

Correlational analysis of gender, professional training and financial performance in restaurant companies in Mexico

Análisis correlacional del género, formación profesional y el desempeño financiero en empresas restauranteras en México

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Abstract

This research was born with the intention of analyzing the importance of professional training, as well as the gender of people who run restaurant companies in two States of Mexico. To meet the objective of the study, a quantitative research, non-experimental, and transactional design was carried out. Likewise, the study is correlational, since it seeks to study the degree of association between the behavior of gender variables, professional training and their relationship with financial performance considering the internal accounting control system and the financial internal control system. With Cronbach's alpha values above 0.5, using the Kolmogorov-Smirnov Test correlation coefficient using the Lilliefors significance correction. With six hypotheses, finding four of them accepted and two rejected. With very interesting results because financial performance is indistinct whether the manager is a man or a woman.

Resumen

Esta investigación nace con la intención de analizar la importancia que tiene la formación profesional, así como el género de las personas que dirigen empresas restauranteras en dos Estados de México. Para cumplir con el objetivo del estudio se llevó a cabo una investigación cuantitativa, diseño no experimental, y transaccional. Igualmente, el estudio es de tipo correlacional, puesto que se busca estudiar el grado de asociación entre el comportamiento de variables de género, formación profesional y su relación con el desempeño financiero considerando sistema de control interno contable y sistema de control interno financiero. Con valores de alpha de cronbach por arriba de 0.5, utilizando el coeficiente de correlación de Prueba de Kolmogorov-Smirnov usando la corrección de significación de Lilliefors. Con seis hipótesis, encontrando cuatro de ellas aceptadas y dos rechazadas. Con resultado muy interesante debido que el desempeño financiero es indistinto sea hombre o mujer el directivo.

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Objective	Methodology	Contribution
Analyze the importance of professional training, as well as the gender of people who run restaurant companies in restaurant companies in Mexico	<ul style="list-style-type: none"> Quantitative research, Non-experimental design Transactional Correlational type, Independent variables: <ul style="list-style-type: none"> gender and professional training Dependent variables: <ul style="list-style-type: none"> accounting internal control system financial internal control system. Hypothesis: 6 Cronbach's alpha above 0.5 Using Kolmogorov-Smirnov test correlation coefficient Using the Lilliefors significance correction. 	<p>Currently in Mexico, the female gender represents more than 50% of the staff who work in restaurants, as well as 64.8% of the total owners.</p> <p>It is interesting to find in this research that financial performance is not associated with gender, both accounting and financial control systems are carried out regardless of gender at the management level.</p>

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Objetivo	Metodología	Contribución
Análisis la importancia que tiene la formación profesional, así como el género de las personas que dirigen empresas restauranteras en empresas restauranteras en México	<ul style="list-style-type: none"> Investigación cuantitativa, Diseño no experimental Transaccional De tipo correlacional, Variables independientes: género y formación profesional Variables dependientes : sistema de control interno contable y sistema de control interno financiero. Hipótesis : 6 Alpha de cronbach por arriba de 0.5 Utilizando coeficiente de correlación de Prueba de Kolmogorov-Smirnov Usando la corrección de significación de Lilliefors. 	<p>Actualmente en México el género femenino representa más del 50% del personal que labora en restaurantes, así como el 64.8% del total de propietarios. Es interesante encontrar en esta investigación que el desempeño financiero no esta asociado con el género, los sistemas de control tanto contable como financiero se llevan a cabo de manera indistinta del género en el nivel dirección.</p>

Financial performance, Correlational analysis, Gender, Restaurant sector

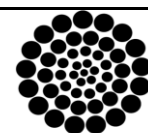
Desempeño financiero, Análisis correlacional, Género, Sector restaurantero

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Introduction

This research was born with the intention of analysing the importance of professional training, as well as the gender of the people who manage restaurant companies in restaurant companies in Mexico. In the search to identify the application of strategies by managers for decision making, strategies such as prioritising the implementation of a strategic plan, establishing budget control on a regular basis, reviewing capital needs, preparing operating budgets, implementing financial technology tools to have a better system of internal control both accounting and financial, in order to have a better organisational performance.

Financial control system to improve organisational performance considering the human, material and financial resources for the human, material and financial resources for the achievement of organisational objectives. (Angel Suarez and Montes Hoyos, 2022) conclude in their research that the management of the restaurant sector in the city of Sincelejo, Peru, do have a high commitment to achieving financial results, but do not apply organisational strategies for the preparation of their staff. Villavicencio Pariona, P.B., Evanan Bustamente, R.N. (2022) this research was not carried out directly towards the sector under study, but the application of the variables of internal control and financial management, with the objective of determining the relationship that exists between both, finding a very high correlation, determining that, when internal control exists, it contributes to the improvement of financial management.

