

Financial Literacy of Workers in the Tourism Industry in Mexico in 2023: a Structural Equations Approach

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Abstract

This paper attempts to examine the level of financial knowledge of workers in the tourism industry in Mexico through the Structural Equations Methodology (SEM). The type of sampling is non-probabilistic by self-determination. A questionnaire is applied to 500 workers, in 2023, from Mexican companies in the tourism sector considering the following 7 issues: investment, savings, credit, insurance, pensions, expenses and budgets. The SEM allows bring to light the financial knowledge that the surveyed workers have about these issues. Based on a factor structure obtained from the confirmatory analysis, which presents good goodness of fit, structural adjustment, and parsimony, the main findings are: 1) in terms of credit, workers give importance to the requirements requested by financial institutions and consider that they are easy to interpret and comply with, 2) in terms of retirement fund accounts, workers feel confident in institutions that manage their retirement savings and are clear about commissions, 3) in terms of savings, workers perceive that bank accounts have been adapted to their needs since banks have become very flexible in terms of requirements for opening and initial amounts with clear and complete account information, 4) in terms of investment, workers hardly acquire bank promissory notes, and 5) regarding life insurance, workers express the ease that exists to contract insurance, although the cost is limited. The results obtained have practical implications for the tourism sector to continue promoting the habit of saving and the use of financial services and products to which the worker can have access, since this financial knowledge translates into more organized employees in their financial affairs.

JEL Classification: G51, G52, G53, D14.

Keywords: Financial literacy, methodology SEM, financial literacy, financial education.

Educación financiera de los trabajadores de la industria turística en México 2023: un enfoque de ecuaciones estructurales

Resumen

Este trabajo intenta examinar el nivel de conocimiento financiero de los trabajadores de la industria turística en México a través de la Metodología de Ecuaciones Estructurales (SEM). El tipo de muestreo no es probabilístico por autodeterminación. Se aplica un cuestionario a 500 trabajadores, en 2023, de empresas mexicanas del sector turístico considerando los siguientes 7 temas: Inversión, ahorro, crédito, seguros, pensiones, etc. gastos y presupuestos. El SEM permite sacar a la luz el conocimiento financiero que los trabajadores encuestados tienen sobre estos temas. A partir de una estructura factorial obtenida del análisis confirmatorio, que presenta buena bondad de ajuste, ajuste estructural y parsimonia, los principales hallazgos son: 1) en términos de crédito, los trabajadores dan importancia a los requisitos solicitados por las instituciones financieras y consideran que son fáciles de interpretar y cumplir, 2) en términos de cuentas de fondos de jubilación, los trabajadores se sienten confiados en las instituciones que administran sus ahorros de jubilación y tienen claras las comisiones, 3) en términos de ahorro, los trabajadores perciben que las cuentas bancarias se han adaptado a sus necesidades, ya que los bancos se han vuelto muy flexibles en términos de requisitos de apertura y montos iniciales con información clara y completa de la cuenta, 4) en términos de inversión, los trabajadores apenas adquieren pagarés bancarios, y 5) en cuanto al seguro de vida, los trabajadores expresan la facilidad que existe para contratar un seguro, aunque el costo es limitado. Los resultados obtenidos tienen implicaciones prácticas para que el sector turístico continúe promoviendo el hábito de ahorro y el uso de servicios y productos financieros a los que el trabajador pueda tener acceso, ya que este conocimiento financiero se traduce en empleados más organizados en sus asuntos financieros.

Clasificación JEL: G51, G52, G53, D14.

Palabras clave: Educación financiera, metodología SEM, educación financiera, educación financiera.

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*Sin fuente de financiamiento para el desarrollo de la investigación

1. Introduction

Currently, both terms Financial Education and Financial Inclusion (FE and FI) have gained relevance worldwide. For example, they are mentioned in the agenda of the G20, the OECD and the World Bank, among other large organizations that have addressed these issues. In this sense, the G20 ratifies the commitment to promote FI worldwide, in addition to launching the so-called G-20 High Level Principles for Digital Financial Inclusion with the purpose of promoting digital technologies in Financial Inclusion (World Bank, 2022). Finally, it is a reality that technology became present in digital finance services, through online banking, mobile banking, mobile wallet, credit card and debit card (Durai and Stella, 2019) since through mobile devices, such as laptop, iPad or Smartphone, all kinds of financial services and products can be handled through applications.

