



The Possibility of Implementing the Optimal Management of Shiraz Metropolis According to Friedman's Hypothesis Test

M. Ghazanfari^{1,*}

¹ Planning expert (civil engineering) and master's degree in urban planning, urban planning, Shiraz, Iran

ARTICLE INFO	ABSTRACT
<p>Article History: Received 7 September 2024 Received in revised form 24 November 2024 Accepted 24 December 2024 Available online 28 December 2024</p>	<p>Strategic management involves making decisions and taking actions to design and implement strategies that help an organization, such as a municipality, achieve its goals. This process includes three stages: strategy formulation, strategy implementation, and strategy evaluation. This research utilized a quantitative method to analyze the data. The first stage involved analyzing the data using descriptive statistical techniques to express the properties of the studied sample. The following stage discussed the use of inferential statistical techniques by parametric methods. The Pearson correlation coefficient was used as the statistic in this research. The null hypothesis in this test states that there is no correlation. The collected data is presented in the form of a descriptive statistics table and histogram chart. The results of the inferential statistics show that, according to the respondents, the measures of strategic management of financial resources and performance have an average lower than the expected level. An unfavorable situation prevails in the municipality of Shiraz region. The current economic situation and inflationary stagnation in the country have negatively impacted the performance of the Shiraz municipality. Additionally, the strategic management of financial resources by the municipality is not up to par, which may further decrease its performance in the prevailing economic conditions.</p>
<p>Keywords: Implementation of Optimal Municipal Management, Friedman Hypothesis Test, Strategic Management, Shiraz Municipality.</p>	

1. INTRODUCTION

Today, due to globalization, market liberalization, and privatization, many municipalities face significant challenges in maintaining their identity and operating as efficient organizations [1,2]. For this reason, managers and organizational leaders worldwide are always seeking to upgrade and improve their organization's performance. Identifying the factors that affect performance, especially financial information, can help municipalities improve their performance. The performance of any organization is the basis for its continued operation or closure. This study aims to examine the effect of implementing strategic financial management in the Shiraz municipality on enhancing organizational performance, as analyzed through field data. Organizational performance has been a topic of interest for both academic researchers and executive managers for decades. The final result is the utilization of tangible and

* Corresponding Author: m.ghazanfari882@yahoo.com

Planning expert (civil engineering) and master's degree in urban planning, urban planning, Shiraz, Iran



intangible resources in organizations, with intangible resources being particularly important for municipalities [3]. Recent studies suggest that strategic management of financial resources can increase competitive advantage. Employees widely test their approach, process, and perspective with the organization's strategic financial planning. Strategic management of financial resources is a method for making decisions about the objectives and plans of municipalities in different regions of the country, which are related to issues such as employment relations, recruitment, training, rewards, policies and financial methods of employees [4].

The integration of financial resource management with strategic management plays a pivotal role in the advancement of organizational development. This process entails a thorough evaluation of capital requirements, financial constraints, and the broader implications of financial decisions on the organization's strategic direction. The original text demonstrates a formal and objective tone, characterized by clear language, precise vocabulary, and adherence to conventional academic structure, including consistent citation and formatting standards. Logical coherence is achieved through well-developed causal relationships among ideas, and the writing is free from grammatical, spelling, and punctuation errors [5].

An analysis of the performance of municipalities across various districts of Shiraz reveals notable fluctuations in their growth trajectories and investment returns over the past decade. According to experts, Iranian municipalities currently possess a relatively enhanced capacity for performance. This growing potential has contributed to the rise of numerous innovations, particularly in urban planning and applied municipal practices [6].

Examining different views on the performance of municipalities reveals that various factors can impact it. Despite the numerous studies conducted on financial resource management strategies in municipalities since the late 1980s, there is still no solid evidence on their adoption and usage and how they impact organizational performance [7]. This gap in applied studies is particularly evident in the financial management of the Shiraz region municipality, which requires further research and attention. The primary objective of this research is to promote the strategic management of financial resources and emphasize its main functions in a systematic and organized manner in the municipality of Shiraz region. This will lead to the enhancement of organizational performance. The use of strategic financial resource management and its functions can improve traditional financial resource management practices and positively impact organizational performance. This research aims to investigate the relationship between strategic management of financial resources and organizational performance in other areas of Shiraz municipality. The research objectives are outlined as follows:

1. Measuring the use of strategic management methods of financial resources in the municipality of Shiraz region.
2. Measuring the organizational performance of Shiraz Municipality.
3. Examining the relationship between the use of strategic management methods of financial resources and organizational performance

2. CONCEPTS AND DEFINITIONS OF STRATEGY

The term 'strategy' originates from the Greek word 'Stratego', which is composed of 'Stratos' meaning army and 'Ego' meaning leader. Economists typically define strategy as the optimal allocation of scarce resources to achieve a goal [8]. In management, strategy refers to a comprehensive, singular, and complete plan that addresses significant environmental changes to achieve a goal by utilizing the organization's strategic advantages [9]. The term 'strategic' refers to financial management methods that focus on long-term success, while 'tactical' management decisions are related to short-term situations. A strategic company makes financial decisions based on what it believes is correct in the long run, even if it means bearing current losses, in order to ultimately achieve the desired results [10]. Armstrong identifies three key concepts of strategy: competitive advantage, distinctive capabilities, and strategic coordination [11].

