ITJ | The International Tax Journal

Analysis of the factors affecting the demand for Algerian insurance companies products: A study on a sample of insurance companies

Dr. Bachiri Hamza [1], **Dr. Abdelkader Amara** [2], and **Pr. Ghafsi Toufik** [3]

[1] Strategies and Policies Laboratory, Economic in Algeria, Mohamed Boudiaf University of M'Sila, Algeria, Email: hamza.bachiri@univ-msila.dz; https://orcid.org/0009-0007-0118-3485
[2] Strategies and Policies Laboratory Economic in Algeria, Mohamed Boudiaf University of M'Sila, Algeria, Email: abdelkader.amara@univ-msila.dz; https://orcid.org/0009-0001-1337-4349
[3] Strategies and Policies Laboratory Economic in Algeria, Mohamed Boudiaf University of M'Sila, Algeria, Email: toufik.ghafsi@univ-msila.dz; https://orcid.org/0009-0002-2311-2980

Abstract---Because it plays a major role in protecting other financial sectors and the nation's economy overall, the insurance sector is crucial to the economic framework. Due in large part to the issuance of Order No. 07-95 and the amendment to Law No. 06-04 of February 24, 2006, Algeria's insurance industry has been a focus of state attention since independence and has seen notable developments in line with both national economic policies and global trends toward the liberalization of trade in financial services. This study determined the economic variables—such as GDP, unemployment, and inflation that affect the demand for insurance products in the Algerian market. The findings show that these elements significantly influence Algeria's rising demand for insurance goods. The survey also found that the largest portion of the Algerian insurance market is made up of property insurance, especially auto insurance.

Keywords---Insurance products, insurance density rate, economic factors.

Introduction

Because it contributes to the growth of the Algerian economy through a variety of insurance companies that conduct various insurance operations with the goal of collecting returns and capital to invest later, the insurance industry in Algeria is regarded as one of the most significant economic and financial activities. Through insurance companies, which are regarded as one of the most significant economic

How to Cite:
Hamza, B., Amara, A., & Toufik, G. (2025). Analysis of the factors affecting the demand for Algerian insurance companies products: A study on a sample of insurance companies. *The International Tax Journal*, *52*(4), 1597–1613. Retrieved from https://internationaltaxjournal.online/index.php/itj/article/view/172

The International tax journal ISSN: 0097-7314 E-ISSN: 3066-2370 © 2025

Submitted: 15 January 2025 | Revised: 26 June 2025 | Accepted: 19 August 2025

entities that comprise the national economic structure and which, like any other establishment, seek to maximize wealth and achieve profit in addition to continuity and market survival, it also offers security to individuals by covering insured risks. Its performance is improved by generating returns from insurance operations and diversifying insurance products at rates that are affordable for both the insured and the uninsured, which raises demand for them.

It is observed that a number of factors affect the demand for the goods offered by Algerian insurance companies. Thus, it is now essential to do research on these elements in order to comprehend how they contribute to the growth in demand for insurance companies' products and the transformation of this industry from one of backwardness to progress. Consequently, the following is one way to state the research problem:

- What is the impact of these factors on the increase in demand for products from Algerian insurance companies?

To answer this question, we pose the following sub-questions:

- What is the status of the insurance sector in Algeria?
- What do the indicators of demand for insurance company products represent?
- What is the nature of the relationship between economic factors and the increase in demand for insurance company products?
- What are the most explanatory factors for the growth in demand for insurance products?

Study Hypotheses

- In light of the above, the following hypotheses can be formulated:
- The economic reforms implemented by the Algerian state have led to an increase in the demand for Algerian insurance products.
- The indicators of insurance density and penetration rate are the most accurate in explaining the phenomenon of increased demand for insurance company products and linking it to other economic factors.
- Economic factors have an impact on increasing demand for products from Algerian insurance companies.

Study Objectives

- The main objective of this research is to highlight the relationship between the change in demand for products from Algerian insurance companies as a dependent variable on one hand, and the influencing (explanatory) factors in the demand for these products on the other hand, in light of the available data during the period 1980-2022, through:
- Demonstrating the quality and importance of the various factors under study.
- Measuring these factors while showing their effect on the demand for products from Algerian insurance companies.
- Audience segments.

Study Methodology

- To study and address the topic, we relied in this study on a set of methodologies, which are:
- Descriptive analytical methodology: which serves to narrate ideas related to the concept of insurance, its types, and forms, and to highlight the contribution of the insurance sector to growth rates outside the hydrocarbon sector in Algeria?
- Statistical methodology: in the practical part, resorting to economic measurement tools to measure the relationship between the studied variables and attempt to build the most appropriate model for the study.

- The standard approach will be used to examine and measure the impact of the increased demand for Algerian insurance companies' products on the economic factors under study.

1/ The Algerian insurance companies' products

The Algerian Civil Code defined insurance as:The material619 as:"A contract by which the insurer undertakes to pay to the insured or a third party beneficiary for whose benefit the insurance was stipulated a sum of money, income, or any other financial performance in the event that the risk specified in the contract occurs, in exchange for premiums or any other financial payments."1.

The Algerian insurance market has recently witnessed several attempts to develop it by the government and most of the players in this sector, through the enactment of laws, their implementation and monitoring of the progress of this sensitive sector. These reforms have resulted in a noticeable development in insurance companies and, consequently, the development of their services and products.