One of the main components of the theoretical constructs on Financial Literacy (FL) and FE is the knowledge that people have about financial products and services. The term FE has quickly evolved, 20 years ago it was called money management (Bernheim *et al.* 2001) or financial knowledge (Atkinson and Messy, 2012), which is used to measure the knowledge of various financial variables such as insurance, loans, credit, budgets, among others (Danes and Hira, 1987). On the other hand, Chen and Volpe (1998) found that little financial knowledge on topics such as investment, savings and spending are the main causes that generate financial problems for people. In this regard, it is essential to cite the work of Houston (2010) that focuses on analyzing an extensive group of studies reported between 1996 and 2008 about the topic. The author identifies that a common characteristic of financial education is the financial knowledge that people have. However, many studies have highlighted the ambiguous use of financial literacy, financial education, or financial knowledge. In the present investigation we will instinctively use.

This research will examine the level of financial knowledge of workers in the tourism industry in Mexico through the Structural Equations Methodology (SEM). In this case, the type of sampling is non-probabilistic by self-determination. To do this, a questionnaire is applied to 500 workers from Mexican companies in the tourism sector considering the following 7 issues: investment, savings, credit, insurance, pensions, expenses and budgets. In the Mexican context, several studies have been carried out which have explored issues related to these constructs, see for example: García-Santillán (2023) and Bayram *et al.* (2021). Figure 1 shows the conceptual model of financial knowledge in which this research will be framed.

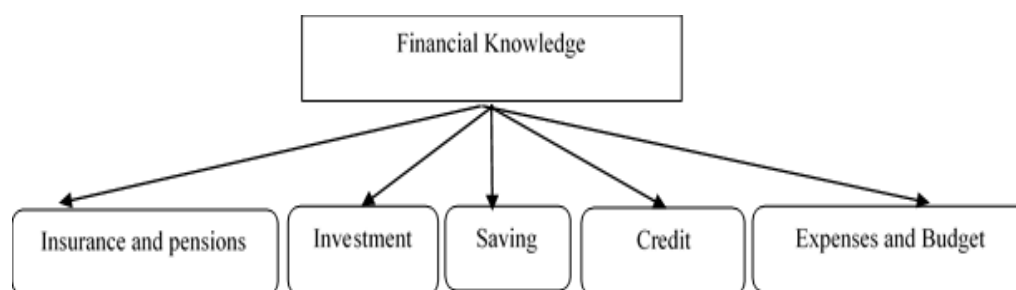


Figure 1. Conceptual model of financial knowledge

This investigation differs from the current literature in confirming the financial knowledge of 7 issues through the (SEM). The proposed exploratory structure analyzes variables related to previous 7 issues. The main finding reported is a factor structure obtained from the confirmatory analysis, which presents a good goodness of fit, as well, structural adjustment and parsimony. This structure, allows us to examine the level of financial knowledge that the surveyed workers have on these 7 issues. Therefore, this study seeks through confirmatory analysis to validate the exploratory structure that explains financial knowledge in workers on the basis of the following conceptual model.

This investigation is organized as follows: section 2 provides a brief review of the literature; section 3 presents the methodology that will be used in this paper; section 4 examines the nature of the data and performs the required statistical analysis; section 5 provides a discussion of the empirical results obtained; finally, section 6 gives the conclusions and acknowledges the delimitations.

2. A brief review of the literature

Robb *et al.* (2012) make a distinction saying that financial literacy involves the ability to understand financial information and make effective decisions using that information, while financial Knowledge simply means remembering a set of facts. In this idea, the OECD (2013) refers that FE addresses three dimensions of a construct made up of financial attitude, financial behavior and financial knowledge. While, Houston (2010) refers, that FE has refers to the understanding that financial knowledge or financial education represents, its use or application.

On the other hand, Atkinson and Messy, (2012) refer that the level of FE can be measured according to the financial knowledge that each person has. For their part, Hilgert *et al.* (2003) point out that financial knowledge is the conceptual definition of FE. In this regard, the OECD (2016) defines it conceptually as the understanding that each person has about financial terms and, therefore, will be able to make effective decisions in their finances.