2.1. Strategic management

Strategic management is a set of decisions and actions that lead to the design and implementation of strategies that are used to achieve the goals of an organization such as a municipality and includes three stages [12]:

Strategy formulation, 2. Strategy implementation, 3. Strategy evaluation.

2.2. Financial management in municipalities

Financial management within municipalities entails a comprehensive understanding of how assets and liabilities are acquired, allocated, and controlled. This process encompasses the oversight of operational finances, including expenditures, revenue streams, accounts receivable and payable, cash flow management, and overall fiscal performance [13].

2.3. Strategic management of financial resources

Strategic financial management in municipalities involves continuous evaluation, planning, and adjustment to maintain the municipality's financial focus and pursue its long-term goals. This includes the evaluation and management of the municipal capital structure of different regions and the combination of their debt and assets to ensure the ability to pay obligations in the long term. It is important to maintain a balanced approach and avoid bias in the evaluation process. The three basic features of strategic financial management are: evaluation, planning, and adjustment.

- Financial strategy is to generate profit for the business.
- A strategic financial plan focuses on long-term profits.
- Strategic financial planning varies depending on the type of organization or industry concerned.

2.4. Factors influencing the strategic management of financial resources

There are three basic elements in strategic financial management, which are as follows:

- 1- A suitable program is developed regarding financial affairs.
- 2- Financial activities are controlled according to the predetermined plan (first stage plan).
- 3- Finally, financial issues are decided.

Therefore, it can be concluded that financial management plays a crucial role in business operations. It is considered one of the most important functions.

2.5. The importance of cash flow in the financial management of municipalities

In financial management, investment decisions are crucial. The municipality must determine the source of funds and the urban projects in which to invest. It is important to note that these are separate discussions that focus on maximizing the net worth criterion, which is critical for net worth.

The net present value for maximizing cash flow is calculated by subtracting the outflow from the inflow, resulting in the net present value. If this value is positive, it indicates that assets with appropriate returns have been selected. To evaluate the financial manager, one should consider the valuation of additional asset creation.

2.6. Research method

This research examines the optimal implementation of financial management for Shiraz Municipality using the analytical management model. The results can be used for the financial affairs of the municipality and its legal compliance. The research is descriptive and explains how to obtain the required data. Analytical Hierarchy (AHP) was used to rank the factors.

2.7. Society and statistical sample

The research includes financial employees of Shiraz municipality, respected university professors, and financial auditors as its statistical population. The sampling method used in this research is simple random. The number of active people studied is based on the statistics prepared from the limited population sampling formula. Therefore,

the minimum required sample size is 109. In the questionnaire distribution stage, 150 people from the statistical population were considered and the questionnaire was distributed among them. Ultimately, 133 people returned the questionnaire, resulting in a return rate of approximately 81%. During the analysis stage, 6 incomplete responses were discarded, leaving 127 questionnaires for the final analysis.

