

## ABSTRACTS - RESÚMENES

### **Economic complexity as seen by the theory of chaos**

Sary Levy Carciente

The irreversibility of time and the absence of linearity in economic processes need to be incorporated into explicative models if we are to further our understanding of economic phenomena. This leads us to examine chaotic, complex and non-lineal dynamics and offers the possibility of understanding irregular economic behavior without resorting to *ad hoc* explanations. The theory of chaos allows us to explore the multiplicity, complexity and dynamic nature of reality beyond the limitations imposed by lineal, automatic or simplistic models.

**Key words:** chaos; complexity, non-linearity, economic dynamics, non-lineal dynamics, temporal irreversibility.

### **Non-linearity and economic dynamics: Some commentaries**

Jesus Gerardo Navarro

This article indicates the main differences between linear and non-linear dynamics. Furthermore, it suggests the need to apply non-linear analysis for certain aspects of economic dynamics, such as persistent cyclical variations. One of those non-linear functions commonly used is the linear approximation a torsos. Goodwin's 1951 model is an example applied to the interaction between capital and rent. It achieves an endogenously self-sustained cycle that neither disappears nor explodes. It is the result of the functional structure of the model and does not depend on the initial conditions; nor does it need exogenous stimuli in order to initiate the cyclical movement.

**Key words:** dynamic systems, non-linearity, economic dynamics, non-linear dynamics, limited cycles.

### **Precios, Entropía y Mercado. Equilibrio, incertidumbre y reversibilidad de la economía**

Alain Herscovici

El trabajo estudia la relación existente entre incertidumbre y reversibilidad temporal en las decisiones de los agentes y la naturaleza del equilibrio macroeconómico. Para iniciar la reflexión se hace uso de los trabajos de Ilya Prigogine vinculados a las estructuras disipativas y al estudio de los sistemas dinámicos inestables. Se estudian así las relaciones existentes entre sistema de precio, coordinación de decisiones individuales y la naturaleza de la información en

función de especificidades de universo económico. Lo anterior exige una definición de corte teórico que permita definir entre 2 tipos de universo: el de la corriente imperante (Mainstream) y el de la (s) heterodoxia(s). Este corte se expresa a través de las diferentes concepciones de la naturaleza del mercado, la regulación macroeconómica, la naturaleza del tiempo y de los procesos económicos. finalmente, se ofrecerán elementos para construir, a partir de una concepción heterodoxa, una economía de la información.

**Palabras claves:** Inestabilidad estructural, entropía, ergodicidad, información.

### **Prices, entropy and market**

*Alain Herscovici*

This article examines the relationship between uncertainty and temporal reversibility in the decisions of actors and the nature of macro economic equilibrium. As a starting point, the authors take Prigogini's work on dissipative structures and on unstable dynamic systems. They study the relationship between price system, the coordination of individual decisions and the nature of available information, on the basis of the particular characteristics of the economic universe. They distinguish between mainstream and heterodox universes that reflect different visions of the nature of the market, macro economic regulation, the nature of time and of economic processes. Finally, from a heterodox perspective, they offer elements for the construction of an information economy.

**Key words:** Structural instability, entropy, ergonomics, information.

### **Is the FTAA a convenient option for South America? (Reflections on development strategies)**

*Luis Mata Mollejas*

Historical experience and economic theory suggest, firstly, that the neoliberal insistence on the negative consequences of political action is misplaced; secondly, that economic changes during recent decades have imposed severe limitations on the efficacy of national fiscal and monetary policies; and, thirdly, that the increasing importance of international financial transactions (globalization) calls for options which imply integration projects as an integral part of development strategies. In order to take advantage of new possibilities, South America needs to achieve political agreements, which imply sharing 'sovereignty'. Otherwise, it will be obliged to accept solutions imposed from outside.

**Key words:** Macroeconomics, financing, intervention, exchange regime.

**Thirlwall's law and the growth of the world economy: A critical analysis of the debate**

*Ignacio Perrotini H.*

This article explains the growth model with limitations derived from the balance of payments, also known as Thirlwall's Law. It also resumes the debate over this dynamic theory and finally argues that, despite what many economists sustain, Thirlwall's Law cannot be deduced from Roy Harrod's growth theory.