Moreover, the relationship between FL, sociodemographic variables and FE on saving behavior can be found in Amari *et al.* (2020). Likewise, Peng *et al.* (2007) deals with money management as a fundamental element of personal finances and habits of savings, as well as credit and budgeting. The importance of money management, as well as its adequate use, leads to a management of personal finances that favor financial health, therefore, it is important to mention the importance of the emergence of credit and debit cards for the use of credit and savings, respectively. Finally, a recent study found that people who showed a higher score in financial knowledge had a better behavior towards credit card payments (Hernández-Mejía *et al.* (2021).

3. Methodology

The study is carried out in the Mexican context in 2023, where the data collection instrument was applied. The participating workers that agreed to collaborate were 500 that requested discretion in the use of the data and their confidentiality. Therefore, it is only used for academic and research purposes. To validate the exploratory factor model, the validity and reliability of the scale and the normality of the data are evaluated for the subsequent use of the SEM methodology using software AMOSv23.

This research applies a non-experimental design study, confirmatory and explanatory type to verify the exploratory factorial structure of on the indicators that evaluate financial knowledge. The factors are Investment (Inv), saving (AH), credit (CR), insurance and pensions (SP), expenses and budget (GP). The factorial structure collects information related to investment, savings, credit, insurance and pensions, expenses and budgets, in a Likert format with a response range that goes from 1 meaning total disagreement to 5 meaning total agreement.

To validate the reliability and internal consistency of the scale, Cronbach's alpha (α) coefficient is used, under the criterion of $\alpha > 0.7$ (acceptable) based on the following expression:

$$\alpha = \frac{K}{K-1} \left[1 - \frac{\sum_{i=1}^N V_i}{V_t} \right]$$

where K is the number of items, V_i is the variance of each item, and V_t is the total variance. Regarding the normality of the data, the asymmetry < 2 and the kurtosis < 7 define the criteria that will be followed. For this purpose the Fisher asymmetry coefficient (CA_F) will be used according to the criteria of Kim (2013) described in Table 1.

Table 1. Theoretical values of asymmetry and kurtosis

Sample size (n)	Z	asymmetry	kurtosis	p value	Null Hypothesis	Distribution
small $n < 50$	> 1.96	Ignore	Ignore	0.05	Reject	Non-normally
medium $50 < n < 300$	> 3.29	Ignore	Ignore	0.05	Reject	Non-normally
large $n > 300$	Ignore	> 2	> 7	0.05	Reject	Non-normally
	Do not ignore	< 2	< 7	0.05	Not reject	Normally

Source: Kim (2013)

In addition, the polychoric correlation matrices would be used in the absence normality when there is excess asymmetry and kurtosis, as indicated by (Muthén and Kaplan, 1985; Richaud, 2005; Ogasawara, 2011; Timmerman and Lorenzo-Seva, 2011). Subsequently, to validate the exploratory model, the SEM methodology will be used to validate the adjustment of the measurement model, structural adjustment and parsimony (Ho, 2006; Schreiber *et al.*, 2006; Hooper *et al.*, 2008; Hair *et al.*, 1999). In what follows the software SPSS AMOS v23 (IBM) will be used. The indicators are: χ^2 (Chi-square statistic), Goodness-of-Fit Index (GFI), Adjusted Goodness-

of-Fit Index (AGFI), Root Mean Squared Error of Approximation (RMSEA), Root Mean Squared Residuals (RMR), Tucker Lewis Index (TLI) and the Comparative Fit Index (CFI),

4. Data nature and statistical analysis

First, Table 2 provides the indicators code of each relevant variable. Each code corresponds to each test item used (see the instrument is attached in the appendix section). For example, the code Inv2 means, “Your bank has offered you alternatives when you state your investment needs”. Subsequently, a validation procedure for the scale is carried out with the tests for the indicators reported by the exploratory factorial structure with acceptable Cronbach’s alpha values (> 0.8) for all the 23 items listed in Table 3), which are according to theoretical criteria (Hair *et al.*, 1999). Finally Table 4 provides the descriptive statistics, it is observed that the asymmetry and kurtosis do not exceed the values suggested by Kim (2013), therefore the multivariate normality criterion is accepted. Finally, the exploratory structure and rotated factor matrix are show in Table 5