To determine the degree to which companies in the restaurant sector in the city of Obregon, Sonora, carry out financial controls, (Ordaz, L. 2020) carried out an investigation to detect an improvement in competitiveness in this sector. Obtaining as a result that at least 80% of the company that participated in this research, consider internal financial control as a strategic factor to measure competitiveness in this sector. The general objective of the research is to analyse the relationship between gender, professional training and financial performance in restaurant companies in Mexico.

It is important to mention that, in the search for published documents related to the study of the correlation between the variables of gender, professional training and financial performance, there is a gap in knowledge in Mexico itself. However, documents were found in other countries, mainly Peru, with articles on this sector with other variables such as knowledge management, competitiveness, sustainability, organisational performance evaluations, among others, which are very interesting and provide areas of opportunity for the improvement of competencies in the restaurant sector.

Therefore, the following hypotheses are used for this research:

H1 = The professional training of the restaurant manager influences the behaviour of the restaurant's internal accounting control system.

H2 = The professional training of the restaurant manager influences the behaviour of the internal financial control system of the restaurant.

H3 = The gender of the restaurant manager influences the performance of the restaurant's internal accounting control system.

H4 = The gender of the restaurant manager influences the performance of the restaurant's financial internal control system.

H5 = The accounting internal control systems in a restaurant influence the performance of the financial internal control systems.

H6 = The financial internal control systems in a restaurant influence the performance of the accounting internal control systems.

Where the variables are considered as follows:

Dependent variables X.

X1= Internal accounting control system.

X2= Financial internal control system.

Independent variables Y.

Y1= Gender.

Y2= Professional training.

Methodology

In order to meet the objective of the study, quantitative research was carried out, given that the data collected and the information obtained is numerical (Martínez Ruíz, 2012), non-experimental, given that the study subjects were not manipulated, and transactional, since the information was collected at a single point in time (García Cabrero, 2009). Likewise, the study is correlational, since it seeks to study the degree of association between the behaviour of variables (Hernández Sampieri et al., 2014).

Subjects

The study subjects were restaurant owners in two Mexican states, affiliated to the National Chamber of the Restaurant and Seasoned Food Industry (CANIRAC), a business organisation made up of companies in the restaurant sector with a presence in the 32 states of Mexico. A convenience sampling was carried out among 83 restaurants, based on the restaurants that agreed to participate in the study.

Materials

To collect the information, a questionnaire comprising 23 items was used, of which 15 collected demographic information such as the name of the restaurants, location, age of the company, gender of the person who owns the establishment, among others. There are also 10 items belonging to the variable of internal accounting control systems and 13 on internal financial control systems. The variables are unidimensional. The questionnaire was presented in Spanish and was applied in physical format to the subjects of the study.

In the demographic data, there were 11 items to be answered openly by the study subjects. Likewise, three items are presented to be answered in dichotomous form YES or NO. On the other hand, one item presents a multiple choice question structure to be answered.

The items corresponding to the internal control systems variables were proposed to be answered through a Likert scale of 6 categories, from 0 to 5, where 0 indicates that the item does not apply, 1 indicates totally disagree, 2 indicates disagree, 3, neither agree nor disagree, 4, agree, and 5, totally agree. The questionnaire covers a total of three letter-size pages.

Procedure

The research was based on the observation of a gap in knowledge about restaurant companies in Mexico with respect to the variables that allow internal accounting and financial control systems to exist. Based on this situation, a literature review was carried out to find out the existing background on the study of both phenomena, and it was found that there are indeed few studies that measure these variables in the Mexican context. The information found was integrated in the form of a theoretical framework for the research.

Once the research background had been explored, we proceeded to the research design, for which a quantitative study was considered due to the possibilities of analysis that the information collected in this way allows, as it allows us to approach reality in an objective and largely unbiased way, which allows for more reliable analyses and easily verifiable information. Similarly, the quantitative nature of the data allows for correlation studies to measure the relationship between variables (Mohammad-Zyoud et al., 2024).

Subsequently, the academic staff in charge of the research designed an appropriate questionnaire for the study, considering published documents from other research, for which key questions were retained and a hybrid document was formed. The questionnaire was designed in the word processor Microsoft Word considering that it would be physically applied. To the items on internal accounting and financial control systems, a section on demographic questions and an introductory text was added to serve as an introduction to the document and as informed consent.

The questionnaire was administered to 83 Mexican restaurant managers affiliated to the National Chamber of the Restaurant and Seasoned Food Industry (CANIRAC), located in two Mexican states. Only one questionnaire was applied per restaurant, i.e. the sample consisted of 83 managers, who agreed to answer the instrument.

The information collected was captured in the IBM SPSS version 21 programme. Subsequently, Cronbach's alpha was calculated for the variables used to determine their level of internal consistency.

