

# The Role of Housewives in the Management of Household Finances

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**Abstract** – The aim of study focuses on evaluating the role of the housewives, regarding the terms such as: financial management, knowledge and use of financial products, financial planning, forecasting and savings as well, level of debt. Female workers from the “Duxom” Corporate participated in the study, which are located in the different headquarters in the State of Mexico, Progreso, Tabasco, Sinaloa, Sonora, Guadalajara, Veracruz, and Baja California. Of the total number of employees, a non-probabilistic sample was applied by self-determination, in order to obtain the greatest number of cases in the time established for the field study, which was two months. To obtain the data we used a scale, which integrates questions from the participants' profile, and 27 items related to financial management (9 items); knowledge and use of financial products (4 items); financial planning at home (4 items), foresight and savings (3 items), debt level (7 items). With the results, a four-factor model is validated, where we can see that women like to have items to impress people, and it gives them pleasure to buy luxury items. They agree to be guarantors for other people, they make extreme decisions in investments and something very risky, they make purchases even when they cannot pay them, since they prefer to have debts than to let their children go without gifts on important dates.

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They like to buy online because the internet makes everything easier for them. They recognize the importance of families setting financial goals to identify priorities. Finally, they consider that having a written financial plan is essential for successful financial management of income, savings and expenses, which translates into family success.

**Keywords** – Financial management, financial products, financial planning, forecasting and savings, debt.

## 1. Introduction

Currently, changes in different aspects of life are observed, some of them associated with the economic fluctuations of countries. Families are not exempt from this, since changes derived from fluctuations in income generate financial vulnerability in families. In this case, these income fluctuations occur more frequently in women's incomes, since they tend to be much more unstable [32]. According to this idea, women have less debt than men do, because they know how to control themselves, they avoid getting into debt and therefore they are more cautious when requesting a loan, they even tend to feel financially incompetent [26]. Therefore, being financially stable is one of the security requirements for all members within a family [30]. Proper management of income is important, especially by housewives as custodians of family finances, to meet the needs of the family through financial planning. The above is of great importance due to the uncertainty of current economic conditions, hence the need to carry out good financial planning for future economic conditions is emphasized [7].

In this way, through financial management it will be possible to prioritize decisions based on the circumstances of each family, from the most important to the least important. Hence, the importance of creating savings as a prevention strategy for future needs [32]. Family financial management aims to use personal and financial resources to produce a level of satisfaction and generate financial reserves to satisfy future and unforeseen needs [39].

Within households, there are many financial variables that are difficult to address, ranging from low income and lack of financial knowledge to investment fraud, which undoubtedly contribute directly to the poor financial situation that a family can face [10]. Therefore, it is important to note that financial knowledge, income, as well as lifestyle will influence financial behavior [41].

These arguments make it pertinent to raise questions about: How is the role of family finances carried out within homes?, based on money management, financial planning, and financial knowledge. Then, the fundamental role of the housewives is questioned, because theoretical

evidence has indicated as a fundamental actor in the management of family finances. Therefore, the aim of the study focuses on evaluating the role of housewives in money management and financial planning, based on their financial knowledge. Hence, statistically we seek to prove:  $H_0$ : The data matrix is an identity matrix, and,  $H_1$ : the data matrix does not constitute an identity matrix.  $H_{01}$ : There is no underlying structure that explains money management, financial planning, and financial knowledge in housewives.  $H_{11}$ : There is underlying structure that explains money management, financial planning, and financial knowledge in housewives.