Table 2. Indicators code of each relevant variable

Indicators Code	Variable
Inv	Investment
AH	Saving
CR	Credit
SP	Insurance and pensions
GP	Expenses and budget

Table 3. Items total statistics and Cronbach’s alpha

	Average scale if the element has been suppressed	Scale variance if the element has been suppressed	Total item correlation corrected	Cronbach's alpha suppressed element
Inv2	70.8154	209.947	.387	.875
Inv3	70.7723	209.738	.430	.874
Inv4	70.4862	208.979	.415	.874
AH6	70.2738	209.138	.424	.874
AH7	70.6615	205.743	.500	.872
AH8	70.7262	205.687	.532	.871
AH9	70.5138	203.578	.590	.869
CR11	70.5600	204.982	.526	.871
CR12	70.8154	208.478	.444	.873
CR13	70.9262	206.371	.512	.872
CR14	70.7785	207.759	.478	.873
CR15	70.6431	205.934	.522	.871
CR16	70.6031	205.475	.485	.872
CR18	70.8000	207.105	.462	.873
SP20	70.5538	208.507	.428	.874
SP21	70.5877	206.076	.497	.872

SP22	70.3231	206.127	.509	.872
SP23	69.9169	211.336	.333	.877
SP24	69.8677	211.782	.338	.877
SP25	70.3877	204.034	.554	.870
SP26	70.6492	209.025	.453	.873
GP28	69.8369	211.742	.331	.877
GP30	69.8000	209.364	.374	.876

Table 4. Descriptive statistics

Items	μ	Sd	asymmetry	kurtosis	items	μ	Sd	asymmetry	kurtosis
Inv2	2.88	1.267	.057	1.045	CR16	3.092	1.330	.051	1.102
Inv3	2.92	1.174	.321	.872	CR18	2.895	1.279	.061	.928
Inv4	3.21	1.264	.317	.866	SP20	3.141	1.266	.158	.922
AH6	3.42	1.231	.317	.812	SP21	3.107	1.265	.140	.841
AH7	3.03	1.279	.179	.970	SP22	3.372	1.237	.236	.789
AH8	2.97	1.216	.106	.736	SP23	3.778	1.310	.637	.813
AH9	3.18	1.227	.169	.808	SP24	3.827	1.259	.734	.500
CR11	3.13	1.271	.166	.976	SP25	3.307	1.270	.249	.887
CR12	2.88	1.230	.130	.975	SP26	3.046	1.171	.241	.630
CR13	2.77	1.216	.026	.869	GP28	3.858	1.283	.889	.215
CR14	2.91	1.200	.098	.738	GP30	3.895	1.347	.950	.329
CR15	3.05	1.222	.202	.834					
N valid (per list)			325						

Table 5. Rotated factor matrix^a

Items	F1 (Credit)	F2 (Insurance and pensions 1)	F3 (saving)	F4 (investment)	F5 (Insurance and pensions 2)	F6 (expenses and budget)	F7 (insurance and pensions 3)
CR13	0.64						
CR18	0.63						
CR15	0.58						
CR14	0.57						
CR11	0.55						
CR12	0.52						
CR16	0.50						
SP20		0.74					
SP22		0.67					
SP21		0.63					
AH8			0.68				
AH7			0.63				
AH9			0.60				
AH6			0.52				
Inv3				0.74			
Inv4				0.58			
Inv2				0.54			
SP24					0.80		

SP23					0.79		
GP28						0.90	
GP30						0.60	
SP26							0.63
SP25							0.50
Extraction method: maximum likelihood. Rotation method: Varimax with Kaiser normalization. ^a . The rotation has converged in 7 iterations.							

Notice that in the model with Varimax rotation, the indicators excluded are CR17, SP19, SP27, AH10, INV1, INV5 and GP29. The adjustments to the initial measurement model are show below. To find the best fit of the model, some indices are modified.