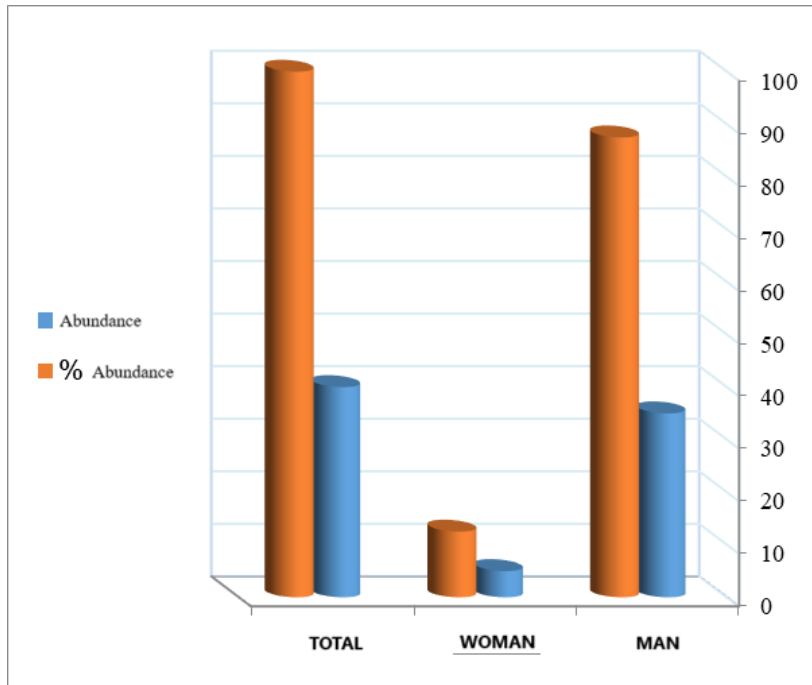


Fig. 1. Gender Distribution of Respondents

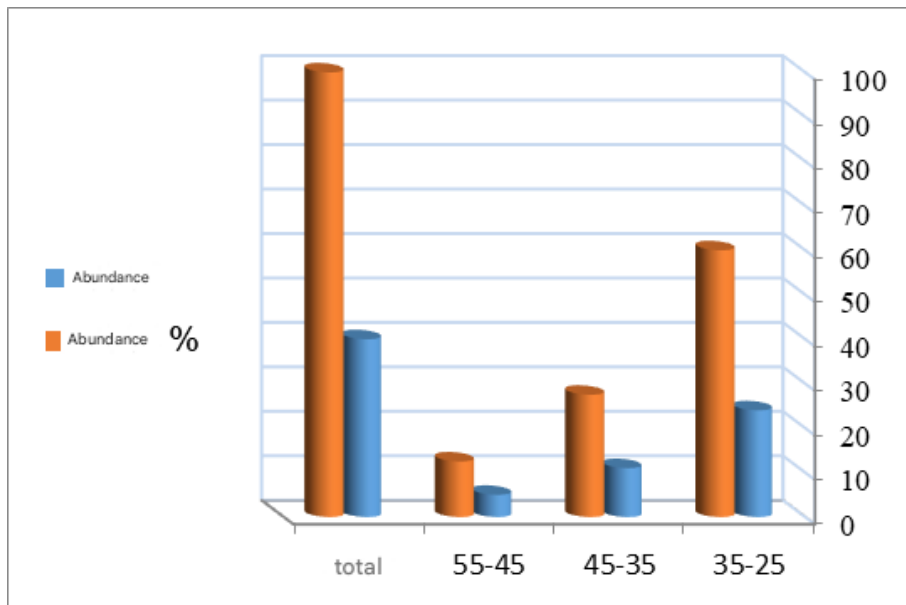


Fig. 2. Age Distribution of Respondents

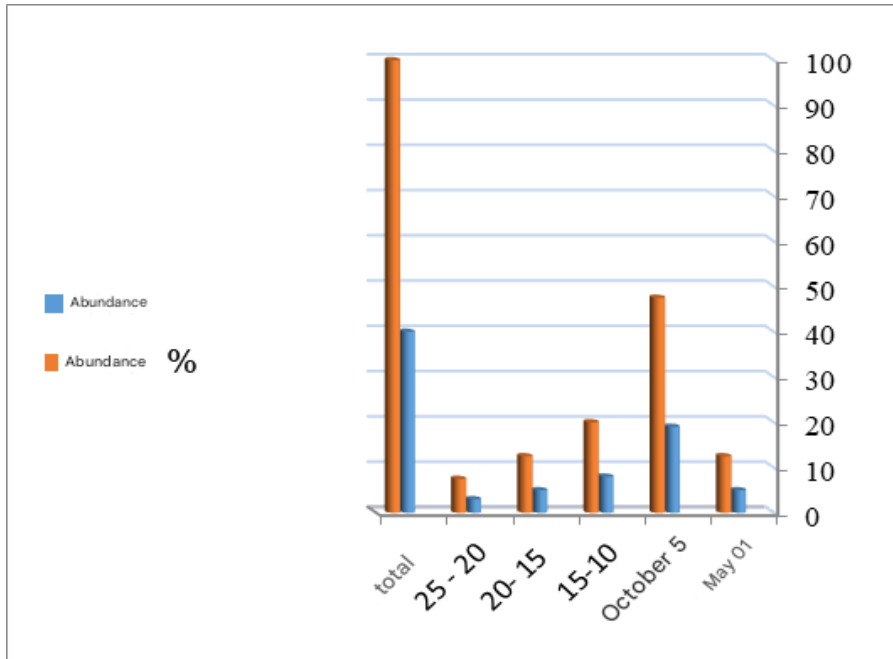


Fig. 3. Work Experience Distribution of Respondents

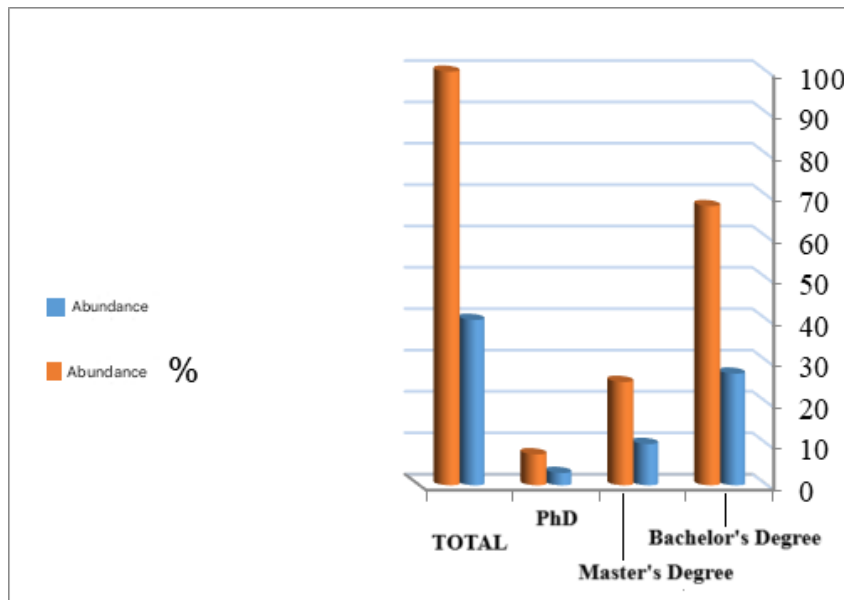


Fig. 4. Educational Level Distribution of Respondents

3. VALIDITY AND RELIABILITY OF MEASUREMENT TOOLS

This research utilizes the content validity method to ensure that the tool contains enough questions to measure the concept being studied. The questionnaire was designed and translated from external sources, then provided to experts for approval before use. Additionally, this research employs Cronbach's alpha coefficient to calculate the reliability coefficient. The value was calculated using SPSS software. Questionnaires were distributed to the statistical population of the research on a small scale (about twenty-five questionnaires) to determine Cronbach's alpha. The results were then analyzed using SPSS software. Please refer to the table below for the results. The Cronbach's alpha coefficient for all variables is above 0.7, indicating good reliability.

Table 1. Cronbach's alpha coefficient

Cronbach's alpha percentage	Variable
0.899	Management strategic Resources Human
0.730	opportunities The job of equal to
0.791	program Yes The work of flexible
0.787	Communication Effective employees
0.830	Education and development N y ro y finance
0.871	compensation Services
0.841	Employment with precision
0.851	Development Management
0.904	Organizational performance

4. DATA ANALYSIS METHOD

This research employs quantitative methods to analyze the data. The first stage of data analysis involves using descriptive statistics techniques to express the characteristics of the studied sample. The next step is to use inferential statistics techniques, specifically parametric methods. The research hypotheses are tested using the Pearson correlation coefficient. The null hypothesis assumes no correlation. The collected data is presented in a descriptive statistics table and a histogram chart. The acceptance or rejection of each statistical hypothesis is then determined.