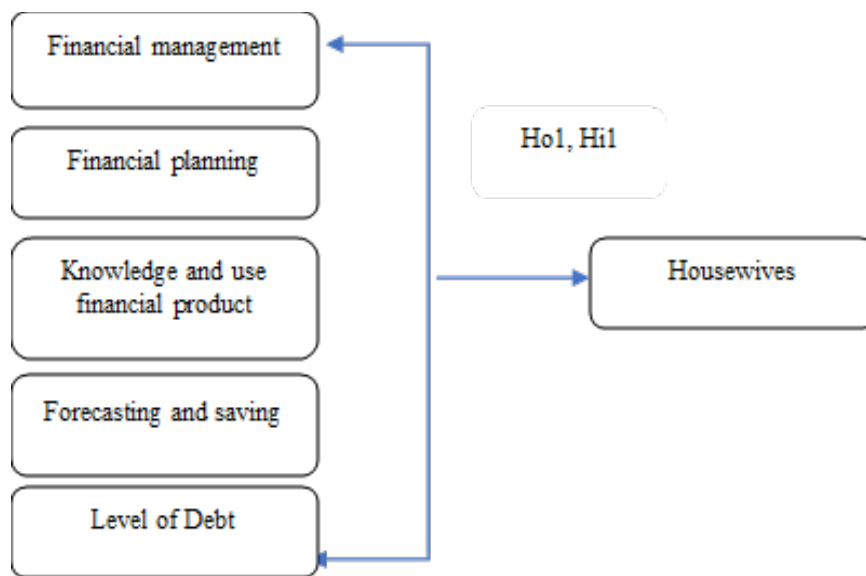


Figure 1. Conceptual model to empirical study

## 2. Literature Review

Basic knowledge of financial terms, as well as the ability to understand, determines the level of financial education of the person, in this case the study focuses on housewives. In this regard, [44] point out that housewives have implemented a financial planning strategy in their home, as part of their efforts to invest in the future. Accordingly, housewives have the responsibility of controlling spending, that is, the wife usually controls the family finances and teaches the children to live a lifestyle with the intention of avoiding spending more than they earn [30].

The above is part of financial planning, which they develop within the home whether they have sufficient financial knowledge or not.

Without a doubt, financial education is fundamental in people's lives, as [27] point out, financial education is a set of basic knowledge which every individual should have, in order to avoid problems in the financial management of their income.

Financial problems do not arise only because of a person's low income; they arise due to a lack of knowledge about personal financial management. Within the family context, various nuances are adopted depending on the family member, however, generally it is the housewives who manage the home finances, regardless of the level of financial education they have.

Adiandari [25] defines financial management or planning as the ability to use savings and available resources to make decisions that favor income and at the same time protect assets from losses and depreciation. Financial planning includes credit and money management, tax and insurance control, risk management, investments, and retirement planning. Hence, people use management to intelligently plan and manage their resources to achieve their goals. Hence, the goal of the housewife focuses on satisfying the needs of the family but avoiding excessive expenses.

In this sense, it is through financial education that people can better organize their personal finances according to their needs [22].

Although within a family, wives are responsible for organizing most of the household finances. Various studies have shown that men are more financially oriented compared to women since culturally, the man is usually considered the head of the family [25]. However, financial skills and knowledge have acquired various nuances, since economic activity has evolved over time, mainly in recent years due to the COVID-19 pandemic, which has generated changes in education, work, and almost all activities. Furthermore, with the inclusion of digital environments, consumer-spending behaviors have changed [13]. In the previous context and given that the spread of COVID-19 has had a direct impact on the economy, [39] refer that financial flexibility is necessary, due to its advantages in the face of a crisis. However, the flexibility or resilience to resist and confront crises requires the ability to adequately plan and manage finances. The above is important considering the financial management that housewives carry out in their daily lives, managing the family income.

Faced with economic instability and some possible financial unforeseen events, housewives must make the correct economic decisions, because they are the ones who play an important role in making financial decisions in the family environment, and they are also the ones who develop financial planning within the home. If a housewife has a good financial experience, she can achieve good money management, considering that each person will have a different experience in financial management, such as insurance planning, investments, pension funds, and loans [36], [25], [6].

Financial education contributes significantly to improving well-being, which is why the introduction of educational programs and lessons on savings habits in homes is essential, particularly in housewives to achieve adequate financial planning [7], [39]. In this regard [10], mention that the home becomes a center of financial knowledge where financial activities are carried out, where decisions are made in matters of provision and savings, so households are part fundamental within the development of the economy, hence the importance of implementing improvements in financial education. Therefore, it is important that mothers have an appropriate level of financial education to generate well-being for the family, considering that the educational level directly affects the happiness of the family [2].

Regarding the important role of women in the home, it was during the COVID-19 pandemic where women assumed different roles, which showed the important role they play within families and within communities. However, it is housewives who face various barriers to be able to develop their financial

skills, as well as to create economic autonomy and empowerment for decision-making [33]. At home, digital financial literacy is necessary to generate security and financial stability in the family. Therefore, it is important that housewives must acquire knowledge on these topics, since they are responsible for managing expenses within the home. To achieve greater financial inclusion, financial education is necessary [5]. That is why it is important to highlight what [45] point out, the effect that financial education has on the economic behavior of a family will differ from the high or low level of education, depending on its location, whether in urban homes and rural homes, and between men, and women. The above, despite the fact that channels outside formal education are equally important to develop financial education and promote good financial practices that lead to good financial behavior [8].

A person with more education will have a higher level of financial knowledge [34]. This knowledge is important, since in addition to taking charge of household chores, according to [33], the number of women who contribute to finances within their homes has been increasing mainly during the last decade. This is because there are many women who depend on their father or husband to manage their money. Furthermore, there is a widespread belief that men should have more economic knowledge than women [8].

