

ABSTRACTS - RESÚMENES

Methodological notes: From classic econometric to non-linear analysis

Luis Mata Mollejas & Roger Da Costa S.

The economic complexity, evidenced in the three concepts that define the value of the money: acquisitive capacity, interest rate and exchange rate, are magnified when being involved with the political complexity to the moment of the forecast. That is why the economic science in its seek of providing explanatory laws for the forecast with an acceptable margin of uncertainty, has been incorporating methods of non-linear adjustments and defining the contributions of the econometrics like tool of common or traditional use. In this respect, the present essay makes a succinct revision of the present stage of the Economic Science and shows a procedural sequence as preliminary approach to a general method for the evaluation of complexity, starting from econometrics. Passwords: econometrics, non-linear adjustment.

Keywords: Econometrics, non-linear adjustment.

Financial market: Efficient or domain of complexity?

Sary Levy Carciente

The interest in understand, describe, and, of course, predict the behavior of the financial market is not new. The idea of winning a market defined theoretically as efficient is in itself a contradiction, but computational advances combined with non-linear perspectives and technical analysis of financial data, seem to indicate that these series follow complex dynamics, respond to stable distributions and possess fractal structures. By this way it is sought that market data will offer hints about their trajectories.

Keywords: non-linearity, complexity, financial market.

Archetype of the stochastic nature of the evolution of the oil prices

Armando Córdova

The work has elements used to approach the understanding of the Venezuelan economy as a system of dynamic relationships. It presents a methodology of analysis of the oil uncertainty and of its potential virtues for the understanding of their impacts on the rest of the economy, using the language of simulation of

Forrester, created to express the dynamic relationship among the variables of state and change. In this respect in this case we conclude that great volatility exists with little predictive capacity. An example of the usefulness that this kind of approach has is that it allows defining an order of magnitudes around which the parameters of a Fund of Macroeconomic Stabilization can be chosen.

Keywords: system dynamics, oil volatility, macroeconomic stabilization, educational proyect, simulation, Venezuela.

Representative agent with discrete time and infinite horizon: Basics notions

Ronald Balza Guanipa

This work details an intertemporal optimization problem (with discrete time and infinite horizon) for a representative agent and a firm, and describes the corresponding Walrasian equilibrium. Its purpose is to illustrate the possibility that well-defined neoclassical models imply a great variety of dynamic behaviors. This way, systems that have one or several stationary states, simple equilibrium trajectories, periodic or even chaotic ones, can exist

Keywords: Non-linear dynamics, general equilibrium, representative agent, chaos.

Emergent calculation and its influence in economic science. Case: Genetics algorithms

Rafael Rodríguez Toledo

Under the capacities of modern computers, the genetic algorithms are presented like a directed random technique that imitates the process of species' formation and apply them in search problems and optimization. This problem type is common in Economic and Social Sciences, where the structure of search spaces and the interdependence of the variables hinder the investigation process. This work carried out a brief introduction to the genetic algorithms, presenting some simple examples where is proven its operability in some typical problems.

Keywords: Simulation, emergent computing, genetic algorithms, typical problems, social and economic sciences.

The triadic theory of the mental operation in moments of economic uncertainty*Carlos A. Torres*

During economic uncertainty, it is necessary a model of dynamic thought, for troubleshooting that keeps in mind that human beings are unwrapped inside organic, non-linear, neither determinists systems. The triadic theory of the mental operation, developed by Carlos Antonio Torres for educational systems, serves, also, to solve the economic problem, from the conceptualization of the non-linear dynamic systems paradigm. This theory establishes nine tasks, grouped triadically that belong to three types of mental processes: cognitive, moving-perceptive and pragmatic-contextual. They interact dynamically, producing activation, opposition or reconciliation. When economic measures are given, that come form a reconciliation process, we will say that creatively we come closer to levels of well-being and stability that suit to each country and so, to the whole world.

Keywords: Non-linear dynamic system; cognitive, moving-perceptive, pragmatic, reconciliation, opposition, activation, fractal.

Detection of chaotic behaviors in TAR Models applied to temporary series of Spanish economic conjuncture*R. Gimeno, R. Mateos, L. Escot, E. Olmedo, P Grau*

The temporary series of economic conjuncture, given the observation frequency and their size, generally escape to the classic non-linear analysis for the detection of chaotic behavior. In this work is introduced a new parametric type methodology for the detection of the chaotic behavior in these temporary series, based on the estimation of econometric models and on the elaboration of bifurcation trees graphics for the admitted variation range by the confidence intervals of the estimated models. This methodology is proven with an autoregressive model with threshold (TAR). Next it was proven with 66 temporary series of the Spanish economic conjuncture, as in 32 of them the linearity hypothesis is rejected, being preferable the adjustment of the TAR model. In twelve of these the presence of chaotic behavior cannot be rejected.

