performance. Zeynep Ata & Toker (2012) found that of the two dimensions of CRM adoption (customer-centric management, operational CRM) significantly affect customer satisfaction. On the basis of previous studies evidence, the following hypothesis is proposed:

H1: Key customer focus has a positive impact on financial performance.

1.3.2. CRM Organization and Financial Performance

The organizational factors include the human resources, training, reward and appraisal system, politics, structure, processes, and organizational culture. Successful CRM implementation requires an effective organizational structure, good organizational culture, and clear business strategy. CRM Organization needs to internalize the values that foster and facilitate orientation towards customers and fulfillment of their needs within the structure and culture of the organization (Akroush et al., 2011, p.165). For example, successful CRM implementing needs to change culture. This refers to the ability of the organization to become customer-oriented and to consider CRM as an organization philosophy that is shared organisation wide (Almotairi, 2010, p.50). Key elements of this dimension consist of organizational structure, organization-wide commitment of resources, and human resources management (Sadek et al., 2011, p.435).

Yim et al. (2004) found that CRM organization exerts significant indirect effects on sales growth through retention. Rahimi (2017) found that the four traits of organizational culture (adaptability, consistency, involvement and mission) have a significant positive effect on the three components of CRM (people, process and technology). However, Zeynep Ata & Toker (2012) found that CRM organization dimension (organizational structure, organizational commitment, and employee performance) does not have a significant effect customer satisfaction. Thus, we propose the following hypothesis:

H2: CRM organization has a positive impact on financial performance.

1.3.3. Knowledge Management and Financial Performance

Nowadays, knowledge plays an important role in the market. Horwitch & Armacost (2002) defined knowledge management as "the creation, extraction, transformation and storage of the correct knowledge and information in order to design better policy, modify action and deliver results". Also, Navimipour & Charband (2016) defined it as "the process of capturing, sharing, developing, and using the knowledge efficiently". Knowledge management is viewed as a process (Gao et al., 2018). Key elements of this dimension include knowledge learning and generation, knowledge dissemination and sharing, and knowledge responsiveness (Sadek et al., 2011, p.435). In addition, Wen (2009) has suggested four key successes of knowledge

management are: (1) procedures; (2) persons; (3) supporting organizational structure; and (4) Information technology.

According to Wong & Aspinwall (2006) Knowledge Management is one of the most important strategies for improving performance and organization competitiveness. Knowledge Management as a crucial factor impacts on organizational performance (Anvari et al., 2011). Yim et al. (2004) found that Knowledge management has a direct significant effect on both customer satisfaction and retention and has an indirect effect on customer retention and sales growth through customer satisfaction. Kebede & Tegegne (2018) examined the effect of CRM on bank performance and found that all dimensions of CRM (key customer focus, CRM organization, Knowledge management and technology-based CRM) have a significant effect on bank performance, and that the knowledge management is more important factor in determining the performances. Thus, we propose the following hypothesis:

H3: Knowledge management has a positive impact on financial performance.

1.3.4. Technology-based CRM and Financial Performance

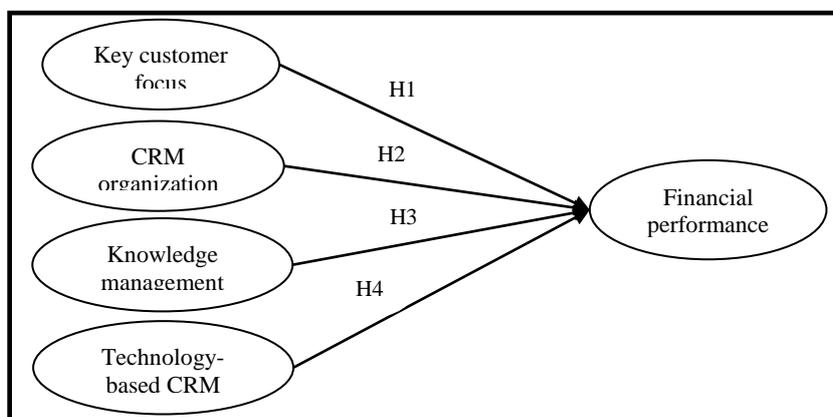
In the field of business, technology refers to tools, methods, techniques, software, systems, machines and devices which can be used to solve the problems and improve functional capabilities. According to Almotairi, (2010, p.33) technology refers to “computing capabilities that allow a company to collect, organize, save, and use data about its customer”. Reinartz et al. (2004) defined CRM technology as "the information technology that is deployed for the specific purpose of better initiating, maintaining, and/or terminating customer relationships".