4.1. Description of research variables

The description of research variables is summarized in the following table:

Table 2. Description of the interaction variable and communication effective with Staff on productivity finance

Wayans	standard deviation	average	the most	the least	number	
0.644	0.80276	3/2014	5	1	116	The impact of interaction and communication effective with Employees on financial productivity
recruitment variable and Employment						
0.914	0.95584	9282/2	5	1	116	The effect of recruitment and Employment on financial productivity
Description of the compensation variable Services						
1/047	1 / 0233	922/2	5	1	116	Compensation effect Services on financial productivity
Description of the training variable and Development Human						
0.69	0.8304	3/0517	5	1/33	116	The effect of education and Development Humanity on financial productivity
Description of the creation variable opportunity Hi a job equal to						
0.759	0.87142	2/8103	4/75	1	116	The effect of creation opportunity Hi a job equal to financial productivity
development variable and improvement Management						
0.744	0.86263	8032/2	4/5	1	116	The impact of development and improvement Financial productivity management
Program variable description I see and scheduling flexible						
0.898	0.94759	8218/2	5	1	116	The impact of the program I see and scheduling Flexible on financial efficiency
Description of the management variable strategic Resources Human						
0.77798	2/9253	4/52	1/25		116	The impact of management strategic Resources Humanity on financial productivity
performance variable						
0.88245	2/7425	4/75	1		116	performance