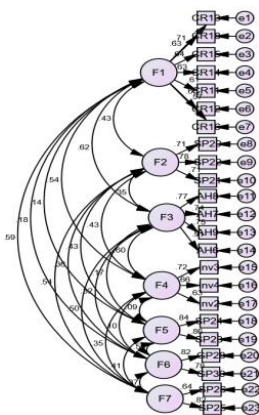


Figure 1. Model a

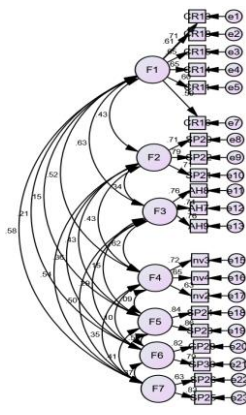


Figure 2. Model b

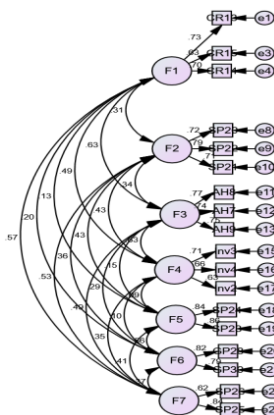


Figure 3. Model c

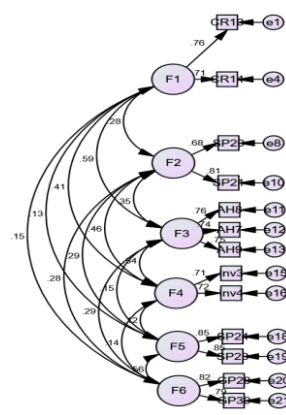


Figure 4. Model d

Using the maximum probability method, after the analysis of the fit of the model and the modification of indices when it was necessary to exclude from the model the indicators with estimates lower than 0.60, a better model is obtained (Figure 4, model d). It should be noted that there are several fit indices to evaluate structural models (Hu and Bentler, 1995, 1999; Mac Callum *et al*, 1996; Byrne, 2001). Subsequently, other methodologies such as chi-squared statistic with degrees of freedom, *p*-value, CFI, GFI, TLI, and RMSEA (Schreiber *et al*, 2006) will be used. It is important to consider the rest of the indices, according the theoretical criteria established in SEM methodologies. In this approach the final measurement model that shows the financial knowledge model in workers with acceptable values that suggest a good adjustment of the model as shown in Table 6.

Table 6. Models and their adjustment indices, structural adjustment and parsimony

Model	RMSEA	CMIN/DF	RMR	GFI	AGFI	PGFI	TLI	CFI	PRATIO	PNFI	PCFI
Model a	.063	2.303	.091	.889	.854	.674	.875	.897	.826	.688	.741
Model b	.056	2.012	.093	.881	.851	.702	.868	.886	.870	.708	.770
Model c	.052	1.862	.071	.934	.901	.623	.934	.951	.745	.672	.709
Model d	.042	1.563	.048	.965	.936	.530	.967	.979	.641	.605	.627

According to Table 6, Model d, in Figure 4, shows the best fit according to the theoretical criteria. In the CMIN/DF indicator, values in the range of 2.1 to 3.1 are recommended (Carmines and McIver, 1981), even less than 2 reflects a good fit of the model (Ullman, 2001), although it is better if it is less than 3 (Kline, 1998). If the goodness of fit index (GFI) is closer to 1, it indicates a good fit, otherwise when it is close to zero, it would indicate a poor fit of the model. In addition, as extension to the GFI, the AGFI adjusts the degrees of freedom, hence if the value is greater than 0.90 the model presents a good fit.

The RMSEA represents the approximation error of the model versus reality, which does not require comparison with a null model, it is even the least affected by the sample size, but when the samples are small, it overestimates the goodness of fit (Xitao *et al.* 1999). Hu and Bentler (1999) suggest values ≤ 0.06 ; Schumacker and Lomax (2004) refers that it is equal to or less than 0.05 for the fit to be perfect. However, in the literature there are different proposals, where they establish ranges of <0.10 as adequate adjustments (Yilmaz, 2018; Yalçiner *et al.* 2019). In this case, a RMSEA value (.042) is good ($<.05$).

In support, the mean square error rate (RMR) of 0.048 is also an indicator of good fit as it is closer to zero, which is a good indication that the variances and covariance's differ from the estimates obtained in the final model. In relation to the measures of the parsimony goodness of fit index proposed by Mulaik *et al.* (1989) as a modification of the Goodness of Fit Index (GFI), which considers the degrees of freedom, the results show acceptable values, which are in the range of 0.5 to 0.7. Now, the model is rotated with Varimax, integrating only the items of the model obtained. Table 7 shows the matrix of rotated components following this criterion.