1/1/What are insurance products?
The first Definition the: PhraseAbout a product marketed and produced by the insurance company supplier with the aim of meeting needs The client and his insurance desires against potential risks that may occur in the future, which could cause him losses to his person or property. Or responsibility Towards others, it is an activity subject to exchange and The It results in a transfer of ownership, but this exchange process results inpossessionInsurance document, which proves the customer's right to Benefit From the insurance service according to the terms agreed upon in the contract.2

The second definition: It is described as the services that insurance firms offer to the policyholder and the protection that has been offered by the policy. Compensation is a representation of security and stability. When the insured risk materializes, the business protects the insured from financial damages.3
Additionally, from that point onward According to earlier definitions, insurance products are the benefit or combination of advantages that the policyholder can receive as a result of purchasing it for herself. This results in the fulfillment of his wants and desires, which are represented by the coverage of potential future losses and risks.

1/2/ Most important Company products Algerian Insurance
Insurance companies offer many insurance products or services. The most important:
A/ Car insurance This contract covers a set of guaranteed risks, which are:4
Civil liability: Every car owner is required to purchase civil liability insurance to cover moral and material damages that they may cause to others.
Collision damage: In the event of a collision outside garages, parking lots, or properties occupied by the insured, between the insured vehicle and a person of known identity, or a vehicle or animal owned by an unidentified person, the company guarantees to the insurer compensation for the damages incurred to the insured vehicle as a result of the collision, within the limits of the amount specified in the special conditions.

Glass breakage the company insures the insured against damage to the windshield (windscreen), rear window, and side mirrors of the insured vehicle while it is stationary. This insurance is valid whether the vehicle is moving or stationary.
Theft: the company guarantees in the event of theft or attempted theft of the insured vehicle:
- Damages resulting from loss or destruction, except for indirect damages...
- Expenses paid by the insured legally or with the approval of the company for the purpose of recovery
Fire and explosion: the company covers damages to the insured vehicle, its accessories, and spare parts that the manufacturer's catalog stipulates should be delivered automatically with the vehicle, if

these damages are caused by one of the following incidents: fire, ignitions, lightning strikes, and explosions, with the exception of damages caused by explosives transported inside the insured vehicle.
Defense and follow-up:The company guarantees to the insured, within the limits of the amount specified in the special conditions, the defense of the insured's civil interests before the designated judicial authorities, when his civil liability is subject to prosecution due to an actuse vehicles specified in the contract the company undertakes to defend him before the misdemeanor courts in the event of prosecution by the Public Prosecution following a violation of traffic rules or the misdemeanor of lack of caution (injuries or unintentional killing) while driving these vehicles.
Contractual guarantees for the benefit of the insured vehicle :The company guarantees, within the limits of the amounts specified in the special conditions, payment of the compensation stipulated in the event of a bodily accident occurring to the insured when he gets on or off the insured vehicle or when preparing it for driving or repairing it on the road.
for/-Transport insuranceTransportation insurance provides insurance protection against material losses that are exposed to means of transportation, goods and transported commodities from various risks. Insurance policies vary according to...For difference The subject of insurance is divided into two basic types:[5]

B/Insurance of the means of transportation itself: This type of insurance aims to protect various types of transportation from the risk of fire and collision. One of the most important insurance policies is:

- Land transportation insurance.
- Marine Vessel Insurance.
- Air transport insurance.

Cargo insurance:
This type of insurance aims to compensate the owners of the transported goods.(By means of sea, land and air transport) or those interested in them from the material losses that these goods are exposed to from various risks during shipping, transportation and unloading.

C/ Insurance against various risks:

This product covers the main risks to which the insured is exposed (fire, explosion, theft, occupational hazards, water damage, etc.) and consists of the following:

Minor risk insurance: This contract covers losses resulting from fire hazards, losses resulting from water damage, Refraction Glass, theft, occupational hazards and more.

Industrial risk insurance:

It includes the risks that the insured may be exposed to, such as the risk of fire. explosions, and Refraction And the destruction of machines and other things.

D/-Insurance against agricultural risks and livestock death: The insured aims through this contract to compensate for the loss that may be incurred as a result of damage to agricultural crops, due to storms, ice, floods, or as a result of the loss of animals resulting from natural death or accidents.and Order D.[6]

H/-Loans: It branches into the following:

Internal loan insurance: It is a means of banking financing and an insurance tool that allows creditors, in return for paying insurance premiums to the insurance company, to cover the commercial and non-commercial risks of local loans.

Export Loan Insurance.:It is a means of banking financing and an insurance tool that allows creditors, in return for paying premiums to the insurance company (which may be a government, private or mixed company), to cover the commercial and non-commercial risks of the loan associated with export operations between countries for a period of time, even if it is one day.One

asIt is a tool for export development by ensuringCreditExport-related between local buyer and foreign seller.[7]

and/-International Approvals (Reinsurance):

It includes local and international reinsurance operations carried out by: With It Algerian insurance companies

Z/-Natural disaster insurance: Catastrophe insurance became mandatory by Order No. 12/03 issued on August 26, 2003, and its implementation began from2 December 1, 2004, and the insurance requirement here is for the following:[8]

- Property ownership (building)).
- industrial or commercial complex

This insurance guarantees the insured compensation for direct material damages to his property caused by:

- Earthquake
- Floods
- Storms and winds.
- driftsoil.