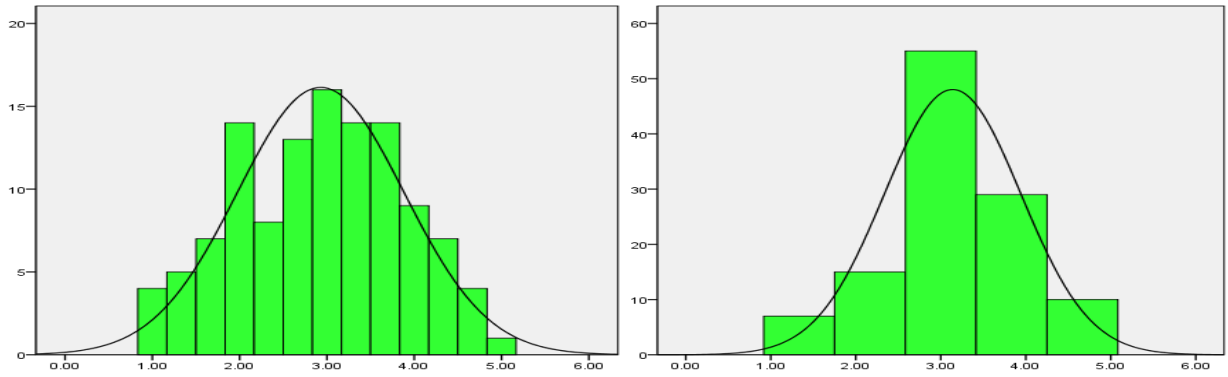


Fig. 5. Variable histogram of interaction and effective communication with employees (right figure), variable histogram of recruitment and hiring (left figure)

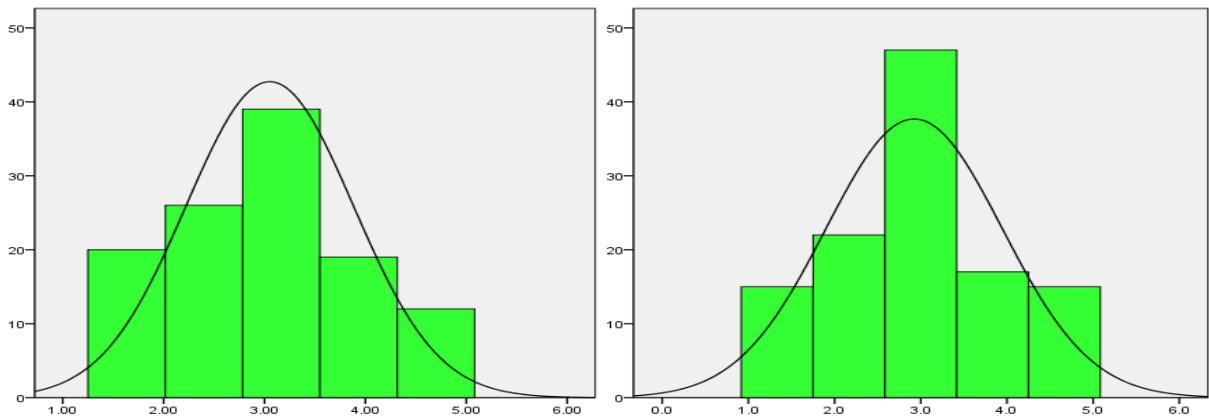


Fig. 6. The variable histogram of service compensation (right figure), the variable histogram of education and human development (left figure)

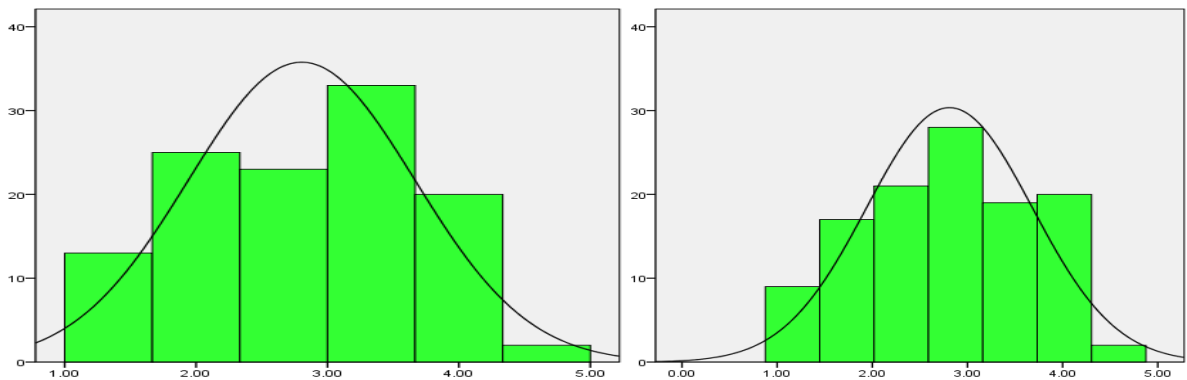


Fig. 7. Variable histogram of creating equal job opportunities (right figure), variable histogram of management development and improvement (left figure)