**Key words:** Thirlwall's law, growth, open economy, balance of payments, effective demand and investments.

**Venezuela's exchange rate paradox**

*Humberto García Larralde*

Between 1997 and 2001, the Venezuelan currency was clearly overvalued, if measured on the basis of parity in purchasing power. Nevertheless, the country maintained a persistently favorable commercial balance. This paradox can be explained once it is recognized that a large proportion of exchange earnings represents a rent paid by foreign oil consumers, the equivalent of a unilateral transfer, without which the balance would be clearly deficitary. It proved impossible to maintain the exchange rate and in 2002 there was a severe devaluation. With the prevailing political instability and the lack of policies supporting the productive sector, this devaluation is unlikely to improve the competitiveness of Venezuelan firms. Inflation will largely neutralize the effects of the devaluation and salaries will inevitably lose real purchasing power.

**Key words:** Venezuela, rent, over-valuation, exchange rate.

**Electronic money and monetary policy: a first approximation**

*Maximir Alvarez*

During the last two years, some Venezuelan financial institutions have begun to examine the possible impact of electronic money on the financial system. At the same time, Central Banks and economic analysts are trying to gauge how these new services affect the designing and application of monetary policy: how electronic money may affect the demand, its circulation velocity and the relationship between monetary aggregates. Other topics of interest are: how the population's use of money will be modified, norms restricting the legitimating of capital, trans-frontier transfer of funds, the quality of payments systems and the reduction of royalties for the emission of paper money. This article describes the different forms of electronic money and their implications for the Central Bank.

**Key words:** electronic money, traditional means of payment, pre-paid cards, multifunctional intelligent cards, electronic money in internet, services in internet, monetary policy, central banks.

**Turquía: Crisis bajo las políticas dirigidas por el FMI y posibilidad de alternativas**

Özgür Orhangazi

El comienzo del 2001 en Turquía ha estado marcado por una crisis económica muy destructiva. El aumento de la fragilidad del sistema tras la implementación del programa dirigido por FMI de 'desinflación y estabilización', abrieron paso al colapso tanto del programa como de la económica. Este artículo esgrime que la crisis no puede ser explicado únicamente por la coincidencia de eventos independientes ni por problemas técnicos de las políticas económicas. La políticas dirigidas por el FMI causaron la crisis al incrementar la fragilidad del sistema. La insistencia en estas políticas solo empeorara las condiciones y resultados de estas políticas son tanto económica como socialmente indeseables. Este artículo muestra que existen políticas y herramientas alternativas, que ofrecerán mejoras en el crecimiento, el empleo y la distribución del ingreso.

**Palabras claves:** Crisis financieras, FMI, Turquía.

**Turkey: the crisis of IMF-Directed policies and the possibility of alternatives**  
Ozgür Orhangazi

The beginning of the 2001 in Turkey has been marked by a very destructive economic crisis. The increased fragility of the system after the implementation of an IMF-directed "disinflation and stabilization" program paved the way to the collapse of both the program itself and the economy. This paper argues that the crisis can neither be explained solely by the coincidence of independent events nor by technical problems of economic policies. The IMF-directed policies caused the crises by increasing the fragility of the system. Insistence on these policies will only worsen the conditions and results of these policies are both economically and socially undesirable. This paper shows that alternative policies and tools, which will provide improvements in growth, employment, and income distribution are available.

**Keys words:** Financial crisis, IMF, Turkey.

## **Inversión y financiamiento en Brasil**

*Elton Eustaquio Casagrande*

El texto discute el financiamiento en Brasil durante la primera mitad de los 90. Dada la importancia histórica del autofinanciamiento, el objetivo es identificar las fuentes de financiamiento del gasto de inversión entre 1990-94. Las empresas de la muestra son clasificadas en Grandes (155) y Medianas y Pequeñas (441) del sector industrial, comercial y de servicios, totalizando 596 empresas. Finalizamos el artículo realizando dos conclusiones: una teórica y otra empírica. La primera se preocupa de escoger el modelo más adecuado para ser aplicado a la muestra. La segunda es sobre la evidencia de los estudios de los determinantes de la inversión realizados en Brasil e internacionalmente.

