Revue de la régulation

11 (1er semestre 2012)
Les capitalismes en Amérique latine. De l'économique au politique

Demian Tupac Panigo et Pablo Ignacio Chena

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Référence électronique
Demian Tupac Panigo et Pablo Ignacio Chena, « Regulationist Macro-Models for Developing Countries. An Application to the Argentine New Development Pattern », *Revue de la régulation* [En ligne], 11 | 1er semestre 2012, mis en ligne le 03 mai 2012, consulté le 11 mai 2012. URL : http://regulation.revues.org/9705

Éditeur : Association Recherche & Régulation
http://regulation.revues.org
http://www.revues.org

Document accessible en ligne sur :
http://regulation.revues.org/9705
Document généré automatiquement le 11 mai 2012.

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1. Introduction

1 The crisis undergone by the Argentine economy by the end of the 1990's, with its most severe period between 2001 and 2002, meant the end of a pattern of development based on the articulation of a classical regulation mode (with preponderance of monetary and international regimes over the rest of the institutional forms) and a rentier-type accumulation regime [1](led by the influx of foreign capital attracted by rents generated from financial services, primary resources and privatized utilities) characterized to be capital intensive and mostly extroverted

2 In order to counterbalance the socio-economic and institutional effects of the crisis, from 2003 onwards, a series of measures has been implemented, aimed at generating a transition towards a new development mode that reverts the hierarchy of institutional forms (proceeding to give priority to the State and the wage relation) so as to promote an industrial, extensive and introverted accumulation regime.

3 With the purpose of making the most appropriate interpretation of the different functional relationships combined in this new development pattern, we have generated (for the National Ministry of Economy and Public Finance of Argentina; see Panigo *et al*., 2009) a regulationist structural macroeconometric model (RSMM), that has the quality of: 1) endogenizing the potential output (which became dependent of the aggregate demand because of significant dynamic scale economies associated to the new sectors leading the growth process); 2) highlighting the macroeconomic effects of income distribution (minimized in the preceding development pattern as a result of a greater availability of domestic credit in US dollars in the medium and long run); and 3) considering the consequences of Argentina's unbalanced production structure (Diamand, 1972) on the dynamics of the current account (crucial after 2002 default, due to the reversal of financial capital flows).

4 The main goal of the present paper is to stress the most important contributions of the RSMM in order to achieve a better interpretation of Argentina's new development pattern. To do so, the paper is organized as follows: in the following section, a brief summary is presented, concerning key transformations undergone by the Argentine economy since the middle of the 1970's, adopting a regulation approach based on a periodization determined by the crisis of the different development modes over the last 35 years (characterized by the combination of alternative modes of regulation and accumulation regimes). In Section 3, the previous analysis is complemented with a deep assessment of the transition from the rentier-type, financial and extrovert accumulation regime – established since 1976 until the crisis of Convertibility – towards a production, industrializing and more introverted accumulation regime –prevailing at present. In this way, Sections 2 and 3 allow to outline the macroeconomic and institutional context of the data generating process used to obtain the parameters of the RSMM formalized in Section 4. Subsequently, the document is closed with the general conclusions, bibliography and a methodological appendix on the estimation techniques used for the empirical analysis in Section 4. 2.

2. Institutional Transformations and Different Development Patterns of the Argentine Economy – A Historical Analysis from the Regulation Theory Perspective

5 For the authors identified with the regulation approach, the mode of development is defined as: "... the conjunction of an accumulation regime and a type of regulation" (Boyer and Saillard, 1996, p. 208). Of all different possible combinations, this theory highlights the polar

cases of pure Fordism and the classical competitive scheme, also having a hybrid series of development patterns that allow explaining the historical and institutional main characteristics of the examined processes (see Boyer, 2007, p. 65-84).

6 More specifically, the intermediate concepts that characterize the development mode are described as:

1. Mode of Regulation: It is defined as the result of the articulation of different institutional forms [2], in order to "1.- reproduce the fundamental social relationships; 2.- support and conduct the ongoing accumulation regime (or set of regularities ensuring a general and relatively coherent progress in capital accumulation" (Boyer and Saillard, 1996, p. 209). Among the most relevant modes of regulation, the following mode cases may be highlighted: 1) the competitive regulation, distinctive of the 19thCentury, traditionally associated to an institutional hierarchy where the supply and demand free relationship determines a subordination of the State form, the monetary regime and the wage relation to the dynamics imposed by capitalist competition over the remaining institutional forms; and 2) the monopolist regulation, emerged during the second half of the 20thCentury, where the order of the institutional hierarchy is usually reversed based on the growing relevance of full employment and social welfare goals, giving rise to a scheme where the wage relation and the State form constitute themselves as the predominant institutional forms of the mode of regulation.
2. Accumulation Regime: It represents the mechanisms and economic regularities that allow the generation, appropriation and utilization of economic surplus so that, in the long run, it may ensure the relative adaptation of the production and consumption dynamism (see Boyer and Saillard, 1996, p. 210). In the classification proposed by the regulationist authors, the polar alternative highlighted are those of the Fordist accumulation regime (intensive, introverted and with mass consumption) as opposed to the classical scheme (extensive, extrovert and with a dual consumption pattern, see Boyer, 2007, p. 98)