H/-Personal insurance:

It is insurance related to the insured person, insuring himself against risks to his life, physical safety, health, or ability to work.[9]

Personal insurance includes different types and forms, the most prominent of which are:[10]

Death insurance:It is a contract whereby the insurer is obligated, in exchange for premiums, to pay a specific insurance amount to the beneficiary upon the death of the insured, whether in a single payment or in the form of a periodic income. This type of insurance includes three cases:

- Life insurance
- Temporary insurance.
- Survival insurance.

Life insurance: It is a contract by which the insurer undertakes, in exchange for premiums, to pay the insurance amount at a specific time if the insured person remains alive until that date (Article 64 of Order 95/07).

And this type of insurance is often the life insured as the beneficiary, who receives the insurance amount upon maturity of the specified asset in the contract. This term is either set as a number of years (10, 15, 20 years) or set as reaching a certain age. Upon reaching this date, the contract ends and the insurer retains the premiums paid to the insured (55, 60 years, for example). Upon reaching this term, theBy taking advantageFrom the insurance amount, and if the insured dies before this date, the contract ends.for himThis incident and the insurer keeps the paid premiums.

Mixed insurance: It is a contract by which the insured undertakes, in return for premiums, to pay the insurance amount, capital or income, to the beneficiary if the insured dies within a specific period, or to the insured himself if the latter remains alive at that time. Expiration the specified period (Article 60 of Order 95/07) **.** It combines death insurance and life insurance, and the premium in this type is higher than the premiums in the previous types of insurance, due to the advantages it provides compared to the two previous types.

Supplementary insurance It means that the insured person in life insurance is protected from the risk of his inability to continue paying the premiums of this insurance for any reason such as illness, inability to work, unemployment, or the like. The latter resorts to concluding another contract with the insurer in addition to the first contract, whereby the insurer pays the premiums on his behalf in the event of his inability and cessation of payment.

Insurance for the benefit of Other And with it A person insures for the benefit of a specific beneficiary where this Is beneficiary an other person outside the contractual relationship.

Additionally, the most often used in this instance, it is life insurance that a man purchases for his dependents, wife, and kids. In this context, the lawmaker stipulates a number of requirements, the most significant of which are: The beneficiary must be named in the contract, accepted, and the insured may revoke the beneficiary's appointment.

2/ Analysis of the factors affecting the demand for Algerian insurance companies' products.
2/1/Factors affecting the increase in demand for insurance products:
The demand for insurance is affected by many variables and factors, including the following:

A/-gross domestic product GDP
it calculates the market value of all finished goods and services produced in a nation over a given time period. Numerous studies have emphasized the connection between GDP development and insurance penetration. A 1% increase in overall insurance penetration was associated with a 4.8% rise in economic growth (or 1.7% if only life insurance is included), according to Han et al. (2010), who examined the situation in 77 established and emerging nations between 1994 and 2005. Remarkably, according to statistics from multiple nations (USAID, 2006), the insurance penetration rate during the previous four decades follows an S-shaped curve rather than a linear relationship with GDP growth (Enz, 2000).

B/unemployment:
The relationship between unemployment and demand for life and non-life insurance products has been studied by a few researchers, and the reason for this is that the effect of this variable appears partially through the income variable, and the researchers have addressed (Lenten & Rulli 2006). The relationship between the variables of demand for insurance and unemployment is direct, and their study revealed unemployment has a negative impact on demand for life insurance products.

C/ Inflation:
The amount of change in the prices of a commodity over a specific period of time, usually a year. Since life insurance savings products typically generate cash interest over the long term, monetary uncertainty has a significant negative impact on the expected returns from these products. Furthermore, high inflation causes consumers to reduce their savings. Inflation can also have a devastating effect on the life insurance industry when the interest rate cycle discourages the use of financial intermediation. Several researchers have demonstrated the negative impact of inflation on the growth of insurance activity in their empirical studies, including (1996Outrevill, Ward and Zurbruegg 2002, Li et al 2007.

3/Standard study:
Determine economic variables
Independent variables:
-For the independent variables, we will choose the most likely.What I atePrevious studies focusing on morale
The impact of the independent variable on the variable representing the insurance sector, and the dependent variables were chosen:
-Gross Domestic Product DAlgerian
-Inflation annually %
-Total unemployment % of total labor force
The process of selecting economic variables that affect the phenomenon under study, represented by In demand for the products of Algerian insurance companies, usually measured Demand for Insurance With two indicators Their foundations 11:
an averagehacking (Taux de pénétration d'assurance)

indicates This rate is the ratio between Installments Direct Rah (Outside operations) re Accepted International Insurance (PIB, more precisely, is the share of GDP allocated to To buy production

Insurance. So, they are shown Importance The relative importance of the insurance sector within national economies, so that it is not affected by fluctuations in currency exchange rates. However, it is Ignores the differences that may exist between countries in product design, and levels of Prices and market characteristics Other. Insurance density (Assurance density). Insurance density index expresses the calculation of the volume installments Insurance for all residents) total installments Insurance underwritten divided by population (In my country, it isindicates To you no average, each resident depends on insurance services, but this indicator is affected by fluctuations in currency exchange rates when used incomparison Benaldol.
We will adopt the latter in DRastnak is an indicator to measure the growth of the insurance sector and its impact. Economic factors The Chosen One.