The normality of the data was also calculated using the Kolmogorov-Smirnov test with Lilliefors significance correction to determine whether a parametric (Pearson) or non-parametric (Spearman) correlation analysis would be used.

After confirming that the data collected were not normal, Spearman's correlation study was performed, obtaining both significant and significant p-value results. From this information it was possible to confirm and reject hypotheses and conclusions were drawn and recommendations for future research were made.

Results

In a first approach to the data, the internal consistency of the internal accounting control systems and internal financial control systems variables was measured by calculating Cronbach's alpha, from which the values shown in Table 1 were obtained.

Box 1

Table 1

Cronbach's alpha of the dimensions on internal control systems

Variable	Alfa
Internal accounting control systems	0.803
Financial internal control systems	0.797

Source: Own elaboration

According to the criteria for the interpretation of Cronbach's alpha presented by Acock (2008), the alpha values obtained are considered adequate, as they exceed 0.7 in both cases. This means that both variables adequately measure the phenomena for which information is sought, and that the items of each variable are closely related to each other.

The normality of the data was measured through the Kolmogorov-Smirnov test; suitable for evaluating samples with more than 50 records, in order to determine whether the data would be processed through parametric or non-parametric statistics. The results of this test per variable, both unidimensional, are presented in Table 2.

Box 2

Table 2

Kolmogorov-Smirnov test for working variables

	Statistician	gl	Sig.
Internal accounting control systems	.129	83	.002
Financial internal control systems	.110	83	.014

Note. The K-S test was refined using the Lilliefors significance correction.

Source: Own elaboration

According to the results obtained with the Kolmogorov-Smirnov test, the data for accounting internal control systems and financial internal control systems present a non-normal distribution of data, given that the asymptotic significance in both cases is less than 0.05. Therefore, the calculation of correlations will be done using Spearman's correlation coefficient. The results of the correlations between variables and demographic data are shown in Table 3.

Box 3

Table 3

Correlations between variables and demographic data

	Internal accounting control systems	Financial internal control systems	Gender of the director	Professional training of the director
Internal accounting control systems.	1	.514**	-.145	.236*
Financial internal control systems.	.514**	1	-.152	.323**

Note: The sample N considered in each correlation is 83 cases.

** The correlation is significant at the 0.01 level (bilateral).

* The correlation is significant at the 0.05 level (bilateral).

Source: Own elaboration

As reflected in the data presented in Table 3, of the correlations studied, the only significant ones are those of the internal accounting control systems (ICAS) and internal financial control systems (IFCS) variables with each other, as well as those of both variables individually with the professional training of the company director (FPD).

Considering the interpretation of correlation coefficients suggested by Salkind (2009) for the field of social sciences, such as finance and management, it can be considered that the index obtained in the correlation of SCIC and SCIF, 0.514, reflects a moderate correlation between the variables. On the other hand, the correlation indices of SCIC and SCIF with FPD are considered weak. These relationships, regardless of the magnitude of the correlation index, stand out because according to the reading of the p-values, less than 0.01, they are considered significant data, i.e. there is statistical evidence to affirm that there is a relationship between these variables. On the other hand, there is no p-value to support the significance of the correlations between SCIC and SCIF with the gender of the company director, i.e. it cannot be said that there is a relationship between these variables.

Considering the above information, Table 4 presents the decisions on the hypotheses that guided the study.

Box 4

Table 4

Decisions on the hypotheses

Hypothesis	Correlation index	Decision
H1 = The professional training of the restaurant manager influences the performance of the restaurant's internal accounting control system.	.236*	ACCEPTED
H2 = The professional background of the restaurant manager influences the performance of the restaurant's internal financial accounting control system.	.323**	ACCEPTED
H3 = The gender of the restaurant manager influences the performance of the restaurant's internal accounting control system.	-.145	REJECTED
H4 = The gender of the restaurant manager influences the performance of the restaurant's financial internal control system.	-.152	REJECTED
H5 = The accounting internal control systems in a restaurant influence the performance of the financial internal control systems.	.514**	ACCEPTED
H6 = The financial internal control systems in a restaurant influence the performance of the accounting internal control systems.	.514**	ACCEPTED

Source: Own elaboration

Conclusion

In the restaurant industry, women are extremely hard-working, yet it is a complex sector that is also run by men. According to INEGI, women represent a majority population in the restaurant industry, accounting for more than 50% of the staff working in restaurants, as well as 64.8% of the total number of owners.

In this restaurant sector, it has been observed over the years that there is still a lot of ground to be gained, i.e. the promotion of spaces for more women to participate, especially in management positions.

Figure 1 below shows the correlation graph of this study considering two independent variables which are gender and professional training, as well as two dependent variables which are internal accounting control and internal financial control to measure the financial performance in this restaurant sector.