7 For the case of the Argentine economy, the combined analysis of the above mentioned concepts allows the following brief characterization of the different prevailing modes of development of the last decades (see Table 1).

Table 1. Summary of the Transformations of the Mode of Regulation and the Accumulation Regime in the History of Argentina

PERIOD	MODE OF REGULATION	ACCUMULATION REGIME
1976-1982	*Monetary Regime*: Devaluation. Since 1979, the "*crawling peg"* promotes the overvaluation of the exchange rate. *State*: Violent reduction of public intervention in the economy. Unprecedented indebtment. Labor union repression in order to provide "sustainability" to the transformations introduced to the wage relation. *Wage Relation*: Strong fall of real wages, reduction of labor rights and suspension of collective bargaining. There is a reduction of the wage share, industrial employment falls and productivity undergoes a slight increase (until 1980, without an extended scientific organization of the tasks). *International Regime*: Growing relevance of the international flows of speculative capital. Strong process of trade and financial liberalization.	Although *ex post* the ongoing accumulation regime still continues to be industrial and introverted, the 1976-1982 period may be interpreted as an unsuccessful transition towards an intensive and extrovert-classical accumulation regime, boosted by traditional exports and investment (until 1979, in this latter case), without mass domestic consumption and articulated with a competitive mode of regulation. This situation takes place together with an important process of deindustrialization, sped up after 1978, with the disappearance of the Fordist (or quasi-Fordist) rules of consumption and a strong initial increase of the investment rate (promoted by a growth of the profit margin) reversed from 1979 onwards. The regime of industrial promotion is reduced to its bare minimum. The productive and export

	Competition Forms: Competition is increased as a result of trade liberalization and market deregulation. However, there is an increase of the concentration in the domestic segment, especially in the sectors of non tradable goods, implying a structural deviation of competitive pricing.	profile becomes again commodity-oriented.
1983-1990	*Monetary Regime*: Maxi-devaluation followed by a series of failed stabilization plans leading to hyperinflation. *International Regime*: Progressive return of capital controls and protectionist policies. *Competition Forms*: Less competitive markets due to protectionism and the growing relevance of multinational corporations. *Wage Relation*: Progressive return to a monopolistic relationship with a strong power of trade unions. General strikes, decreasing real wages and increase of unemployment. *State*: Progressive increase of intervention since the end of 1983, but highly constrained by structural budget deficits and inherited public debt.	Partial reintroduction of the import substitution based industrialization process, characterized by a low accumulation rate and international trade barriers. The social consumption rule becomes more heterogeneous. Structural restriction of external financing. Industrial concentration and heterogeneity. Backward integration of a small number of multinational corporations and growing burden of debt services.
1991-2002	*Monetary Regime*: Hyperinflation, dollarization and loss of the monetary and exchange rate policy. Switch to a Currency Board after the "*Bonex*" Plan. *International Regime*: Trade and financial liberalization. Massive capital inflow, foreign direct investment attracted by generalized privatizations. *Competition Forms*: Deregulation + Foreign Trade Liberalization = More Competition in tradable goods. But simultaneously, concentration and transnationalization of the productive structure. *Wage Relation*: Switch to a more competitive relationship. Banning of wage indexation and significant erosion of labor union power. *State*: It drifts away from the production of goods and services. Massive deregulation. Subsidy removal. Privatizations. Access to capital markets (after the *Brady* Plan) and a new process of indebtment.	New extroverted accumulation regime, promoted by foreign indebtment, where financial intermediation, privatized utilities, agricultural (primary and manufacturing) production and the extraction of natural resources (oil and minerals) steer growth. Context of rising globalization, deregulation and intensive competition, determining the reconversion of the productive structure. Inflation drop and monetary stability (until 2002), with structural current account and budget deficits, and an exponential increase in unemployment, poverty and inequality.
Since 2003	*Monetary Regime*: Shift from a fixed, unique and overvalued exchange rate scheme to another with multiple exchange rates, administered according to the main requirements of the argentine unbalanced economic structure (Panigo and Chena, 2011). Large	Initially, the accumulation regime becomes extroverted, extensive and encompassing a dual consumption pattern. A reindustrialization of the economy occurs, with a GDP recovery based on durable goods and exports growth, in conjunction with a regressive distribution of wealth