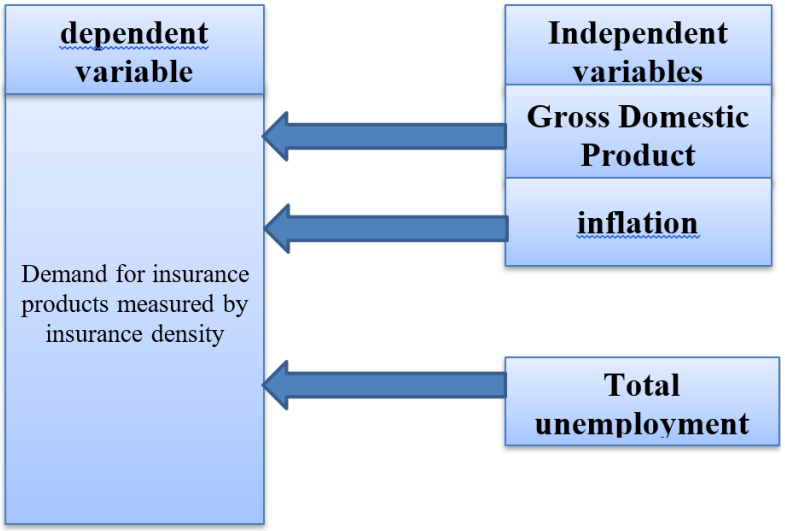

Figure 1: Shows the independent variables and the dependent variable that is the subject of the study.

- A study of the development of study variables during the period 1980-2022
Descriptive study of study variables:
With the help of the program STATA 15After entering the data into the program, the results of the descriptive study appear.

Table 01 No: Statistical study of study variables using the program STATA 15 Based on descriptive appendix 01

Variable	Obs	Mean	Std. Dev.	Min	Max
LTA	42	9.996967	1.428466	7.473858	11.92702
LTCH	42	2.817739	.3790412	2.284421	3.460723
LTINF	42	1.784953	.9162807	−1.07881	3.45537
LPIB	42	28.63539	1.61931	25.81394	30.65145

Table No. 02: Arithmetic means and standard deviations

Standard deviation Std. Dev	arithmetic mean Mean	Variables
1.428466	9.996967	Insurance culture
0.3790412	2.817739	unemployment

Standard deviation Std. Dev	arithmetic mean Mean	Variables
0.9162807	1.784953	inflation
1.61931	28.63539	Gross Domestic Product

Prepared by the student based on the program STATA15.

Through Table No. 02

- arithmetic mean Mean The average demand for insurance during the study period is estimated at: 9.996967, which is greater than the standard deviation. Std. Dev Estimated at: 1.428466.7
- arithmetic mean Mean The unemployment rate during the study period is estimated at: 2.817739, which is greater than the standard deviation. Std. Dev Estimated at: 0.3790412
- arithmetic mean Mean The inflation rate during the study period is estimated at: 1.784953, which is greater than the standard deviation. Std. Dev Estimated at: 0.9162807

From this we conclude that:

- Don't direct D There are many fluctuations in the variables during the study period extending from 1980 to 2022 because the standard deviation of each variable is less than the mean value for each variable.
- Express value spa in High mediations on positive trends For the independent variables towards the dependent variable.

Table No: 03: matrix correlation Pearson program STATA15

```
. regress LIA LTCH LTINF LPIB
```

Source	SS	df	MS	Number of obs	=	42
				F(3, 38)	=	210.41
Model	78.9106166	3	26.3035389	Prob > F	=	0.0000
Residual	4.75046811	38	.125012319	R-squared	=	0.9432
				Adj R-squared	=	0.9387
Total	83.6610847	41	2.04051426	Root MSE	=	.35357

LIA	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LTCH	-.6667127	.1634538	-4.08	0.000	-.9976076	-.3358177
LTINF	.0213147	.0696667	0.31	0.761	-.1197182	.1623476
LPIB	.7805941	.0430249	18.14	0.000	.6934948	.8676934
_cons	-10.51508	1.530594	-6.87	0.000	-13.6136	-7.416549

Table Number 04: Correlation coefficients between study variables (Correlation Matrix).

inflation	inflation	unemployment	Insurance culture	Variables
			1.0000	Insurance culture
		1.0000	-0.5750 (0.001)	unemployment
	1.0000	0.2318 (0.1396)	-0.4713 (0.0016)	inflation
1,000	-0.5017 (0.0007)	-0.4435 (0.0026)	0.9582 (0.000)	Gross Domestic Product

Prepared by the student based on the program STATA15

From Table No. 04, the following is clear:

1- There is a link between GDPr=0.9582Insurance density at a significance level of less than 10%(i.e. there is a direct relationship)
2- There is a link between GDPr=0.9582and the unemployment rater = -0.4435With a significance level of less than 10%(i.e. there is an inverse relationship)
3- There is a link between GDPr=0.9582and inflation rate r= -0.5017With a significance level of less than 10%(i.e. there is an inverse relationship)
4- There is a link between GDPr=0.9582 and the unemployment rater = -0.4435With a significance level of less than 10%(i.e. there is an inverse relationship)
5- There is a link between GDPr=0.9582 and inflation rate r= -0.5017With a significance level of less than 10%(i.e. there is an inverse relationship)
6- There is no correlation between the inflation rate r = -0.5017 9582 and unemployment rater = -0.4435At a higher level of significance than10%P=0.1396

Is there a multicollinearity problem between the dependent and independent variables?
To answer this question, Reliance on the variance inflation index Variance Inflationary Factor (VIF). The phenomenon of linear interference occurs when there are linear relationships between Variables Independent, and therefore their effect on the dependent variable cannot be separated, which creates Effects The negative impact on the test results is through reducing and exaggerating the effect, which creates the problem of linear interference, which is reflected in the accuracy of generalizing the outputs and results of the analysis. To verify the existence of this phenomenon or its absence, reliance was placed on the variance inflation index, as the variance inflation index VIF detects linear interferenceVariablesIndependent, according to-:(Luo et al., 2007) The general rule for the VIF index in the presence of the problem of linear interference between Variables Independent when the value increases VIF for each variable10 When looking at the table data, the next Low value shown VIF for all Variables Independent About 10 Which indicates that there is no linear interference between Study variables.