Keywords: Temporal series, TAR models, chaos.

Historicidad, entropía e inestabilidad estructural: es estudio preliminar*Alain Herscovici*

El objetivo de este trabajo consiste en definir la historicidad de la ciencia económica en función de los conceptos de entropía y del indeterminismo metodológico. Esto implica una definición de dos universos distintos: uno que se caracteriza por la ergodicidad y por la irreversibilidad del tiempo y de los procesos económicos, y el otro que presenta las características inversas. La primera parte tratará de la definición del objeto de estudio y de la naturaleza de las leyes en cada uno de estos universos. En una segunda parte, se estudiarán las implicaciones de esta dicotomía con respecto a la naturaleza del equilibrio, sus condiciones de estabilidad o de inestabilidad y las modalidades de 'cerramiento' de los sistemas así construidos.

Palabras Claves: Historicidad, estructuras disipativas, entropía, irreversibilidad.

Historicity, entropy and structural uncertainty: preliminary study*Alain Herscovici*

The objective of this work consists on defining the historicity of the economic science in function of the entropy concepts and of the indeterminism methodology. This implies a definition of two different universes: one characterized by ergodicity and the irreversibility of time and of the economic processes, and the other one, that presents the inverse characteristics. The first part will be about the definition of the study object and of the nature of the laws in each one of these universes. In a second part, the implications of this dichotomy will be studied with regard to the nature of the equilibrium, its stability or instability conditions and the modalities of 'closing' the systems this way built.

Keywords: historicity, dissipative structures, entropy, irreversibility.

Crisis cambiarias, ataques especulativos e inestabilidad financiera en un mundo global: Un acercamiento postkeynesiano con referencia a la crisis cambiaria brasileña*Antonio J. Alves, Jr. Fernando Ferrari, Luiz Fernando de Paula*

Este artículo desarrolla una visión crítica a los modelos convencionales de crisis cambiarias y presenta una visión postkeynesiana de la inestabilidad financiera y

los ataques especulativos. También analiza la crisis cambiaria brasileña 1998/1999 según una perspectiva postkeynesiana.

Palabras Claves: Modelos de Crisis Cambiarias, teoría Keynesiana y postkeynesiana, Crisis Cambiaria Brasileña.

Dolarización Parcial: una regla de calce monetario y sus implicaciones para la política monetaria y el bienestar

Angel Gerardo García Banchs

Este papel contribuye a los estudios previos de objetivos económicos de inflación en economías parcialmente dolarizadas incorporando el efecto de una regla de calce monetario. Específicamente, dicha regla implica la imposición de una restricción para la dolarización crediticia para garantizar que cualquier forma de deuda nominada en divisa (o crédito bancario) se asigne solamente a la exportación del sector comercial de la economía. Los resultados son evidentes. Cuando la economía no está expuesta financieramente al riesgo del tipo de cambio real: (i) la volatilidad de las principales variables macroeconómicas se reduce, reflejando ganancias en términos de bienestar, y (ii) la función de reacción de política óptima es menos sensible a los cambios en la prima de riesgo y la tasa de interés foránea, y más reactiva a los movimientos en la diferencia del producto y la inflación esperada. Las consecuencias de (i) y (el ii) sugieren que el consejo que llama a la desdolarización de los pasivos en las economías pequeñas y abiertas, debe aplicarse solamente al sector no-exportador.

Palabras claves: dolarización financiera (parcial), regla de calce monetario, miedo a flotar, pecado original.

Royalty in Venezuela as commercial format of entrepreneur growth 1990-2002

Aarón I. Olmos R.

Royalty is the result of long date recognition and adaptation process of business practices to the different prevailing economic, social and political conditions in the markets. It is for that reason that the development and growth of commercial and business format royalty at world level, grants a structure and elements that allow the efficient exploitation and operation of a business concept, proved and successful, activating an entire group of relationships and interactions, among the economic agents that participate of it, stimulating the monetary, goods and services flow in the economy. In this sense, the firm, becomes the basic unit of relationship among economic factors that participate in the royalty market, when becoming the fundamental mechanism of expansion and growth of the system to

a world level. In Venezuela, the companies that decide to operate under this system, impulse the development of the managerial sector, when replying their structure and operation, in an iterative way, through the creation of new companies. In this sense, the contribution that to the growth and development of the national economy, offers the system of royalties, it is evidenced in the contribution of 0,5% to the Non-Oil Gross Domestic Product, as well as, in an increase of the social welfare, and in the generation of employments.

Keywords: Commerce, Growth, economy, companies, royalty.