### ***2.1. About Debt and Financial Planning***

Accounting and financial planning take on an important role in the management of family finances, because the lack of financial control can cause economic difficulties for the family and even divorce of the spouses [44]. Financial planning helps to have control, how much one has and what it was spent on, which helps prevent financial embezzlement in the home [30]. With better financial education of housewives, financial management focused on healthy financial behavior can be achieved [8]. However, in the absence of a level of financial knowledge, they are exposed to complicated situations regarding responsible debt.

In this regard, the lack of financial education is one of the main reasons for housewives to acquire persistent debt behavior [1]. Some studies have shown that housewives take out loans to pay for their children's tuition, as well as to purchase products and goods that are unnecessary [28]. Financial education turns out to be essential, as people with low levels of financial education tend to remain over-indebted. The higher the level of financial knowledge of the housewife, the more intelligently she will be able to manage her income and expenses.

In this sense, the role that financial education plays in the level of indebtedness is important [28] financial education affects people's decision to obtain a loan.

Household debt cannot be explained or determined solely by the social spending it implies, but by its quality, as well as its institutional agreements and its direction, which will determine a lower or higher level of debt [4]. Debt in households or families can be defined as an unintended consequence of the directionality and orientation of well-being. According to [28] daily needs that cannot be covered with income obtained through work are covered by loans, whether obtained through financial institutions that offer loans to the public, considered official, or by lenders considered as unofficial nature. Although rural households prefer the informal financial market, urban households prefer the formal market [40]. On the other hand, married women are more stressed by debt due to income problems compared to other women who are in a different marital status [6]. In this sense, the less wealth one has, versus other households, the most indebted households are less affected by the impact of wealth, giving it less importance unlike other households [18].

## **2.2. Financial Knowledge and the Use of Financial Products**

Another important factor to consider as part of efficient financial knowledge on the part of housewives is their skill and awareness regarding the management of financial products and services. The greater the financial knowledge, the greater the probability of benefiting from the financial investment compared to those people with less financial knowledge [40]. In this way they will diversify risks and improve profitability through the portfolio of existing financial products. With the arrival of online banking, people do not need to go to the bank to gradually enjoy banking services, in this way digitalization leads to the transformation of banking institutions, turning them into digital banks as indicated by [37].

Thanks to digitalization, it is more necessary for housewives to have adequate knowledge to use financial services and products due to their participation in the management of household finances because housewives are the ones who require the use of digital banking services. Without a doubt, the knowledge and use of financial products generates benefits, if they are used in a conscious and responsible manner. Using digital means to make payments, digital loans, and digital financing can increase a household's annual income.

According to [23] the combination of digital technology and inclusive finance has improved the efficiency of financial services and contributed to the increase in citizens' income.

Due to the above, the use and management of financial products is very important today. In this regard, [37] point out that the government also plays a key role in creating conducive conditions to accelerate the adoption of digital banking applications among housewives, providing appropriate technology and the Internet access in the homes.

## **3. Methodology**

It is a non-experimental cross-sectional study, descriptive, exploratory, correlational and confirmatory, for this last analysis, the SEM methodology is used.

### **3.1. Population and Sample**

The population participating comprises female workers at "Duxom" Corporate, who are working in the different headquarters located in the State of Mexico, Progreso, Tabasco, Sinaloa, Sonora, Guadalajara, Veracruz, and Baja California. Through non-probabilistic sampling by self-determination, the aim is to obtain a representative sample of each of the aforementioned states. The aim of the study is to evaluate the level of knowledge, financial planning, money management, level of debt, considering that women manage their household expenses, whether they are single, married, widowed, divorced, single mother, even those living in the core of the home, who manages family finances.

### **3.2. Test**

The Latin American Studies Network in Administration and Business (RELAYN) designed the instrument used in this study, which is composed of seven blocks. In their study, [42] analyze block 6 corresponding to financial culture, which is, made up of 27 items: Financial management with nine items; Knowledge and use of financial products with four items; Financial planning at home with four items, Forecasting and savings with three items, Level of debt with seven items.

In addition, section I includes questions related to the sociodemographic profile of the participant, which are gender, age, marital status, education, economic dependents, who are economic dependent and monthly income. Section II corresponding to the previously mentioned items, designed on a Likert scale with a range of responses ranging from 1 to 5, where: (1) totally disagree to (5) totally agree.