Table No 05: Variance inflation indexVariance Inflationary Factor Depending on the program STATA15

Vif	**Inflation coefficient of variation**	
Variable	VIF	1/VIF
LPIB	1.59	0.62816
LTINF	1.34	0.748275
LTCH	1.26	0.794339
Mean VIF	1.4	

Table No 06: Variance inflation index Variance Inflationary Factor.

Vif	**Inflation coefficient of variation**	
Variable	VIF	1/VIF
LPIB	1.59	0.62816
LTINF	1.34	0.748275
LTCH	1.26	0.794339
Mean VIF	1.4	

STATA15 Prepared by the student based on the program.

- VIFGDP = 1.59<10.
- VIFInflation rate = 1.34<10
- VIF Unemployment rate = 1.26<10
  Since the average Mean VIF= 1.4 so there is no multicollinearity problem
- Standard Model Formulation

Formulating the standard model is one of the most important and difficult stages of model building, through what it requires in terms of specifying the variables that the model must include or that must be excluded from it. We begin by pointing out the symbols of the various variables, which are as follows:
dependent variable: The dependent variable is the rate of hacking It symbolizes DEN
Explanatory variables: It is represented in:
GDP size and symbol—: PIB
Inflation rateIt symbolizes flame— :INF
unemployment rateIt symbolizes flame- —: CHO
After identifying the variables contained in the standard model, and after collecting the data for all the variables, the mathematical form of the model is determined, as it is one of the first and most important stages of building the standard model. The form of the function is as follows:

$$DEN=f\ (PIB_{,,,})$$

μ:errorrandom
The multiple linear regression method will be used to estimate the standard model. Insurance density To find out the appropriate mathematical formulas to estimate it, we will try the non-linear formula.logarithmic,.
Standard Model The natural logarithm is introduced on the variables to correct the heterogeneity between the variables, and it can be formulated in its standard form: Its formula is as follows:

$$Ln\,DEN_i=B_0+B_1Ln\,BIB_i+B_2Ln\,INF_i+B_3Ln\,CHO_i+u_i$$

where :

- (i)Time represents the value of the variable in a year.i

Statistical software is used STATA After entering the data into this program, the results of estimating the multiple logarithmic model appear in the following table:

Table No 06: Linear model estimation results for the rateDensityDuring the period1980-2022 Program STATA15.

regress LTA LTCH LTINF LPIB		Multiple regression	
Source SS	df	MS Number of obs =	42
		F(3, 38) =	210.41
Model 78.9106166	3	26.3035389 Prob> F =	0
Residual 4.75046811	38	R-squared = .125012319	0.9432
		Adj R-squared =	0.9387
Total 83.6610847	41	2.04051426 Root MSE =	0.35357

LTA Coef.	Std. Err.	t P>t [95% Conf.	Interval]
LTCH -.6667127	0.1634538	-4.08 0.000 -.9976076	-0.3358177
LTINF .0213147	0.0696667	0.31 0.761 -.1197182	0.1623476
LPIB .7805941	0.0430249	18.14 0.000 .6934948	0.8676934
_cons -10.51508	1,530,594	-6.87 0.000 -13.6136	-7,416549

Source: Prepared by the student based on the statistical program STATA 15

According to Table No.: 06 The results of estimating the log-tendency model were: Insurance densityonAs follows:

$$LnDEN_i = B0 + B_1 LnBIB_i + B_2 LnINF_i + B_3 LnCHO_i + u_i$$

$$LnDEN_i = 10.51 - + 0.780 LnBIB_i + 0.021 LnINF_i 0.660 - LnCHO_i + u_i$$

$$*(4.08-)*(0.31)*(6.87-) \quad *(18.14)$$

*: It is a statistical value.-:T
R: Coefficient of determination.= 0.9432
R2: Coefficient of determination rate= 0.9387.
:B Number of views.= 42
F: Fisher's statistic.=210.41
Robprobability of error.=0000
.Economic, statistical and econometric study of estimated models To study the validity of the estimated standard model for the rate of Insurance density In Algeria, a set of tests must be conducted to determine the validity of each model from the perspective of the logic of economic theory and its validity from a statistical point of view. After that, the best model is selected to be tested from a standard point of view.
Economic and statistical study of the model:
The linear model will be studied first from the economic and statistical perspectives as follows:
Economic study through the table 05 We note the following:

- For the coefficient logarithm gross domestic product tB_1We note that his reference Positive What is the relationship? Proportionality between the dependent variable (Insurance density rate) The variable Independent gross domestic product) This result is consistent with the previously mentioned expectations and the logic of economic theory, where if the total output changes by one unit, (1%) The average Insurance density It will change 0.780% Operator's permissionB_1 It has economic significance.
- For inflation coefficientB_2We note that its sign is positive, meaning that the relationship between the dependent variable (Insurance density rate). The independent variable(Inflation rate) This result is consistent with the previously mentioned expectations and the logic of economic theory, where if the inflation rate changes by one unit,%Thenan average Insurance density will change:0.0213%Unit of permissionB_2It has economic significance..
- For the coefficient unemployment B3We note that his referencenegativeWhat is the relationship? Proportionality between the dependent variable (an average Insurance densityThe variable Independent (unemployment rate) This result is consistent with the previously mentioned expectations and the logic of economic theory, where if the change unemployment rate In one unit 1%The average Insurance density it will change0.666%Unit of permissionB3It has economic significance.