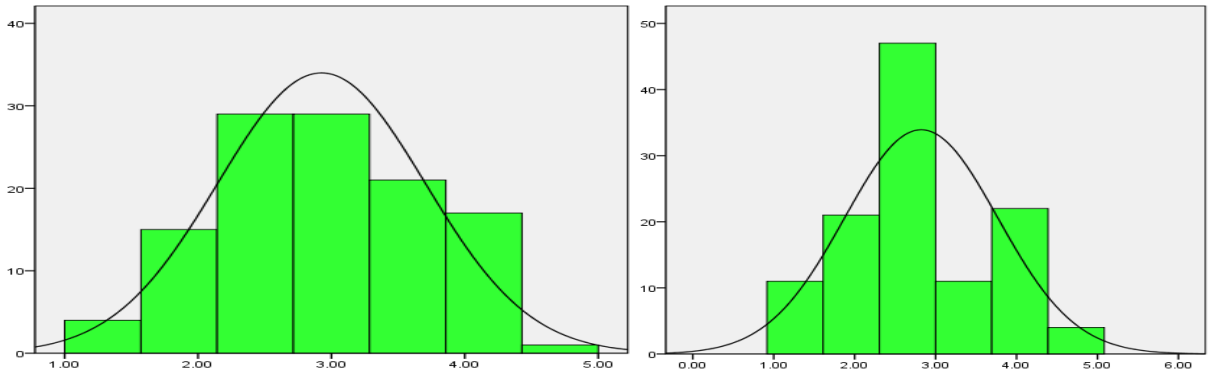


Fig. 8. Variable histogram of programs and flexible scheduling (right figure), variable histogram of strategic human resources management (left figure)

Based on the table and graphs above, it is evident that the variable of effective interaction and communication with employees has the lowest value of 1 and the highest value of 5. The mean, standard deviation, and variance are 3.1394, 0.80276, and 0.644, respectively. Similarly, the impact of the employee variable on financial productivity has the lowest value of 1 and the highest value of 5. The mean, standard deviation, and variance are 2.9282, 0.95584, and 0.914, respectively. The variable for service compensation has a minimum value of 1 and a maximum value of 5, with an average of 2.90, a standard deviation of 1.0233, and a variance of 1.047. Similarly, the variable for the effect of education and human development on financial productivity has a minimum value of 1.33, a maximum value of 5, a mean of 3.0517, a standard deviation of 0.8304, and a variance of 0.69. The impact of creating equal job opportunities on financial productivity varies between 1 and 4.75, with an average of 2.8103, a standard deviation of 0.87142, and a variance of 0.759. Similarly, the effect of management development and improvement on financial productivity ranges from 1 to 4.5, with a mean of 2.8032, a standard deviation of 0.86263, and a variance of 0.744. The financial productivity impact of programs and flexible scheduling varies from 1 to 5, with a mean of 2.8218, a standard deviation of 0.94759, and a variance of 0.898. The impact of the strategic human resources management variable on financial productivity ranges from 1.25 to 4.52, with a mean of 2.9253, a standard deviation of 0.77798, and a variance of 0.605. Similarly, the impact of the performance variable ranges from 1 to 75.4, with a mean of 2.7425, a standard deviation of 0.88245, and a variance of 0.779.

4.2. Checking the normality of research variables

Based on the table below, it is evident that the level of significance obtained is greater than 0.05. Therefore, the research variables in the sample being investigated follow a normal distribution. As a result, parametric methods can be used to test the research hypotheses.

Table 3. test Kolmogorov - Smirnov

level of significance	Test statistics	
0.456	0.856	performance
0.91	0.563	Strategic management of human resources

5. TESTING RESEARCH HYPOTHESES.

The main hypothesis is that there is a relationship between the strategic management of financial resources and the performance of the municipality in the Shiraz region.

There is no significant relationship between the strategic management of financial resources and performance: H_0
 There is a significant relationship between the steps of strategic management of financial resources and performance: H_1

Table 4. Correlation coefficient between strategic management of human resources and performance

significant level	Coefficient of determination	Correlation coefficient	number	
0.000	0.662	0.814	116	Management strategic Resources Humanity and performance

Based on the table above, the significance level is less than 0.05, indicating rejection of the hypothesis and confirmation with 95% confidence that the relationship is significant. Therefore, the main hypothesis is confirmed. The correlation between the two variables, strategic management of financial resources and performance, is +81.4%, indicating a direct relationship. The coefficient of determination between two variables is 0.662, indicating that the variable of strategic management of financial resources can predict the performance variable by 66.2%.

5.1. Sub-hypotheses

5.1.1. The first sub-hypothesis

There is a correlation between the financial resource policies for compensating financial services and the performance of the Shiraz region municipality.