To apply the questionnaire, the Google forms format is used. The purpose focused in covering a broader range of distribution, within the states indicated in the population section. Table 1 describes the dimensions and indicators of the instrument used.

Table 1. Dimensions and indicators of the test

Dimension	Items	Option-answer
Financial management	1-9	1 Total disagree 2 Disagree 3 Indifferent 4 Agree 5 Totally Agree
Knowledge and use of financial services and products	10-13	
Financial planning at home	14 - 17	
Prevision and savings	18 - 20	
Level of debt	21 - 27	

### 3.3. Statistical Procedure

Firstly, the reliability and internal consistency of the test is evaluated through Cronbach's alpha coefficient, under the criterion  $\alpha > .70$  (acceptable). In addition, the normality of the data is verified under the criteria of asymmetry ( $< 2$ ) and Kurtosis ( $< 7$ ) according to the criteria proposed by [19] described in Table 2.

Table 2. Skewness, kurtosis values, and sample values

Simple size	Z value	skewness	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 > 300	Ignore	> 2	> 7	0.05	Reject	Non normally
	Otherwise	< 2	< 7	0.05	Not Reject	Normally

Source: [19].

It is important to verify the reliability and internal consistency of the scale, as well as the normality. Hence, if the univariate distributions of the ordinal elements are skewed or have excess kurtosis, [29], [35], [31]. [42], suggest that polychoric correlation matrices must be used. Subsequently, to obtain the underlying structure of the database, exploratory factor analysis with maximum likelihood and Varimax rotation is used. With the factorial solution obtained, it is evaluated using the SEM methodology with the use of AMOS v23 software..

The resulting model is evaluated through absolute fit, structural fit, and parsimony to obtain the best model fit [12], [15], [38], [16] and [11]. Also, the measure indicators are: maximum likelihood  $\chi^2$  (chi-

square), goodness of fit index (GFI), and adjusted goodness of fit index (AGFI), root mean square error approximation index (RMSEA), root of mean square of the residual (RMR) and the comparative fit index (CFI), which compares the estimated model with the null model that indicates independence among the variables under study.

### 3.4. Data Analysis

The scale shows a Cronbach's alpha of  $\alpha = .844$  overall acceptable according to the theoretical criterion [11] and by item all are  $> .8$  (Table 3). In addition, Table 4 describes the asymmetry and kurtosis of the total items.

Table 3. Total item statistics

Item	N	Mean	Standard Dev.	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
MF1	189	1.6720	1.13845	63.2698	199.421	0.349	0.840
MF2	189	2.0794	1.30834	62.8624	194.811	0.422	0.837
MF3	189	1.4444	0.99110	63.4974	201.528	0.335	0.840
MF4	189	1.6190	1.11224	63.3228	196.390	0.459	0.836
MF5	189	1.4021	0.95494	63.5397	198.771	0.456	0.837
MF6	189	1.8466	1.17724	63.0952	195.629	0.453	0.836
MF7	189	1.7037	1.15641	63.2381	193.863	0.520	0.834
MF8	189	1.4550	0.98626	63.4868	200.038	0.392	0.839
MF9	189	2.1323	1.26679	62.8095	196.900	0.378	0.839
UPS10	189	3.1376	1.31769	61.8042	196.754	0.364	0.839
UPS11	189	3.7249	1.27098	61.2169	194.447	0.448	0.836
UPS12	189	3.8148	1.34188	61.1270	196.548	0.361	0.840
UPS13	189	3.4392	1.34984	61.5026	192.985	0.457	0.836
PF14	189	4.0106	1.21598	60.9312	203.235	0.209	0.845
PF15	189	3.8148	1.25588	61.1270	200.367	0.281	0.842
PF16	189	4.1005	1.24005	60.8413	206.081	<b>0.122</b>	0.848
PF17	189	3.3757	1.25970	61.5661	198.694	0.329	0.841
PA18	189	2.2434	1.36601	62.6984	203.637	0.165	0.847
PA19	189	1.9947	1.39336	62.9471	196.306	0.351	0.840
PA20	189	3.7460	1.34838	61.1958	194.392	0.419	0.837
ND21	189	1.5767	1.02141	63.3651	196.095	0.518	0.835
ND22	189	1.7037	1.08522	63.2381	197.502	0.435	0.837
ND23	189	1.7037	1.09011	63.2381	198.480	0.400	0.838
ND24	189	1.7989	1.18582	63.1429	196.123	0.434	0.837
ND25	189	1.8730	1.27361	63.0688	193.809	0.466	0.836
ND26	189	1.9048	1.30524	63.0370	200.323	<b>0.269</b>	0.843
ND27	189	1.6243	1.14466	63.3175	195.260	0.481	0.836

As shown in Table 3, the columns: scale mean if an item is removed and scale variance if an item is removed are typically of little use in interpreting results. Therefore, we focus on the columns of the correlation between a particular item and the sum of the rest of the items. In this column, we observe the combination of one element with respect to the rest. The MF7 indicator has the highest item-total correlation of  $r = .520$  and the lowest item is PF16 ( $r = 0.122$ ).