Statistical study

The significance of the parameters is tested using the Student statistic. The coefficient of multiple determination is then tested for the stability of the parameters of the obtained model. Significance test of parameters Student statistic used T To evaluate the significance of the model parameters, and then evaluate the effect of the explanatory variables on the dependent variable by testing the hypotheses specific to the parameters, as follows:

H0 : B0=B1=B2=B3……Bi=0null hypothesis
H1: B0 ≠ B1 ≠ B2 ≠ B3……Bi ≠ 0 Alternative hypothesis

The results of the Student test for the first model can be explained through the following table, in which we show the calculated values: Tcal For estimated parameters and tabular values Ttab The lowest morale levelprobAt a moral level.%5
I throwWhatTabularTtabWe extract it from the student's table. At a moral level.%5And degree of freedom (nk) That is, it is equal to:

$$T\alpha n_{-y}=0.054_{2-3}=42-3=39$$

Table No.07: Tests T Student.

Lowest level Prob	Tabular valuesTtab	Calculated valuesTcal	Transactions	Capabilities
0.0000	2,021	4.08	B0	constant
0.0000	2,021	0.31	B1	BIB
0.761	2,021	18.14	B2	Inf
0.0000	2,021	6.87	B3	cho

Prepared by the student based on Table No.: 06
From the table above we notice the following:
with regards For the fixed variable coefficient B0We notice that calculated value Tcalgreater than the table value Ttab
any :Tcal>TtabThus, the null hypothesis is rejected. H0 That is B0Moral. And since the lowest level of morale Prob Equal to zero, which indicates that the constant can be accepted. B0 In the form.
For the coefficient logarithm of GDP B1We notice that Table value Tcal Less than the table valueTtabYes, yesTcal>TtabWe have a high morale level. Probequal to zeroProb Less than 5% Therefore, the null hypothesis is rejected. H0That is B1Moral Hence, it can be said that the gross domestic product has statistical significance at the significance level.5%, (prob=0.000) In the interpretation of the rate Insurance density During the study period, the independent variable (gross domestic product) Affects the dependent variable rate Insurance density.

For the coefficient logarithm of inflation rate B2We notice that calculated value Tcalgreater than the table value Ttabany ::Tcal>TtabWhereas the lowest level of morale Probequal 0.761greater than 5% Thus, we accept the null hypothesis. H0That is B2 Non-moral. From this it can be said that Inflation rate for him He has no Statistical significance at the significance level5%,(prob=0.761)In the interpretation of the rateInsurance density During the study period, the independent variable (Inflation rate) No Affects the dependent variable rate Insurance density.

For the coefficient Logarithm of unemployment rate B3We notice that calculated value Tcal greater than the table value T tabany: Tcal>TtabWhereas the lowest level of morale Prob Equal to zero less

than 5%(prob=0.000) Thus, the null hypothesis is rejected. H0 That is B3moral. From this it can be said that unemployment rate They have statistical significance at the significance level. 5% In the interpretation of the rate Insurance density During the study period, the independent variable (unemployment rate) Affects the dependent variable rate Insurance density.
Moral college test of the model, We use the coefficient of determinationR2Fisher's test*F*To test the moral college of the model obtained from Table 06.

Coefficient of determination R2
The obtained value of the determining coefficient is approximately 0.9387R^2=Whereas the explanatory variables control 93.87% Of the changes that occur in the insurance coverage rate, which indicates that there is a strong relationship between the insurance coverage rate and the explanatory variables, the rest is explained by other factors not included in the model and included in the error limit.u_i

Fisher's test *F:*
Where the calculated value is compared F_{CAL} The estimate is: 201.41 with table valueF_{TAB} It is extracted from the Fisher table. FAt a meaningful level 5% The degree of freedom for the numerator and denominator is shown in the following relation:

$$FKn\text{-}k\text{-}1=F342\text{-}3\text{-}1=F438=2.61$$

And From him:
We note that the calculated value F_{CAL} Bigger thanTable value F_{TAB} Therefore, we will reject the null hypothesis, which states that all independent variables are equal to zero except for the constant, and accept the alternative hypothesis, which states that there is at least one variable that is not equal to zero, which indicates the existence of a significant linear relationship between the dependent variable and the explanatory variables. Therefore, the model as a whole is significant.

