DYNAMICS OF THE FISCAL FREEDOM INDEX

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Abstract:

In the historical evolution of society, prosperity has been a perennial goal, as well as freedom, in all its aspects. Economic freedom, as a fundamental right, expressed through the IEF composite index (Index of Economic Freedom, developed by The Heritage Foundation, Washington's No. 1 think tank.) Combines in one measure 12 categories of freedoms, from property to financial freedom - the freedom of individuals to work, produce, consume and invest according to their own decision; freedom of movement of labor, capital and goods, in so far as they do not affect the freedom itself.

Keywords: *dynamics, index, freedom, fiscal*

JEL: M41, E62

Introduction

The Economic Freedom Index is a useful tool that currently allows the analysis of 186 economies around the world, facilitating analyzes by country, from the perspective of development, this index is a means of in-depth analysis of political and economic developments. The 12 indices on economic freedom and their evolution also provide a comprehensive set of principles and facts for those who want to understand the fundamentals of economic growth and prosperity.

Research methodology

To analyze economic freedom in Europe, the Index of Economic Freedom, Property Law, Government Integrity, Judicial Efficiency, Tax Burden, Government Expenditure, Fiscal Health, Business Freedom, Freedom of Work, Monetary Freedom, Trade Freedom, Investment Freedom were analyzed. and financial freedom. All indicators in Europe have average values higher than half the scale, with the lowest values being recorded for government integrity and judicial efficiency. The averages for these indicators are representative, the deviations are small, this translates into a homogeneity at the level of European countries regarding economic freedom.

Result

Figure 1 Map of the Economic Freedom Index, Europe, 2019

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In 2019, economic freedom is influenced by the analyzed variables, the regression model is valid (Table no.), And the parameters are significant. This means that the index of economic freedom can be determined by indices on freedoms.

Figure 2 Descriptive statistics

	Mean	Std. Deviation	N
Score	68,6273	6,85122	44
property_rights	70,0318	13,76782	44
government_integrity	55,8114	21,06251	44
judicial_effectivness	56,5909	15,46613	44
tax_burden	72,1023	14,55659	44
government_spending	46,6773	19,38270	44
fiscal_health	85,0636	15,07112	44
business_freedom	74,7977	9,43927	44
labor_freedom	61,1364	11,01099	44
monetary_freedom	79,8114	5,79194	44
trade_freedom	84,0159	3,89179	44
investment_freedom	74,8864	15,03827	44
financial_freedom	62,5000	15,86645	44

[1]

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Figure 3 Model validity

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2018.347	12	168.196	128312.070	.000[b]
	Residual	.041	31	.001		
	Total	2018.387	43			

a. Dependent Variable: score

b. Predictors: (Constant), financial_freedom, fiscal_health, labor_freedom, business_freedom, government_spending, monetary_freedom, trade_freedom, judicial_effectivness, tax_burden, investment_freedom, property_rights, government_integrity

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[1] Own analysis, using SPSS

Figure 4 Significance of parameters

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-.149	.205		-.724	.475	-.568	.270					
property_rights	.083	.001	.167	66.998	.000	.081	.086	.794	.997	.054	.105	9.559
government_integrity	.085	.001	.261	88.771	.000	.083	.087	.784	.998	.072	.075	13.263
judicial_effectivness	.083	.001	.186	80.267	.000	.081	.085	.753	.998	.065	.120	8.310
tax_burden	.084	.001	.178	107.903	.000	.082	.085	-.237	.999	.087	.240	4.173
government_spending	.083	.000	.236	177.112	.000	.082	.084	.125	1.000	.143	.366	2.734
1 fiscal_health	.083	.000	.183	197.773	.000	.082	.084	.374	1.000	.159	.757	1.321
business_freedom	.083	.001	.115	78.926	.000	.081	.085	.549	.998	.064	.307	3.258
labor_freedom	.083	.001	.134	134.851	.000	.082	.085	.408	.999	.109	.658	1.521
monetary_freedom	.083	.002	.070	52.995	.000	.080	.086	.553	.995	.043	.372	2.691
trade_freedom	.086	.003	.049	34.447	.000	.081	.091	.583	.987	.028	.320	3.122
investment_freedom	.082	.001	.181	89.917	.000	.081	.084	.760	.998	.072	.160	6.234
financial_freedom	.083	.001	.192	111.751	.000	.081	.084	.753	.999	.090	.221	4.534

a. Dependent Variable: score

All parameters are significantly non-zero, with changes in any freedom index being reflected in the economic freedom index. Economic freedom is a complex phenomenon and cannot be quantified or described by a single indicator due to its multidimensionality, in order to be studied it is necessary to use a relatively large number of indicators. In the study of the Index of Economic Freedom, the primary indicators take the form of quantitative statistical variables that are not independent, but we cannot say that they overlap perfectly. This results from the simple fact that all primary indicators address aspects of reality. The effect of partial overlaps can only be redundant information contained in the system of variables.

The reduction of the number of initially proposed variables can be achieved using multidimensional analysis - factor analysis. In this way not only factors are determined, but also mathematical relationships are established that determine the connection between the initial variables and factors, with the property that the latter largely reproduce the information given by the initially established variables. Basically, due to the method of rotating the factors, using Hotelling's method, the solution generated by applying the factor analysis is one of an infinity of existing solutions. The analysis of the data in the correlation matrix (Correlation Matrix) gives us information about the correlation coefficients and, at the same time, helps us to avoid multicollinearity and to identify possible variables that can be removed later from the analysis. We observe strong correlations between: government integrity, judicial efficiency and property rights; government spending and tax burden; freedom of investment and financial freedom, etc. We can consider the model valid due to the value of 0.821 (value close to 1) of the KMO test and Bartlett's sericity level (413.985, Sig = 0.000), and the four extracted factors explain in a proportion of 84.1% the variance of the twelve variables.

Figure 5 KMO test[1]

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.821
Bartlett's Test of Sphericity	Approx. Chi-Square	413.985
	df	66
	Sig.	.000

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[1] Own analysis, using SPSS

Discussions

The 12 variables were grouped into four factors with eigenvalues greater than 1, as follows (Extraction Sums of Squared Loadings):
- factor 1 explains 47.30% of the variance of the included variables;
- factor 2 explains 16.28% of the variance of the included variables;
- factor 3 explains 12% of the variance of the included variables;
- factor 4 explains 8.82% of the variance of the included variables. In the context of the initial factorial solution, not subject to rotation, the factors explain 84.41% of the variance of the analyzed values, the difference of 15.6% remaining unexplained by this factorial model.

As can be seen from the analysis of the four factors, there is a redistribution of variance explained by each factor, factor 1 loses the degree of saturation in favor of the other three factors. Basically, the value of the saturations for each factor changes in the conditions in which the value of the total variance remains unchanged.

Conclusions

In the applied factor analysis, the Economic Freedom Index, if we consider each variable as a factor, from the graphical representation of the 12 factors we can consider that the first four components have the highest value.

References

European Union, 2015. *Taxation trends in the European Union*, Luxembourg: European Union.

Easterly, W., Rebelo, S., 1993b. *Marginal income tax rates and economic growth in developing countries*, European Economic Review 37, 409-417.

Brezeanu, P., Simon, I., Celea, S., 2005. *Fiscalitate europeană*, Ed. Economică.