Items with correlations close to zero must be eliminated. Finally we observe the last column in which the Cronbach's alpha is calculated if the element is deleted, for example the global Cronbach's alpha of .844 drops to .840 if that element is eliminated. If some "Alpha if item removed" values are greater than the overall alpha, then analyze - scale - reliability analysis should be run after moving the offending item from the box and repeat the process until no values exist in the "Alpha if element is deleted" column greater than the overall alpha.

Table 4. Descriptives

Items	N	Minimum	Maximum	$\mu$	Standard Deviation	asymmetry	Kurtosis
PF16	189	1.00	5.00	4.1005	1.24005	-1.445	1.075
PF14	189	1.00	5.00	4.0106	1.21598	-1.222	0.556
UPS12	189	1.00	5.00	3.8148	1.34188	-0.912	-0.454
PF15	189	1.00	5.00	3.81	1.25601	-0.915	-0.152
PA20	189	1.00	5.00	3.7460	1.34838	-0.869	-0.440
UPS11	189	1.00	5.00	3.7249	1.27098	-0.931	-0.136
UPS13	189	1.00	5.00	3.4392	1.34984	-0.460	-0.989
PF17	189	1.00	5.00	3.3757	1.25970	-0.514	-0.650
UPS10	189	1.00	5.00	3.1376	1.31769	-0.172	-1.086
PA18	189	1.00	5.00	2.24	1.36644	<b>0.791</b>	-0.602
MF9	189	1.00	5.00	2.1323	1.26679	<b>0.859</b>	-0.273
MF2	189	1.00	5.00	2.0794	1.30834	<b>0.975</b>	-0.189
PA19	189	1.00	5.00	1.9947	1.39336	<b>1.178</b>	-0.016
ND26	189	1.00	5.00	1.9048	1.30524	<b>1.281</b>	<b>0.362</b>
ND25	189	1.00	5.00	1.8730	1.27361	<b>1.318</b>	<b>0.449</b>
MF6	189	1.00	5.00	1.8466	1.17724	<b>1.310</b>	<b>0.806</b>
ND24	189	1.00	5.00	1.7989	1.18582	<b>1.499</b>	<b>1.266</b>
ND22	189	1.00	5.00	1.7037	1.08522	<b>1.623</b>	<b>1.897</b>
MF7	189	1.00	5.00	1.7037	1.15641	<b>1.601</b>	<b>1.545</b>
ND23	189	1.00	5.00	1.7037	1.09011	<b>1.782</b>	<b>2.528</b>
MF1	189	1.00	5.00	1.6720	1.13845	<b>1.743</b>	<b>2.131</b>
ND27	189	1.00	5.00	1.6243	1.14466	<b>1.959</b>	<b>2.806</b>
MF4	189	1.00	5.00	1.6190	1.11224	<b>1.900</b>	<b>2.687</b>
ND21	189	1.00	5.00	1.5767	1.02141	<b>1.864</b>	<b>2.777</b>
MF8	189	1.00	5.00	1.4550	0.98626	2.346	<b>4.711</b>
MF3	189	1.00	5.00	1.4444	0.99110	2.591	<b>6.113</b>

\* Asymmetry -Standard error (.177); kurtosis standard error (.352)

The skewness and kurtosis values present acceptable and unacceptable values, which does not favor the normality of the data. Therefore, the correlation matrix is analyzed to assess the relevance for developing the EFA.

Table 5 shows the correlation matrix, which indicates that it does not constitute an identity matrix; therefore, it is an appropriate database for empirical analysis [14], [20], [9], [21].