4/Analysis of results:

Through study at Statistical and econometric economics It is possible Best-fit model estimation Insurance density rateIn Algeria during the period 1980-2022, This is based on data. Statistics for external independent variables Listed In the model composition Expressed by The following logarithmic equation:

$$LnDEN_t=10.51-+0.780BIB_t+0.021INF_t0.660\text{-}CHO_t$$

For GDP:
In light of this model, its content will be analyzed based on the estimated features. The following are the most important results obtained:

- For the period 1980-2022VanMost important influencing factor On the insurance density rate in Algeriahe The value of the GDP has a coefficient of 0.78, which means that any increase in the GDP by 1% will lead to an increase in the insurance density rate by 0.78%, i.e. there is a direct relationship.
- Algeria has seen a rise in its gross domestic product, accompanied by a significant increase and improvement in economic growth rates. This has led to an increase in insurance density rates due to the rise in fuel prices, which has given the Algerian government the opportunity to implement an economic recovery program.
- Algeria has seen a rise in its gross domestic product, accompanied by a significant increase and improvement in economic growth rates. This has led to an increase in insurance density rates

due to the rise in fuel prices, which has given the Algerian government the opportunity to implement an economic recovery program.

- The population has witnessed a significant increase, reaching approximately 32 million people in 2000, reaching 44.5 million people in 2022, noting that the overall population density rate is linked to population size.

Regarding the unemployment rate:

- During the period 1980-2022, one of the most important factors that most influence the insurance density rate in Algeria is the value of the unemployment rate with a coefficient of 0.66, which means that any increase in the unemployment rate of 1% will lead to a decrease in the insurance density rate by: 0.78% Insurance density is an inverse relationship
- The results showed that the insurance density rate is inversely related to the unemployment rate, as people without income cannot purchase insurance services and products, and thus the demand for insurance decreases as the unemployment rate rises. This is what some studies have shown, such as: YAZID ET ALL .2012" which suggested the existence of a negative relationship between the unemployment rate and the demand for family Takaful insurance, and the results of the study (2006, Rulli & Lenten) showed that unemployment has a negative impact on the demand for life insurance. The study also attributed this expected impact of employment on the demand for life insurance to be reflected hypothetically through the income variable.12

Regarding the inflation rate:

- There are two possible reasons why not. Importance of a variable Inflation rate in the model. the first It is that Changes in the inflation rate Does not affect On the insurance density rate in Algeria where there is no A clear long-term relationship between insurance density and inflation rate.
- In Algeria, the increase in output led to Local AThe total and corresponding increase in economic growth led to a significant decrease in the unemployment rate. The higher it goes Output value Local Total decreased The unemployment rate and thus the insurance density rate increases; and the higher the value of the gross domestic product Total decreased The unemployment rate increased and the rate consequently increased. Insurance density This is represented in Increased demand On insurance products in Algeria.

Verify the validity of the hypotheses:
In light of the results obtained, we confirm the validity of the hypotheses presented previously:
Confirming the validity of the first hypothesis:
Which means thatThe economic reforms undertaken by the Algerian state have led to an increase in demand for Algerian insurance products. Since independence, the Algerian state has carried out a series of reforms, the most important of which are:chests The order Qom 95-07theDated 25January1995, which came to abolish the state monopoly and the principle of privatization, and also came to regulate the insurance sector and abolish all Rulings Contrary to it and issued previously. And it has been organized Rulingsrelating to the insurance contractand the provisions Related to the supervision and regulation of insurance companies, and the provisionsRelated to brokers Insurance and Kto Afor him Insurance activity was liberalized and private companies were allowed to enter the market. This came within the framework of...Economic reformsinitiated by Algeria To move from Economy The plan to the market economy which included several Fields Including the financial services and insurance sector andIn 2006, Law No. 06-04 ofFebruary 20, 2006 Amendment and supplement to Order No. 95-07, which allowed these reforms for the sectorInsuranceWith several achievements at the institutional and organizational levels, the most important of which are: the activity of damage insurance, the approval of new insurance companies specializing in personal insurance.And accordingly alsobecome Can Algerian banks practiceactivity new And enterA new service among its financial services, namely life insurance through its banking windows..) Banc assurance (All this has led to an increase in demand for Algerian insurance products.

Confirming the validity of the second hypothesis:
Which means that Insurance density and penetration rates are the most accurate indicators in explaining the phenomenon of increased demand for insurance company products and linking it to other economic factors. I confirmed Previous studies my indicators Insurance density and rate Insurance penetration importance To measure We grow Insurance and Insurance Density Index: "It is an index that expresses the calculation of the total insurance premiums subscribed divided by the number of inhabitants in a country." This index is affected by fluctuations in exchange rates. Currencies For each country (Zeitouni Kamal, Ghafsi Tawfiq,2010, 2017) And only (Ghafsi Tawfiq,2019,109Estimate the average value of this indicator in Algeria. During period (2010-2017) B$33This is far from the global average of$624Per person13.

Confirmation of the validity of the third hypothesis:

Which means that Economic factors have an impact on the increased demand for Algerian insurance companies' products. The standard and statistical study has proven the validity of the hypothesis through the relationship between the insurance density index and other explanatory variables (GDP, unemployment rate, and to a lesser extent, inflation rate). The study has proven the existence of a direct relationship between the insurance density rate and the GDP and an inverse relationship between the insurance density rate and unemployment. We conclude that the higher the GDP rate, the higher the per capita share of it, which leads to a decrease in the unemployment rate and thus increases spending on insurance products and demand for them because the level of unemployment Affected By total population and GDP Total.