	companies' debt dilution through asymmetric "pesification". *International Regime*: Greater importance of exports in the economy (with a relative growth of manufacturing goods) Controls over capital flows and systematic surplus of the current account. *Competition Forms*: The 1990's oligopolistic structure remains unchanged in many sectors. The 2002 asymmetric pesification favored property concentration. *Wage Relation*: Progressively monopolistic, with a growing relevance of indirect wage policies. Strong fall (as a result of the 2002 devaluation) and subsequent recovery of the real wage (based on the widespread implementation of new collective agreements and the progressive increase of the minimum wage). Deep regulatory reform, improving workers' individual and collective rights (see Panigo, Chena and Makari, 2010). *State*: Greater intervention in the different markets, taxes on exports in order to redistribute the agricultural profit to the rest of the society, mainly funding new social programs. Price agreements to hold back inflationary pressures. Structural budget surplus and indebtedness reduction.	and a modification of relative prices in detriment of non-tradable sectors. Since 2005, investment starts to be oriented by a more introverted, less extensive and more egalitarian accumulation regime, leading to an increasing mass consumption. In this context, GDP growth is promoted by public investment and the working-class consumption (see Chena, Crovetto and Panigo, 2011).

8 As it can be observed in Table 1, the Argentine development pattern has undergone a drastic transformation after the crisis of the Currency Board, which has been particularly relevant to the formal design of the RSMM. For this reason, section 3 introduces a detailed description of the Argentine post-Convertibility development pattern.

3. Main Characteristics of the Argentine Post-Convertibility Development Pattern

9 After the breakdown of the different stabilization plans that culminated in the hyper-inflationary processes of 1989 and 1990, the new government (elected in early elections in 1989) decides to implement the Convertibility Plan (a quasi-currency board, with contract and wage deindexation) together with a series of economic policy measures associated to the "Washington Consensus" and aimed at deregulating markets, privatizing public companies, making labor conditions more "flexible" and liberalizing foreign trade and capital flows.

10 Initially, this new accumulation regime noticeably reduced the inflation rate and allowed a vigorous, though temporary, recovery of the economic activity. However, since the middle of 1994 (and with a greater intensity since 1998), the Convertibility Plan and its associated policies begin to show a deep fragility both at the domestic level (with a strong growth of unemployment, informality, poverty, extreme poverty, inequality, budget deficit and financial fragility, among other relevant socio-economic indicators) and in their ability to generate foreign currency (persistent deficit of the current account, exponential indebtment and growing capital outflows, see Peralta Ramos 2007). In this sense, the negative foreign shocks that affected the Argentine economy concerning competitiveness and access to international credit (as the 1994 "Tequila Effect", the 1997 Asian crisis, the 1998 "Vodka Effect" and the 1999 "Caipirinha Effect") only acted as amplification and acceleration factors of an unsustainable endogenous dynamics. The main cause of the 2001-2002 crisis is related to the internal

inconsistency of a rentier-type, intensive and extroverted accumulation regime. Even in the absence of those shocks, the model was unable to generate the necessary job positions without resorting to a rising and unsustainable level of public and foreign indebtment.

11 The crisis of Convertibility left the Argentine economy in default and without financial intermediation with almost 20% of accumulated GDP drop (since 1998), 25% of unemployment rate, a poverty incidence higher than 50%, 1 out of 4 people in extreme poverty and the highest level of inequality in its history (see Agis *et al.*, 2010).

12 In order to revert this situation of socio-economic emergency, since 2003 the new national government implements a series of measures aimed at reverting the hierarchy of institutional forms (with the State and wage relation, formerly subordinated to the monetary and the international regimes, as leading institutions of the new regulation mode) and substituting the preexisting rentier-type and financial accumulation regime for a productive, intensive and less extroverted accumulation regime, boosted by the simultaneous raise of the profit rate and the wage share (due to rents redistribution from financial and primary sectors) and oriented the new goals of full employment and decreasing inequality.

13 Among the different economic policies implemented since 2003, the following pillars of the new development pattern may be highlighted:

1. Support of a "development promoting" (sectoral differentiated) real exchange rate.
2. Control of capital flows.
3. Renationalization of several privatized companies.
4. Debt relief of the public sector (with budget and foreign exchange impacts)
5. Fiscal sustainability, without recessive adjustment; with further and better public expenditures.
6. Progressive taxation and increasing fiscal efficiency. Priority in the extraction and redistribution of extraordinary rents.
7. Support for the development of collective bargaining and increase of the minimum wage.
8. Renationalization of the pension system, allowing increasing coverage and benefits.
9. Indirect wage raise, through the expansion (in coverage and benefit amounts) of the main social inclusion programs.
10. Regulation of key sectors, through export duties, subsidies and price arrangements.