**Palabras claves:** Inversión, financiamiento, asimetría de la información, modelos de inversión.

## **Investments and financing in Brazil**

*Elton Eustaquio Casagrande*

This article examines financing in Brazil during the first half of the nineties. Given the historical importance of self-financing, the objective is to identify the sources of financing for investments during the period 1990-1994. The 596 firms from the industrial, commercial and service sectors are divided into two categories: large (155) and medium and small (441). The authors offer two conclusions, one theoretical and the other empirical: the first is related to the choice of an appropriate model to be applied in the survey: the second is based on the evidence offered by studies on investments, both in Brazil and internationally.

**Key words:** investments, finance, non symmetrical information, investment models.

## **A reference framework for the development of micro-financing in Venezuela**

*Leonardo Vera, Francisco Vivancos & Luis Zambrano Sequín*

The relatively limited development of small-scale credits in Venezuela has provoked a lively interest in official circles for government participation in and promotion of this activity. This article synthesizes recent literature dedicated to understanding small-scale financing on the basis of the rich experience accumulated in developing countries. The authors discuss the objectives and the scope of the credits and its relationship to the problem of poverty. They also analyze the lessons of recent experiences and their relevance for evaluating the recently

approved legal framework introduced for Venezuela, suggesting some shortcomings and ambiguities.

**Key words:** Micro finance, regulations, interest rates, Venezuela.

### **La desestructuración e informalidad del mercado de trabajo en Brasil**

Mauricio de Sousa Sabadini y Paulo Nakatani

Las constantes Transformaciones del capitalismo contemporáneo provocaron significativas alteraciones en el mundo del trabajo. La crisis del capital produjo el resurgimiento del proyecto neoliberal y la reestructuración productiva, afectando el mercado del trabajo a través del aumento de las tasas de desempleo, el uso del régimen y contratación laboral más flexible, provocó la reducción del empleo formal y aumento del informal. El objeto de este trabajo será mostrar la evolución de la informalidad en Brasil, en la década de los 90, así como destacar algunas características de los dos principales grupos de ocupación informal: los trabajadores por cuenta propia y los asalariados sin trabajo fijo. El proceso de precarización y desestructuración del mercado laboral brasileño en los años 90, principalmente en el gobierno de Fernando Enrique Cardoso tuvo como elemento central una ampliación en las ocupaciones informales que sirven como reserva activa de fuerza de trabajo disponible para el capital.

**Palabras claves:** Precios, entropía de mercado, equilibrio, incertidumbre.

### **Destructuring and informality in the brazilian labor market**

Mauricio de Souza Sabatini & Paulo Nakatani

Recent changes in the capitalist system have affected labor. The restructuring of production and the neoliberal project have provoked increasing unemployment and work flexibilization. They have reduced formal work relations and increased informality. This article examines the advances of informality in Brazil in the nineties, highlighting the fate of the self-employed and wage earners without regular employment (lacking a work card). The authors conclude that, in the nineties, and above all during the Cardoso administration, the process meant above all an increase in those informal occupations which constitute a an active reserve army, available for capital.

**Key words:** Prices, market entropy, equilibrium, uncertainty.

## **Budget analysis and the gender focus**

*Lourdes Urdaneta de Ferrán*

The national budget mirrors the economic and social policies of the government and is naturally a focus point for the pressures of competing interests. In several countries, feminist groups have been formed in order to analyze the budget and formulate criticisms designed to foster a more equitable distribution of financing and returns. This article examines the contributions and limitations of these efforts, which necessarily promote a greater transparency over who pays and who benefits and, as a result, furthers the interests of both men and women.

**Key words:** Budget analysis, equity, gender.