Table 5. Correlations matrix

	MF1	MF2	MF3	MF4	MF5	MF6	MF7	MF8	MF9
MF1	1.000	0.360	0.300	0.413	0.406	0.240	0.326	0.318	0.252
MF2		1.000	0.170	0.313	0.400	0.301	0.314	0.244	0.308
MF3			1.000	0.396	0.485	0.282	0.436	0.363	0.296
MF4				1.000	0.606	0.296	0.363	0.285	0.372
MF5					1.000	0.410	0.609	0.454	0.422
MF6						1.000	0.576	0.294	0.349
MF7							1.000	0.455	0.310
MF8								1.000	0.313
MF9									1.000
	UPS10	UPS11	UPS12	UPS13	PF14	PF15	PF16	PF17	PA18
UPS10	1.000	0.407	0.345	0.408	0.162	0.234	0.229	0.302	0.037
UPS11		1.000	0.616	0.669	0.332	0.368	0.372	0.467	0.091
UPS12			1.000	0.594	0.363	0.402	0.462	0.416	-
UPS13				1.000	0.347	0.371	0.307	0.394	0.043
PF14					1.000	0.799	0.631	0.407	0.043
PF15						1.000	0.582	0.434	0.030
PF16							1.000	0.483	-
PF17								1.000	0.037
PA18									0.095
	PA19	PA20	ND21	ND22	ND23	ND24	ND25	ND26	ND27
PA19	1.000	0.192	0.417	0.199	0.206	0.279	0.281	0.228	0.236
PA20		1.000	0.034	-0.026	0.017	0.071	0.083	-0.011	0.003
ND21			1.000	0.548	0.541	0.399	0.392	0.400	0.496
ND22				1.000	0.541	0.392	0.381	0.243	0.372
ND23					1.000	0.332	0.433	0.406	0.418
ND24						1.000	0.420	0.283	0.312
ND25							1.000	0.367	0.631
ND26								1.000	0.524
ND27									1.000

Source: own

Once the correlation matrix is verified, that it is not an identity matrix, we proceed to calculate the Bartlett test of sphericity with Kaiser (KMO), the measure of sampling sufficiency (MSA), Chi-square with n df. If the KMO value is less than 0.5 it would indicate that the correlations between variables, cannot be explained by other variables, and the EFA is not appropriate for these data. Therefore, the value KMO (.835), Chi-square 2237.433 with 351 df, and p-value <.001, provide evidence to reject the null

hypothesis according to the following: the KMO value is 0.835 with  $p < 0.000$  which is considered acceptable according to [12].

Furthermore, the Bartlett test of sphericity shows the calculated value of Chi-square (2237.433 with 351 df) that is > the maximum table value, hence, which allows the use of the exploratory factor analysis (EFA). Tables 6 and 7 show the total variance explained and rotated factor matrix.



Table 6. Total variance explained

Factor	Initials eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% variance	% cumulative	Total	% variance	% cumulative	Total	% variance	% cumulative
1	6.337	23.470	23.470	4.970	18.406	18.406	3.441	12.746	12.746
2	4.640	17.186	40.656	5.046	18.690	37.097	3.039	11.257	24.003
3	1.812	6.713	47.369	1.198	4.438	41.535	2.868	10.624	34.627
4	1.377	5.100	52.468	1.090	4.036	45.571	2.480	9.186	43.813
5	1.290	4.779	57.247	0.740	2.740	48.311	1.143	4.235	48.048
6	1.119	4.145	61.392	0.733	2.716	51.028	0.805	2.980	51.028

Table 7. Rotated factor matrix<sup>a</sup>

Items	F1	F2	F3	F4	F5	F6
MF5	.774					
MF7	.646					
MF4	.601					
MF3	.562					
MF9	.557					
MF6	.551					
MF8						
MF1						
MF2						
ND2 1		.716				
ND2 3		.686				
ND2 2		.638				
ND2 5		.571				
ND2 7		.561				
ND2 6						
ND2 4						
UPS1 1			.819			
UPS1 3			.749			
UPS1 2			.707			
PF17			.502			
UPS1 0			.502			
PF14				.855		
PF15				.844		
PF16				.587		
PA20				.553		
PA18					.656	
PA19					.572	

Extraction method: maximum likelihood. Rotation method: Varimax with Kaiser normalization. <sup>a</sup> The rotation has converged in 10 iterations.

Table 6 shows the variance explained by the initial solution. Only six factors in the initial solution have eigenvalues greater than 1. Together, they account for almost 61% of the variability in the original variables. This suggests that six latent influences are associated with financial knowledge, financial planning, and money management on housewives, but there remains room for a lot of unexplained variation. The variance explained by the extracted factors before rotation. The cumulative variability explained by these six factors in the extracted solution is about 51%, a difference of 10% from the initial solution. Thus, about 10% of the variation explained by the initial solution is lost due to latent factors unique to the original variables and variability that simply cannot be explained by the factor model. In the same table, we can see the variance explained by the extracted factors after rotation.