Conclusion:

Despite a number of reforms approved by the Algerian government, the insurance does not effectively contribute to the national economy, as evidenced by the fact that, in 2023, its contribution to the gross domestic product does not surpass 0.3% of the global average of 0.7 percent. This is true even after Algeria gained independence 62 years ago. Along with the fact that there are fewer insurance products available in Algeria than in other nations, the main reason for this is that public corporations control the majority of the insurance industry. It has poor economic performance metrics because it is not regarded as a fully developed market, particularly in certain areas, the most significant of which is personal insurance, whose share of the insurance industry's overall output did not surpass 9% during the study period. In contrast to property insurance, particularly auto insurance, and so on. Some recommendations can be made to stimulate and enhance the insurance industry. His contribution to economic growth By means of the following:

- Providing insurance products with specifications that match the reality of society Whether it is in line with his ideology (religious orientation), such as Takaful insurance, or what is in line with his capabilities. (Mandatory and optional guarantees) and at an acceptable (insurance premium) price, so that companies do not resort to doubling the premium due to an increase in the amount of compensation. With the need to review the insurance prices set by insurance companies and supervisory and control bodies in Algeria in a way that is consistent with the capabilities of individuals, especially those with limited incomes..
- Insurance companies must gain the trust of their customers by quickly settling compensation claims for the insured, offering benefits on insurance contracts, simplifying insurance contract underwriting procedures, and simplifying the terms contained in the contracts so that they are easy to understand by the insured.
- Insurance companies should use modern technologies in marketing insurance services, such as electronic marketing.

Use of special software and web pages.

- Spreading insurance culture among audience using Media strategy It works to spread it by conducting wide advertising and media campaigns among members of society, through various media (television, radio, newspapers, magazines, etc.) or social media. Organizing campaigns to raise awareness of insurance products At the level of insurance companies or outside them (universities, other companies, exhibition halls...)
- The necessity of insurance companies moving towards Takaful insurance as a new product, given that the latter is compatible with the provisions of Islamic Sharia and is accepted by members of society, as it provides legitimate insurance protection that is in line with the provisions of Islamic Sharia and is free from the legal prohibitions that corrupt contracts, such as usury, uncertainty, gambling, and under the supervision of a Sharia supervisory body, with it being placed in A special legal framework to support and encourage this type of activity, given the fertile and promising field it represents, especially in personal insurance.
- Interest In various Types Insurance Other With the aim of more Income Such as agricultural, industrial and other activities.
- Reducing unemployment by providing small projects exempt from taxes on insurance contracts or reducing their prices.

Finally Within this thesis, which focused on some of the economic factors that influence the demand for Algerian insurance companies' products, there are many different factors, whether economic, social, legal or structural, that require further research and the extent of their impact on the insurance sector in Algeria. In addition to:

- The role of modern technology in improving the performance of the insurance sector.
- Profitability rates And the percentage The sheet
- Takaful insurance
- Insurance and contracting
- Electronic marketing for insurance

References:

1- Mouloud Didan, Insurance Law, Dar Belqis, Algeria, 2006, p. 4

2- Ryan Palmer, Services Marketing, Zahran Publishing and Distribution House, no date mentioned, p. 20.

3- Ilham Naama Nazem, Evaluation of the Quality of Insurance Services in the National Insurance Company, Diwaniyah Branch, Al-Qadisiyah Journal of Administrative and Economic Sciences, Volume 15, Issue 03, Year 2012, p. 119

4- Société Nationale d'Assurance, Automobile, General Conditions, 2009, P (9-16)

5- Ibrahim Ali Ibrahim Abd Rabbuh, Introduction to Commercial Insurance, pp. 60-16

6- Abdul Hadi Al-Sayyid Muhammad Taqi Al-Hakim, Insurance Contract, Al-Hilli Legal Publications, Beirut, 2003, p. 182.

7- Saeed Wassaf, Export Loan Insurance System, Institute of Economic Sciences, University of Algiers, 1997, p. 381.

8- Article 1,2 of Order No. 03/12 dated 08/26/2003 regarding mandatory insurance against natural disasters.

9- Abdul Hadi Al-Sayyid Muhammad Taqi Al-Hakim, previous reference, p. 159

10- Jadidi Maraj, Introduction to the Study of Algerian Insurance Law, p. 92

11- Ghafci Tawfiq, Lectures on Insurance Systems in Algeria, directed to first-year Master's students in Insurance Economics, p. 35

[12]- Liam j. A. Lenten and David N. Rulli, A Time-Series Analysis of the Demand for Life Insurance Companies in Australia: an Unobserved Components Approach, Australian Journal of Management, Vol. 31, No. 1, 2006, P 48.

13- Youssef's boudle,Majd Bouzidi,Yahyaoui Mohammed,The impact of annual inflation on the insurance density index in Algeria- Analytical standard study for the period (1990-2019)Article dated June 1, 2022, p. 319

ITJ | The International Tax Journal

PP

CERTIFICATE Of PUBLICATION

28/08/2025

Recipient Name

Dr. Bachiri Hamza[1], Dr. Abdelkader Amara [2], and Pr. Ghafsi Toufik [3]

is thanked for their phenomenal participation on publication in **The International Tax Journal** ISSN **0097-7314**

Article Title: **Analysis of the factors affecting the demand for Algerian insurance companies products: A study on a sample of insurance companies**

Article URL Published Online: https://internationaltaxjournal.online/index.php/itj/article/view/172

Article History: Submitted: 15 January 2025 | Revised: 26 June 2025 | Accepted: 19 August 2025 | Published 28-08-2025

Editor-in-Chief

Dominic Balzano
Chief Editor of The International Tax Journal
https://internationaltaxjournal.online/