Table 7. Rotated component matrix^a

Items	F1 (Credit)	F2 (Insurance and pensions with expenses and budget)	F3 (Saving)	F4 (Insurance and pensions 2)	F5 (investment)	F6 (Insurance and pensions 3)
CR13	.714					
CR18	.705					
CR11	.679					
CR14	.665					
CR15	.639					
CR12	.563					
CR16	.530					
SP24		.783				
SP23		.770				
GP28		.743				
GP30		.724				
AH7			.753			
AH8			.730			
AH6			.663			
AH9			.616			
SP20				.835		
SP21				.727		
SP22				.711		

Inv3					.803	
Inv2					.683	
Inv4					.682	
SP26						.704
SP25						.673
eigenvalue	6.401	2.615	1.659	1.533	1.176	1.041
σ^2	27.83	11.37	7.21	6.67	5.12	4.53
Extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalization. ^a The rotation has converged in 7 iterations.						

With the 23 items of the model, which was confirmed (Figure 4), a Varimax rotation is again performed to obtain an alternative model. Therefore, Figures 5 to 9 show the resulting models in the search for the best model:

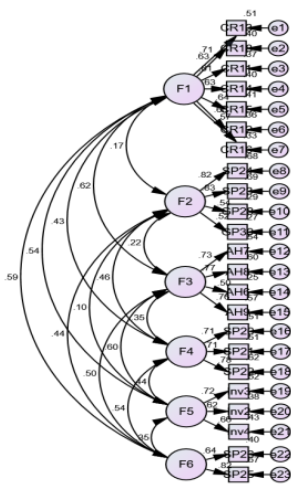


Figure 5. Model A

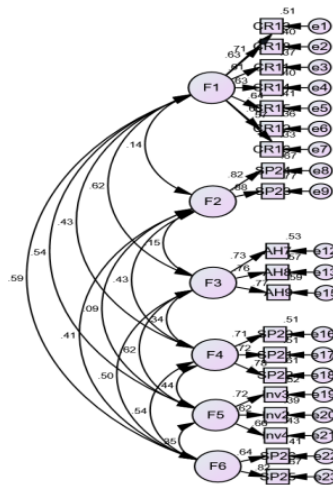


Figure 6. Model B

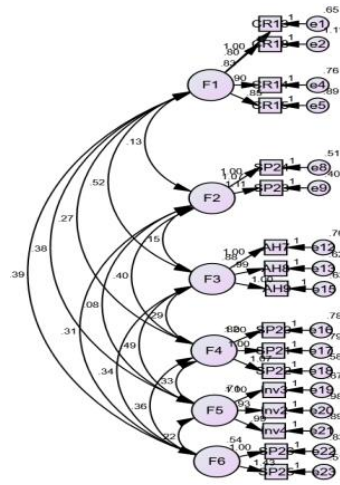


Figure 7. Model C

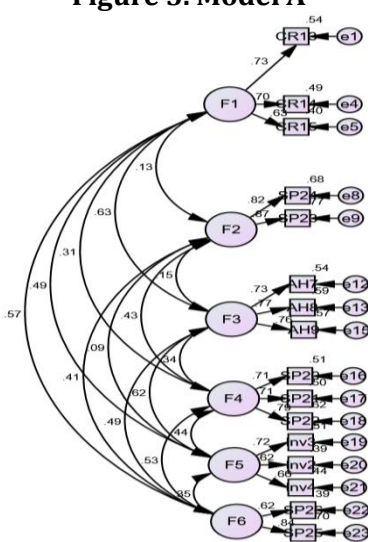


Figure 8. Model D

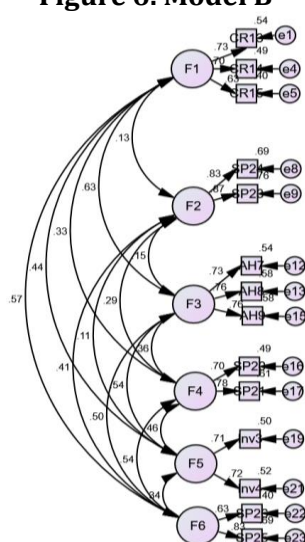


Figure 9. Model E

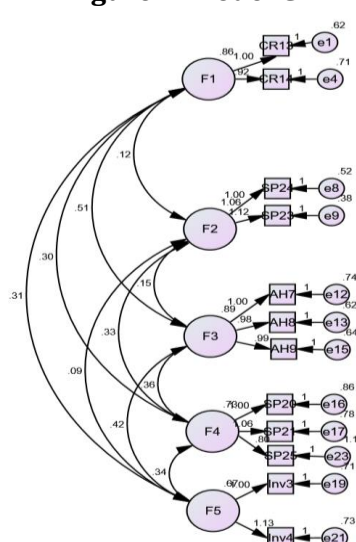


Figure 10. Model F

Once again, the maximum likelihood method was used and those indicators that were considered necessary for the adjustment of the model were modified, which is shown in the summary of Table 8 for models E and F in Figures 9 and 10, respectively. These two models have adjustments very similar. In both, acceptable values are observed in the indicators $\chi^2=88.535$ with 62 df, p -value (.015), CFI (.981), GFI (.963), TLI (.972), and RMSEA (.036) as shown in Table 8.

Table 8. Indicators of the models obtained

	RMSEA	CMIN/DF	RMR	GFI	AGFI	PGFI	TLI	CFI	PRATIO	PNFI	PCFI
Model A	.074	2.761	.104	.862	.823	.672	.832	.858	.850	.677	.729
Model B	.059	2.135	.080	.910	.878	.672	.904	.921	.816	.705	.752
Model C	.050	1.822	.073	.936	.906	.636	.939	.953	.765	.691	.729
Model D	.036	1.931	.073	.938	.906	.614	.936	.952	.681	.641	.668
Model E	.036	1.428	.053	.963	.937	.568	.972	.981	.681	.641	.668
Model F	.037	1.448	.047	.973	.947	.501	.977	.985	.618	.591	.609

5. Discussion of empirical results

According to model d in Figure 4, the factors are represented as follows: in relation to credit, workers give importance to the requirements requested by financial institutions. They consider that requirements are easy to interpret and be able to comply with them to obtain them. Good credit management brings with it a good record before financial institutions, which favors obtaining new credits.