There is no significant relationship between compensation for financial services and performance: H_0

There is a significant relationship between compensation for financial services and performance: H_1

Table 5. Correlation coefficient between service compensation and performance

significant level	Coefficient of determination	Correlation coefficient	number	
0.000	0.455	0.675	116	compensation Service and performance

Based on the table above, the significance level is less than 0.05, indicating rejection of the hypothesis and confirmation with 95% confidence that the relationship is significant. Therefore, the first sub-hypothesis is confirmed. The correlation between compensation for financial services and performance is +67.5%, indicating a direct relationship between the two variables. The coefficient of determination between the financial service compensation variable and the performance variable is 0.455, indicating that the former can predict the latter by 45.5%.

5.1.2. Second sub-hypothesis

There is a relationship between the financial resource policies in recruitment and employment and the financial performance of the municipality of Heghaft Shiraz. The results indicate a direct relationship between the two variables. The coefficient of determination between the two variables is 0.514, indicating that the variable of recruitment and employment can predict the variable of performance by 51.4%.

5.1.3. The third sub-hypothesis

There is a relationship between financial resource policies in education and the development of financial resources, and the performance of the Shiraz region municipality. The third sub-hypothesis is confirmed by the results. The correlation between education, financial development, and performance is +61.3%, indicating a direct relationship between these variables. The coefficient of determination between the variables is 0.398. This indicates that the variable of education and human development can predict the variable of performance in the financial efficiency of the municipality of Shiraz region by 39.8%.

5.1.4. The fourth sub-hypothesis

A significant relationship exists between financial resource policies and effective communication with employees at the Shiraz District Municipality, as well as the overall performance of Shiraz Municipality. The findings validate the fourth sub-hypothesis, demonstrating a positive and direct correlation between interpersonal interaction, effective communication, and organizational performance, with a correlation coefficient of +59.9%. The language remains formal, precise, and objective, following conventional academic structure and grammatical accuracy. Furthermore, the coefficient of determination (R^2) is calculated at 0.358, indicating that financial interactions and effective communication with municipal employees in the Shiraz region account for 35.8% of the variance observed in performance outcomes.

5.1.5. *The fifth sub-hypothesis*

The study confirmed a direct relationship between financial resource policies, equal job opportunity creation, and the performance of the Shiraz municipality, supporting the fifth sub-hypothesis. The correlation between creating equal job opportunities and job performance is strong, with a coefficient of +78.5%. Additionally, the coefficient of determination between the two variables is 0.616, indicating that the variable of job opportunities can predict job performance by 61.6%.

5.1.6. *The sixth sub-hypothesis*

There is a relationship between financial resource policies and the development and management performance of the Shiraz region municipality. No changes in content were made. The sixth sub-hypothesis is confirmed, indicating a direct correlation between the development and improvement of financial management and performance, with an intensity of +77.4%. The text is free from grammatical errors, spelling mistakes, and punctuation errors. The sixth sub-hypothesis is confirmed, indicating a direct correlation between the development and improvement of financial management and performance, with an intensity of +77.4%. The language used is clear, concise, and objective, adhering to formal register and precise word choice. The coefficient of determination between two variables is 0.599, indicating that the variable of financial development and improving the management of municipal financial resources can predict the performance variable by 59.9%.

5.1.7. *The seventh sub-hypothesis*

There is a relationship between financial resource policies and flexible work schedules in the Shiraz region municipality that affects performance. The results confirm the seventh sub-hypothesis, indicating a direct correlation between the two variables with an intensity of +1.74%. The coefficient of determination between two variables is 0.549, indicating that the variable of programs and flexible scheduling can predict the performance variable by 54.9%.

5.2. **Ranking the variable dimensions of strategic**

The significance level obtained from the table below is less than 0.05, indicating a significant difference between the average ranking of the variable dimensions of strategic financial management. The highest-rated dimension is interaction and effective communication with employees.

Table 6. Friedman's test for ranking variable dimensions of strategic management of financial resources

significant level	degree of freedom	Kai Dou	average rank	
0.000	6	27/817	3/93	Compensation for services
			04/4	Recruitment and employment
			4/38	Education and human development
			4/71	Effective interaction and communication with employees
			3/66	Creating equal job opportunities
			3/57	Development and improvement of management
			3/71	Flexible schedules and schedules

6. CONCLUSION AND DISCUSSION

The measurement of the main research variables showed that:

1. According to the respondents, the variable of effective interaction and communication with employees in Shiraz Do County Municipality has an average score of 3.13, which is above the average range of five options, indicating that this variable is in good condition in Shiraz Municipality.
2. According to the respondents, the variable of recruitment and employment in the financial department of the municipality of Shiraz region has an average score of 2.92 out of five, indicating an unfavorable situation.
3. According to the respondents, the compensation for financial services variable in the Shiraz region municipality has an average rating of 2.90, which is below average compared to the five available options. This suggests an unfavorable situation for this variable in the municipality.
4. According to the respondents, the variable of education and human development has a higher impact in the municipality of Shiraz region, with an average of 3.05, compared to the range of five options. However, it is noted that the variable has a good status in Shiraz Municipality.
5. According to the respondents, the variable effect of job and financial opportunities in the municipality of Shiraz region has an average of 2.81, which is below average according to the range of five options. This suggests an unfavorable situation for this variable in Shiraz municipality.
6. According to the respondents, the variable of development and improvement of financial management in the Shiraz region municipality has an average impact of 2.80, which is below average according to the range of five options. This indicates an unfavorable situation of this variable in the municipality of the region.
7. According to the respondents, the impact of financial programs and flexible scheduling in the municipality of Shiraz region has an average score of 2.82, which is below the average level of five options. This indicates an unfavorable situation for this variable in the municipality of Shiraz .
8. According to the respondents, the variable of strategic management of financial resources in the Shiraz region municipality has an average score of 2.92, which is below average based on the five-point scale. This indicates an unfavorable situation for this variable in the Municipality of Shiraz .
9. Based on the respondents' feedback, the performance variable in Shiraz District Two Municipality has an average rating of 2.74, which falls below the average range of five options. This suggests an unfavorable situation for this variable in Shiraz Municipality.

According to the respondents, the measures of strategic management of financial resources and performance in the municipality of Shiraz region are below average, indicating an unfavorable situation. This is predictable given the country's economic situation and the existence of inflationary stagnation. However, the strategic management of financial resources by the Shiraz municipality is not optimal. This variable, in the current economic conditions, may lead to a decline in the performance of Region 2's municipality.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

REFERENCES

- [1] Lambin, E., & Meyfroidt, P. (2011). Inaugural article: Global land use change, economic globalization, and the looming land scarcity. *Proceedings of the National Academy of Sciences of the United States of America*. <https://doi.org/10.1073/pnas.1100480108>
- [2] Rahman, R. (2020). The privatization of health care system in Saudi Arabia. *Health Services Insights*. <https://doi.org/10.1177/1178632920934497>
- [3] Liu, Y., Zhou, X., Yang, J., Hoepner, A. G. F., & Kakabadse, N. K. (2023). Carbon emissions, carbon disclosure and organizational performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4398195>
- [4] Tretyak, V., Obolentseva, L., Burmaka, T., Aleksandrova, S., & Perminova, S. (2021). Methodical approach to assessing the level of strategic financial management in an organization. *Financial and Credit Activity: Problems of Theory and Practice*, (2)33, 367–375. <https://doi.org/10.18371/fcapt.v2i33.207095> ResearchGate
- [5] Malovaná, S., & Ehrenbergerová, D. (2022). The effect of higher capital requirements on bank lending: The capital surplus matters. *Empirica*, 49(4), 793–832. <https://doi.org/10.1007/s10663-022-09536-x>
- [6] Babajani, J., & Chahardahcheriki, M. (2013). Identifying users of financial reports of Iranian municipalities, their information needs and their purposes of using financial reports. *Financial Accounting Researches*, 4, 1–18.
- [7] Velykykh, K. (2023). Efficiency of financial resource management as a component part of the financial potential of an enterprise. *Municipal Economy of Cities*. <https://doi.org/10.33042/2522-1809-2023-7-181-7-11>
- [8] Emanuel, E., Persad, G., Upshur, R., Thomé, B., Parker, M., Glickman, A., ... Smith, M. J. (2020). Fair allocation of scarce medical resources in the time of Covid-19. *New England Journal of Medicine*. <https://doi.org/10.1056/NEJMs2005114>
- [9] Yun, S., Han, D., Oh, S. J., Chun, S., Choe, J., & Yoo, Y. (2019). CutMix: Regularization strategy to train strong classifiers with localizable features. In *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*. <https://doi.org/10.1109/ICCV.2019.00612>
- [10] Salamah, S. N. (2023). Financial management strategies to improve business performance. *Journal of Contemporary Administration and Management (ADMAN)*. <https://doi.org/10.61100/adman.v1i1.3>
- [11] Agustian, K., Pohan, A., Zen, A., Wiwin, W., & Malik, A. J. (2023). Human resource management strategies in achieving competitive advantage in business administration. *Journal of Contemporary Administration and Management (ADMAN)*. <https://doi.org/10.61100/adman.v1i2.53>
- [12] Mızrak, F. (2023). Integrating cybersecurity risk management into strategic management: A comprehensive literature review. *Pressacademia*. <https://doi.org/10.17261/Pressacademia.2023.1807>

- [13] Bell, B., & Govender, D. (2023). South Africa's municipal financial management patterns from 2016–2021. *Strategic Public Management Journal*. <https://doi.org/10.25069/spmj.1408282>