Akroush et al., (2011) found that CRM organization and technology-based CRM are the best predictors of business performance. Zeynep Ata & Toker (2012) found that CRM adoption has a significant positive effect on both organizational performance and customer satisfaction in business to business settings. However, Yim et al. (2004) show that technology-based CRM does not have a significantly increase customer satisfaction and loyalty over the long run. Thus, we propose the following hypothesis:

H4: Technology-based CRM has a positive impact on financial performance.

Our research model is based on four hypotheses and is shown in Figure 1.

Fig (1): Research Model



Source: Prepared by the author based on previous studies

2. Methods

2.1. Measurement Tool

To empirically test our hypotheses, we used a survey research; we used a two-part questionnaire. The first part of the questionnaire consists of demographic information about participants (gender, age, and level of education). In the second part of the questionnaire, we used CRM scale originally developed by Sin et al. (2005) which includes eighteen-items (four items to measure key customer focus; five items to measure CRM organization; four items to measure knowledge management; and five items to measure technology-based CRM). This scale has been validated with companies from the financial service sector of Hong Kong. Also, this scale was adopted in the current study because it has been successfully used in many previous empirical studies (for example, Akroush et al., 2011). Responses were rated on a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Also, to measure financial performance, we used a four-item scale (sales volume; profitability; volume return on investment; and market share). This scale was adopted because it used in many previous empirical studies (for example, Akroush et al., 2011; Sin et al., 2005; Yim et al., 2004).

The respondents were asked to state their satisfaction with their organization's financial performance relative to major competitors in the market. Responses were rated on a five-point Likert scale, ranging from 1 = very dissatisfied to 5 = very satisfied. Before the questionnaire was distributed, three academic experts in marketing were invited to review the questionnaire, to assure content validity. So, very minor revisions were adjusted according to their recommendations. The instrument was originally developed in English, and then was translated into Arabic and French by the reverse translation method. The three versions of the questionnaire were distributed according to the respondent's desire.

2.2. Population and Sample

The respondent target population consists of different types of manager (such as marketing managers; sales manager's; and frontline managers) and employees who working in many service sectors such as post centers; private schools; private clinics; hotels; shopping centers; entertainment and games centers. The sampling method was non-probabilistic convenience, because this method is speedy, easy, readily available, and cost effective. Data were collected through a questionnaire, 170 questionnaires were distributed in three ways, (1) 90 questionnaires face to face; (2) 30 via electronic mail; and (3) 40 via facebook. Data collection process, which took place between October and December 2019. After filling it out the participants had to send it back to researcher. As a result of this process, we collected 112 valid questionnaires.

Detailed information statistics about characteristic of respondents are displayed in Table 2.

Table (2): Characteristics of Respondents

Characteristic	Variables	Frequency	Percentage
Gender	Male	77	68.75
	Female	35	31.25
Age (years)	Under 35	23	20.53
	35-50	55	49.11
	Above 50	34	30.36
Education	Secondary	53	47.32
	University	43	38.39
	No response	16	14.29
Work Field	Post centers	12	10.71
	Hotels	37	33.04
	Private clinics	19	16.96
	Other	44	39.29

Source: Prepared by the author based on SPSS output

Regarding the participants, its great majority consisted of males with percentage of 68.75% while 31.25% of women. Almost half of the participants is between 35 and 50 years old (49.11%), followed by individuals between the ages above 50 years old (30.36%). Also, nearly a half of the participants have secondary education (47.32%), followed by individuals who have a university degree (38.39%). As for the work field, table 1 shows that 33.04% participants working in hotels, 16.96% in private clinics and the rest in the other fields.