On the issue of the retirement fund accounts (Afores, Spanish acronym for *Administradora de Fondo para el Retiro*), workers feel confident in the institutions that manage their retirement savings and are clear about the commissions they charge. Similar case in the matter of savings, since the workers perceive that the bank accounts have been adapted to their needs, since the banks have become very flexible in terms of requirements and opening amounts. Workers also perceive that financial institutions provide clear and complete information regarding the account on a regular basis, so that users are informed. The management of the account statement is essential to know the history of the savings account and the returns generated in each period when acquiring bank promissory notes.

Financial institutions also offer a wide variety of investment alternatives associated with savings accounts. In the traditional account, it increases according to the frequency with which they deposit. When there are significant amounts without withdrawals, then financial institutions make other types of accounts available to savers, these are term investment accounts. Moreover, investment accounts allow savers to generate higher returns at pre-established terms. According to the results, the workers participating in the survey stated that the investment products and services have been adapted to their needs, and the information provided by the banks on these accounts has been clear and complete.

Moreover, factors 5 and 6 expose the opinion of the participants in relation to how important it is to have life insurance and medical expenses. Although their opinion is not evidence of having any of them, but it also shows the importance that, these financial products have in the

well-being of people. In this sense, the workers express their total agreement regarding the facility that exists to take out insurance and consider the variety of insurance that exists and that adapts to their needs to be an advantage. Undoubtedly, life and medical expenses insurance brings peace of mind in the face of possible adversities, since health care is by nature very expensive, and sometimes leaves the relatives of patients, without the assets they had, to cover the expenses derived from a disease. All of the above is according with an effective management of personal finances and help in budgeting to manage resources. Under these considerations to the model “a” described in Figure 4, we can see that Chen and Volpe (1998) reported findings that suggest that the little financial knowledge shown by the people in their study, in matters of investment, savings or spending, were the main causes in their financial problems. Therefore, this result leads us to think that knowledge of financial issues has increased over time, specifically for workers.

Finally, in model “E” of Figure 9, the factors are grouped in different directions, resulting in very similar cases in some cases. For example, credit once again shows the importance given by workers to the requirements requested by financial institutions. It is easy for them to interpret and cover with them when they apply for a loan.