The rotated factor model adjusts the factors: the initial values in factors 1 and 2 show similar behavior after extraction and rotation. In a similar case, factor 3 and 4 behave similarly in the three moments. In factors 5 and 6, which have initial eigenvalues greater than 1, after extraction they drop below 1 and in rotation, only factor 5 remains with an eigenvalue greater than 1 and factor 6, both in extraction and in rotation decreases less than 1. This behavior means that the rotated matrix only presents five factors, which are analyzed in Table 7, to continue with the confirmatory analysis with SEM methodology.

### 3.5. Confirmatory Analysis Through SEM Methodology

In order to validate the resulting exploratory model described in Table 7, the SEM methodology is used. The confirmatory analysis allow us, to validate the adjustment of the measurement model, structural adjustment and parsimony [15], [38], [16], IBM software SPSS AMOS v23 is used.

The main indicators to evaluate the factorial solution are:  $\chi^2$  (Chi-square), 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). Figure 1 shows the initial model from the factorial solution.

To obtain the best fit of the model, it is necessary to modify some indices. Furthermore, the maximum likelihood method is used, and indicators with estimates lower than .60 are excluded, to obtain the best fit of the measurement model (diagram 2). It should be noted that there are several fit indices to evaluate structural models [17] likewise the specialized literature suggests using the indicators  $\chi^2$  with df, p-value, CFI, GFI, TLI, RMSEA [38].

However, it is advisable to consider the rest of the indices, according to the theoretical criteria established in the SEM methodologies. Figure 1 shows the model of financial knowledge in housewives.

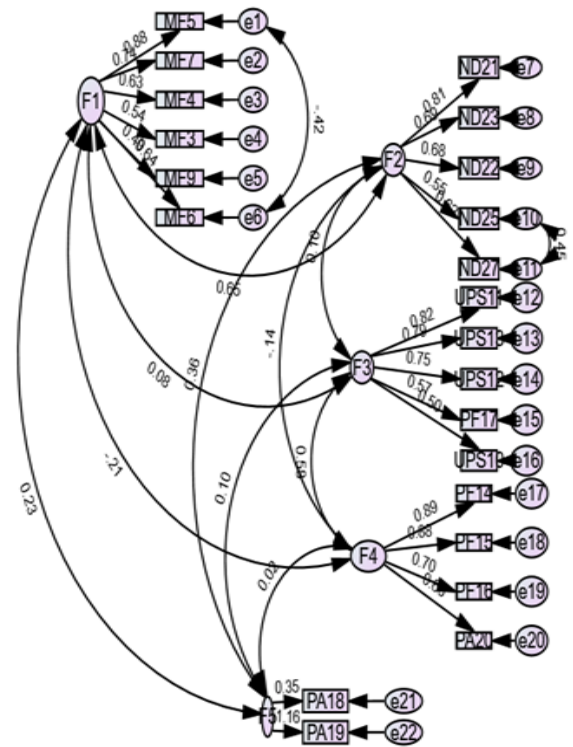


Figure 1. Initial model from the factorial solution

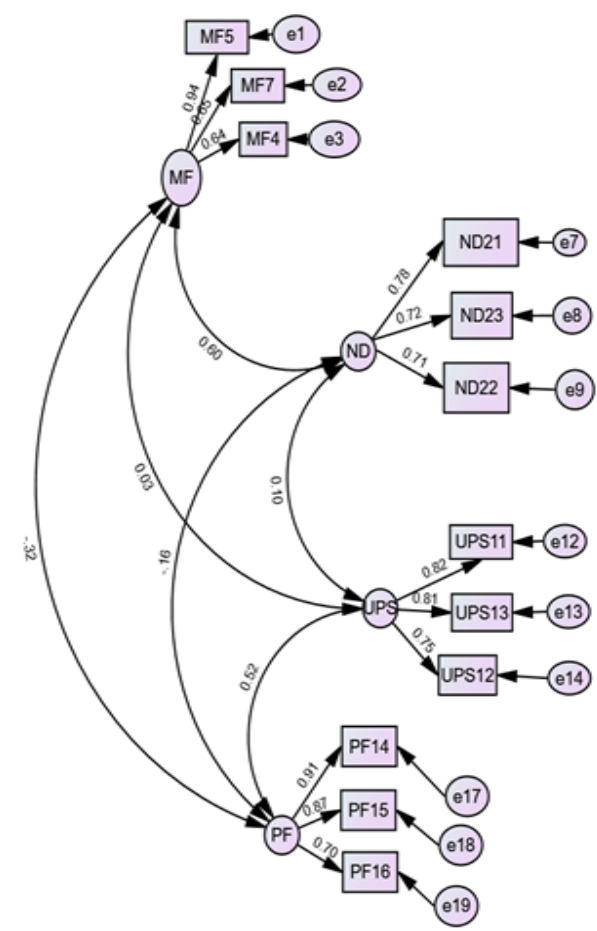


Figure 2. Adjusted model  
 $\chi^2=362.782$  con 197 gl, p-valor (.054)

After the modification of some indicators less than .60 in the initial measurement model (Figure 1), since it was necessary to exclude them to improve the fit of the model, Figure 2 shows the final model that presented the best fit.