Analysing the results of the correlation index, it is observed that the variables that have the greatest influence on their behaviour are those related to professional training of managers with the part of the internal accounting control system (.236*) and internal financial control system (.323**). 323**), considering that there are accounting records and financial statements that allow managers to make decisions for the possible acquisition of capital assets, if necessary external sources of financing, preparation of annual financial planning, budget control, and strategic plans, which generates a good participation of managers in the financial performance of this sector.

However, with the variables of gender and internal accounting control system (-.145) and financial control system (-.152) the same does not happen, which is gratifying because in this sector it is considered mostly led by the male gender, and in this study we obtain results that it is indistinct the gender to obtain a good financial performance in this sector.

Box 5

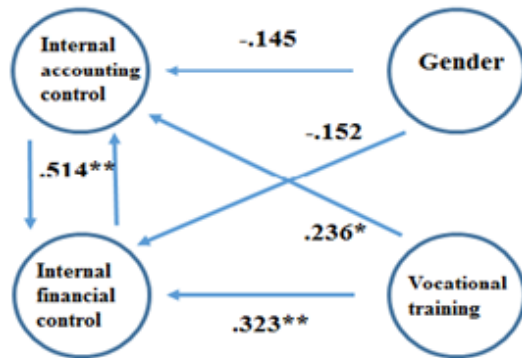


Figure 1

Source: Own elaboration

Three main conclusions can be drawn from the information obtained. First, that having internal accounting control systems within a Mexican restaurant company is likely to influence the existence of internal financial control systems, and vice versa, which makes sense since the existence of one or the other reflects an intention of the companies to record the state of the resources they have, and it is therefore likely that both types of systems will coexist to achieve this end. Secondly, the professional background of the person running a restaurant in Mexico will motivate to a lesser extent the existence of internal accounting control systems, and to a slightly greater, but also lesser extent, the existence of internal financial control systems, which can be understood by the legal need for companies to keep accounts, regardless of the professional background of the manager. In other words, there is a certain degree of compulsion to record accounting information in a company. Thirdly, the gender of the manager of the Mexican restaurant company is not related to whether internal accounting or financial control systems are kept, which is interpreted because, regardless of the gender of the manager, companies will keep both control systems in order to have more information about the resources they possess. Considering the information obtained, it is generally possible to state that the objective of the study was met. It is recommended for future research, to expand the sample to other states and to define family businesses within this sector in order to work with variables of competitiveness, sustainability, another very important variable is sustainability, and how to promote awareness among people, considering that this restaurant sector can even modify its management practices.

Conflict of interest

The authors declare that they have no conflicts of interest. They have no known competing financial interests or personal relationships that might appear to influence the article reported in this paper.

Authors' contribution

Vazquez-Jimenez, Imelda Lorena: Contributed project idea and research development, research method, data analysis.

Landazuri-Aguilera, Yara: Contributes to the development of the Theoretical Framework, data analysis, review and editing.

Valdez-Pineda, Dina Ivonne: Contributed to the project idea and research development research.

Ruiz-Perez, Roberto: Contributed to the revision and editing of the document.

Availability of data and materials.

The datasets used or analysed during the current study are available in the corresponding study are available from the corresponding author upon reasonable request.

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References

Background

Angel Suarez, A.E., and Montes Hoyos C.A. (2022). *Correlational analysis of managerial competencies and financial management in microenterprises in the restaurant sector in the city of Sincelejo*. [Postgraduate thesis, University of Sucre].

Ordaz, L. (2020) *Control Interno financiero en el sector restaurantero de ciudad obregón, sonora*, El buzón de Pacioli, número 111.

Villavicencio Pariona, P.B., Evanan Bustamente, R.N. (2022). *Control Interno y Gestión Financiera en la Municipalidad Distrital de San Juan Bautista, Ayacucho, Perú*. [Undergraduate thesis, Universidad PeruanaLosAndres].

Basics

Acock, A. C. (2008). *A Gentle Introduction to Stata* (2nd ed.). Stata Press.

García Cabrero, B. (2009). *Handbook of research methods for the social sciences: a project-based teaching approach*. Manual Moderno.

Hernández Sampieri, R., Fernández Collado, C., & Baptista Lucio, M. del P. (2014). *Research methodology* (6th ed.). McGraw-Hill.

Martínez Ruíz, H. (2012). *Metodología de la investigación*. CENGAGE Learning.

National Soft. (2020, March 9). *Women in the restaurant industry*.

Salkind, N. J. (2009). *Exploring Research* (7th ed.). Pearson/Prentice Hall.

Results and Discussions

Acock, A. C. (2008). *A Gentle Introduction to Stata* (2a. ed.). Stata Press.

Salkind, N. J. (2009). *Exploring Research* (7a. ed.). Pearson/Prentice Hall.