6. Conclusions

This section begins with some comments on practical implications in business management. The results obtained provide important evidence to suggest a series of alternatives to promote the habit of healthy personal finances in workers. For companies, CEO or managers, it is important that worker feels satisfied in his workplace, since this translates into more efficient and productive employees in the tasks they carry out every day. The interest that the company places in its employees undoubtedly results in mutual benefits. For this reason, it is important that companies encourage savings in their workers, implementing strategies that favor workers for each peso saved, the company may contribute a similar amount or different percentages. At the end of the year, a better saving results in a greater wealth for the worker.

The promotion of savings for retirement, with additional quotas to those already provided by the companies for which they work, the habit of using health risk coverage insurance, patrimonial assets or of any other nature, in the same way will translate into long-term benefits for workers. Another strategy that always results in mutual benefits is continuous training in financial education issues, according to what has been proposed by the G20 and various international organizations.

With respect to financial education, companies can train their staff on issues related to financial health, economic well-being and, above all, the management of mobile applications in digital financial services. Regarding theoretical implications, the confirmation of a measurement model from the established theoretical criteria is always a contribution to the field of knowledge. Although it is true that the exploratory structure discussed a priori approximates a reality extracted from a database. Although doubts will always arise as to whether the model explains the reality of the phenomenon, however, this is not the purpose of the study, since the result of the confirmatory analysis is only limited to showing the model that best fits reality and that is the contribution to the field of FE.

A great limitation of this research is the time and economic resources to develop surveys that cover the largest possible number of participants and that the samples are highly representative of the different population sectors analyzed. Another limitation presented by social studies is the possible bias that may exist in the answers of the participants.

In relation to the suggested future research topics, it would be worth exploring the levels of use of financial apps by workers, considering that internet banking can be a more effective way to manage their payroll and be financially included to a greater number of financial services and products. About this, the opportunity opens for an additional research topic that discusses the levels of financial inclusion in Mexican workers, in different industrial, service and commercial sectors. Similarly, it would be convenient to carry out research to measure the levels of satisfaction towards the attributes of digital financial services.

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Appendix

Financial Knowledge Test

INVESTMENT
Inv1. Financial institutions facilitate access to the investment products they offer.
Inv 2. Your bank has offered you alternatives when you state your investment needs.
Inv 3. The investment products and services offered by financial institutions have been adapted to your needs.
Inv 4. The information provided by financial institutions on their investment alternatives is clear and complete.
Inv 5. A financial institution can be trusted to invest resources.
SAVING
AH6. The requirements requested by financial institutions to open a savings account are accessible.
AH 7. Your bank has offered you alternatives when you explain your savings needs.
AH 8. The savings accounts that financial institutions have offered you have been adapted to your needs.
AH 9. The information provided by financial institutions about your savings accounts is clear and complete.
AH 10. You feel confident when saving your resources in a financial institution.
CREDIT
CR11. The requirements requested by financial institutions to grant a personal loan (credit card) are accessible.
CR 12. Financial institutions grant facilities to contract a mortgage loan.

CR 13. The requirements of financial institutions to grant a car loan are simple and accessible.
CR 14. The requirements to contract a SME or microcredit loan are simple and accessible.
CR 15. The different credits offered by financial institutions are enough to meet your needs.
CR 16. Financial institutions clearly specify the commissions they charge for their loans.
CR 17. The information presented in the statement of your credits is clear and complete.
CR 18. You feel confident requesting a loan from a financial institution when you need resources.
INSURANCE AND PENSIONS
SP19. It is easy to access a retirement savings account.
SP 20. Retirement fund accounts clearly specify the commissions they charge.
SP 21. You trust your retirement fund to manage your retirement resources.
SP 22. The information presented in the account statement of your retirement fund is clear and complete.
SP 23. It is important to have health insurance.
SP 24. It is important to have life insurance.
SP 25. It is easy to take out insurance.
26. Insurers have offered you alternatives when outlining your coverage needs.
SP 27. The information provided by institutions when offering insurance is clear and complete.
EXPENSES AND BUDGETS
GP28. It is useful to have a budget to manage your resources
GP 29. Financial institutions offer you alternatives to manage your expenses
GP 30. Keeping track of your expenses is essential to have healthy finances