Table 8 shows acceptable values in the indicators CMIN/DF (1.659), CFI (.968), GFI (.932), TLI (.955), RMSEA (.059), among others.

Table 8. Models obtained

	RMS EA	CMIN/ DF	RMR	GFI	AGFI	PGFI	TLI	CFI	PRAT IO	PNFI	PCFI
Model 1	.067	1.842	.117	.857	.816	.667	.885	.902	.853	.691	.769
Model 2	.059	1.659	.082	.932	.890	.574	.955	.968	.727	.672	.704

#### 4. Discussion

The four-factor model obtained from the confirmatory analysis allows us to discuss the results in the following terms:

Factor one -Financial Management-: This factor explains the financial management of the study participants. In this regard, they point out that they like to own things to impress people, as well as buy luxurious things, which gives them a lot of pleasure. Another more significant fact is that they have accepted endorsements from someone. The latter is significant, since it is a latent risk of the person who is a guarantor for another person, in the event that the debtor does not comply with his responsibility, then the guarantor has to respond, which constitutes a risk to the assets of the people who are guarantors. These skills are consistent with the conclusions of [3] who report that female entrepreneurs frequently become undercapitalized compared to men. They highlight the need to improve their education, since their limited knowledge affects their financial performance and they have limited ways to obtain capital.

Factor two -Debt level-: In relation to the level of debt, the participating women state that they make purchases even when they cannot pay for them, in addition to making extreme investment decisions, since they generally prefer to invest in risky alternatives. Finally, they prefer to have debt than to let their children go without gifts on important dates.

Factor three -Knowledge and use of products and services-: In this factor, the participants point out that by purchasing online they avoid lines to make payments, collect products, receipts, among other things. In addition, the development of new technologies gives them security for virtual economic transactions, which also gives them confidence to buy online. Current technological facilities, such as the Internet access, the value of products and habits, are important factors that contribute to the consumption of digital services [37]. An advantage of commerce over the internet is that can be done at anytime and anywhere.

Housewives who actively participate in the digital market through online purchases, are influenced by their educational level when making their purchasing decision [24].

Factor four -Financial planning-: In factor four, the participants present a very specific point of view. They mention that families should have written financial goals that help determine spending priorities, hence the importance of maintaining an adequate income and expense budget, emphasizing short-term obligations. On the other hand, having a written financial plan is essential for successful financial management, and planning income, savings, and expenses is essential for family success in life. These results are consistent with [33] who state that the improvement in family financial well-being arises from financial planning. In addition, financial planning within households plays an important role in future investments, thus being one of the ways to prosper [43].

#### 5. Conclusion

The important role that housewives play in managing family finances is evident. Although the result showed their interest in owning assets to impress other people, it is also very significant that their trust leads them to be guarantors for other people, referring to debt. The role of guarantor entails risks considered unnecessary; since they depend on the financial security of the person, they support and believe that it will not affect them. However, the reality is different, since there are cases in which the debtor fails to pay, and the problem is absorbed by the guarantees of these people. Another finding that coincides, what has already been demonstrated in others studies, is the need to increase financial knowledge, which undoubtedly generates benefits for every person and favors reasoned decision making in all types of operations where economic resources are involved.

The maternal feeling of housewives in relation to the needs of their children on very special occasions leads them to make extreme decisions.

Without having the necessary resources to acquire what their children need, they make the decision to go into debt. Of course, this behavior is also observed in the male gender, but it is the housewives who took part in this study. The skills acquired in the management of technology are undoubtedly good learning; but its use must be responsible. Online purchases can generate unnecessary debt if the financial resource is not sufficient. However, when there is a need to purchase a product, it is the reason that motivates them to buy, even without having the financial resources. The ease of acquiring products through online purchases can lead to an unreasoned purchase that will lead to non-responsible debt.

It is important to establish financial goals, as well as prepare a record of income and expenses; hence, it is advisable to carry out a budget, which will undoubtedly favor the management of family finances.

As some studies have already pointed out, financial planning at home plays an important role in decision-making regarding investments, savings and other financial and economic activities carried out by families, which in most cases, the housewives are responsible of.

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