3. Results and Discussion

3.1. Alpha Reliability Coefficient

Mean and standard deviation are presented in the tables 5 (Appendix). Table 3 shows the variables used in the scale, their number of items and inter reliability of the scale.

Table (3). Results of Reliability Analysis

Construct	No. of Items	Alpha
Key customer focus (KCF)	4	,912
CRM organization (CRMO)	5	,913
Knowledge management (KM)	4	,904
Technology-based CRM (TCRM)	5	,950
Financial performance (FP)	4	,863

Source: Prepared by the author based on SPSS output

A value greater than 0.6 indicates satisfactory internal consistency reliability (Malhotra, 2010). The reliability for the key customer focus construct was satisfactory with a value of 0.912. The Cronbach Alpha values for the CRM organization were 0.913. For knowledge management 0.904, also for technology-based CRM 0.950 and for financial performance 0.863. These values indicate that the scales were reliable and all items should be included in the scale.

3.2. Testing of Hypotheses

To test our hypotheses, we conducted a multiple linear regression analysis to evaluate degree of importance for each variable/dimension (Table 4). We note that the global regression model is significant ($p= 0,000<0,05$).

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Table (4). Regression Analysis Results for Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.
	B	Std. Error	Beta		
(constant)	,427	,155		2,755	,007
KCF	,305	,118	,322	2,590	,011
CRMO	-,038	,076	-,039	-,505	,615
KM	,251	,111	,265	2,251	,026
TCRM	,357	,120	,387	2,981	,004

Dependent Variable: Financial performance. Independent variables: KCF; CRMO; KM; and TCRM.

Notes: Model summary: R = 91,5%; R Square = 83,7%; Adjusted R Square = 83,1%; F = 137,460; P = 0.000 (p<0.05).

The relationship between key customer focus (KCF) and financial performance of organizations is positive ($\beta = ,305$; $t = 2,590$). Hence, H1 is supported. This suggests that a more customer focus levels lead to improved financial performance and that lead to greater profitability, and vice versa. The relationship between knowledge management (KM) and financial performance of organizations is positive ($\beta = ,251$; $t = 2,251$). Hence, H3 is supported. This suggests that the build an effective knowledge management system lead to improved financial performance, and that lead to sustainable growth of organizations, and vice versa. Moreover, the relationship between technology-based CRM (TCRM) and financial performance of organizations is also positive ($\beta = ,357$; $t = 2,981$). Hence, H4 is supported. This suggests that rising levels of CRM technology adoption lead to improved financial performance, and that lead to gain a competitive advantage by reducing costs, and vice versa. These results of this research are consistent with the results described in previous studies. For example, Reinartz et al. (2004) found that CRM have a moderate positive correlation with both perceptual and objective organization performance. Fernando & Karunanithy (2015) found a significant positive relationship between customer relationship marketing and market performance. Akroush et al., (2011) also found that significant relationship existed between CRM implementation and business performance (financial and marketing performances). Additionally, Eldesouki & Wen (2018) found that CRM dimensions had a positive influence on hotel performance.

We can conclude that the variables “key customer focus”, “knowledge management”, and “technology-based CRM” positively influence financial performance of organizations. These variables determine financial performance. Based on the SPSS output, the following multiple regression equation was formed:

$$FP = 0,427 + 0,357 (TCRM) + 0,305 (KCF) + 0,251 (KM)$$

In contrast, the relationship between CRM organization (CRMO) and financial performance of organizations is a weak negative and not statistically significant ($\beta = -,038$; $t = -,505$). Hence, H2 is rejected. This suggests that the CRM organization efficiency does not necessarily lead to improved financial performance. In our opinion, this is due to the absence of perceptions of participants (managers and employees) about benefits of CRM organization

and its role in CRM system success or failure. This result inconsistent with the results of previous studies (Akroush et al., 2011; Eldesouki & Wen, 2018; Kebede & Tegegne, 2018; Reinartz et al., 2004; Sin et al., 2005), who found that CRM organization has had significant and positive impact on performance.

Conclusion

This study's purpose was to examine the CRM dimensions effect on organization's financial performance. The findings showed that the three dimensions of CRM (key customer focus; knowledge management; and technology-based CRM) has a positive and significant impact on financial performance of organizations, but CRM organization do not have a significant impact on financial performance. So, this means that these three variables were predictors of organization's financial performance. Among the predictors, technology-based CRM has a great impact on financial performance ($\beta = .357$). The results of this study support the idea that CRM is one of the important tools to improve organizations performance. Also, it can improve organizations managers' understanding of the role that CRM play in improve financial performance.

In managerial terms, contemporary organizations recognize the importance of CRM to attract and retain customers and improve financial performance. The results show that practitioners can increase the financial performance when they focus on increasing the customer focus; knowledge management; and technology-based CRM. Marketing practitioners should integrate the four components of CRM to increase performance. In addition, effective CRM strategy should focus on maintain long term relationship with customers to increasing the customer lifetime value.

The CRM strategy in the organizations should be supported by different activities include HR management and technology. Hence, service organizations need to (1) speed up adoption of CRM system; (2) acquire current technological systems to implement CRM effectively; (3) acquire knowledge from customers, suppliers, and competitors, then to turn it into a competitive advantage; and (4) make an effective employee training programs about technology-based CRM. As for suggestions for other studies, future research could test the relationship between the two variables in a specific sector (such as hotels, communications, and medical clinics). Future research can also focus on testing the impact of one dimension of CRM on financial performance (such as technology-based CRM) in service Industries.

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Appendix

Table (5): Descriptive statistics for all variables

No.	Items	Mean	SD
KCF1	Through ongoing dialogue, we work with individual key customers to customize our offerings.	3,8393	,92565
KCF2	My organization provides customized services and products to our key customers.	3,8136	,95709
KCF3	My organization makes an effort to find out what our key customer needs.	3,7930	,94763
KCF4	When my organization finds that customers would like to modify a product/ service, the departments involved make coordinated efforts to do so.	3,8661	,96325

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CRMO1	My organization has the sales and marketing expertise and resources to succeed in CRM.	3,7679	,93945
CRMO2	Our employee training programs are designed to develop the skills required for acquiring and deepening customer relationships.	3,8214	,97919
CRMO3	My organization has established clear business goals related to customer acquisition, development, retention, and reactivation.	3,7411	,93718
CRMO4	Employee performance is measured and rewarded based on meeting customer needs and on successfully serving the customer.	3,7946	,93132
CRMO5	Our organizational structure is meticulously designed around our customers.	3,7750	,94372
KM1	My organization's employees are willing to help customers in a responsive manner.	3,7957	,96262
KM2	My organization fully understands the needs of our key customers via knowledge leaning.	3,8125	,99123
KM3	My organization provides channels to enable ongoing, two-way communication with our key customers and us.	3,8750	1,00561
KM4	Customers can expect prompt service from employees of my organization.	3,8036	,92842
TCRM1	My organization has the right technical personnel to provide technical support for the utilization of computer technology in building customer relationships.	3,8214	,93205
TCRM2	My organization has the right software to serve our customers.	3,7679	,86973
TCRM3	My organization has the right hardware to serve our customers.	3,8482	,96991
TCRM4	Individual customer information is available at every point of contact.	3,6696	,95284
TCRM5	My organization maintains a comprehensive database of our customers.	3,7589	1,00669
FP1	Sales volume.	3,7411	,98407
FP2	Profitability volume.	3,7679	,93945
FP3	Return on investment.	3,8393	,92565
PF4	Market share.	3,6696	,94334