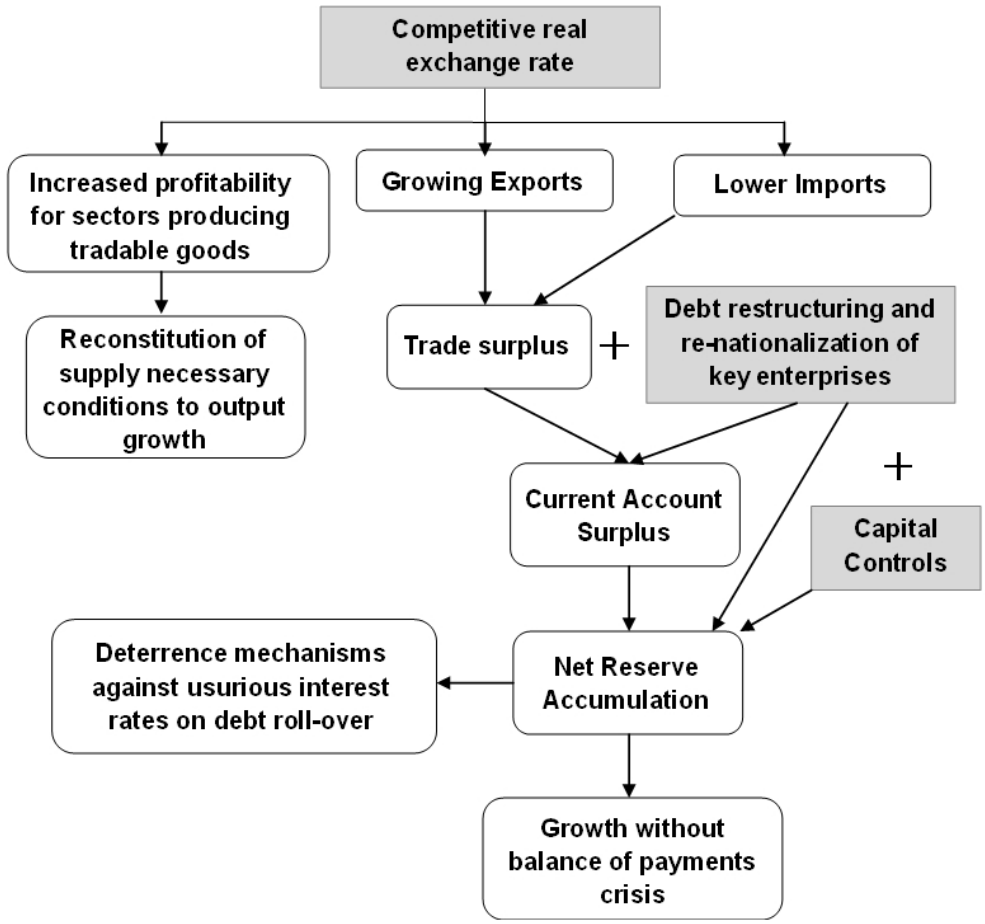
14 The first 4 pillars are related to seeking for a persistent solution to the limited supply of foreign exchange and the lack of industrial international competitiveness under free-market conditions (see Chart 1).

15 The support of a "development promoting" real exchange rate (grounded on a government intervention scheme in international trade, foreign exchange and currency markets, through the replenishment of reserves, the sterilization of money surpluses and the reduction of financial volatility with controls on capital flows) was an incentive for import substitution and exports growth, generating:

- A persistent trade and current account surpluses that allow for the accumulation of genuine international reserves, in order to alleviate the limited supply of foreign exchange and allow strong and sustained GDP growth without generating a balance of payments crisis (Bacha, 1986; and Thirlwall, 1979); and
- The reconstruction of aggregate supply necessary conditions (but not sufficient) for industrial recovery and employment growth (Curia, 2007a and 2007b).

16 Additionally, it must be emphasized the positive impact of the public debt restructuring (after the 2001 default) both on the Current Account and on the Capital Account, as well as the helpful effect on the Current Account (because the transfer of dividends and earnings to foreign countries is reduced) of the renationalization of several public companies that had been privatized during the previous decade (Azpiazu, 2002).

Chart 1. Policy Measures to Fulfill Necessary Aggregate Supply Conditions for a Sustained GDP Growth without Foreign Indebtment

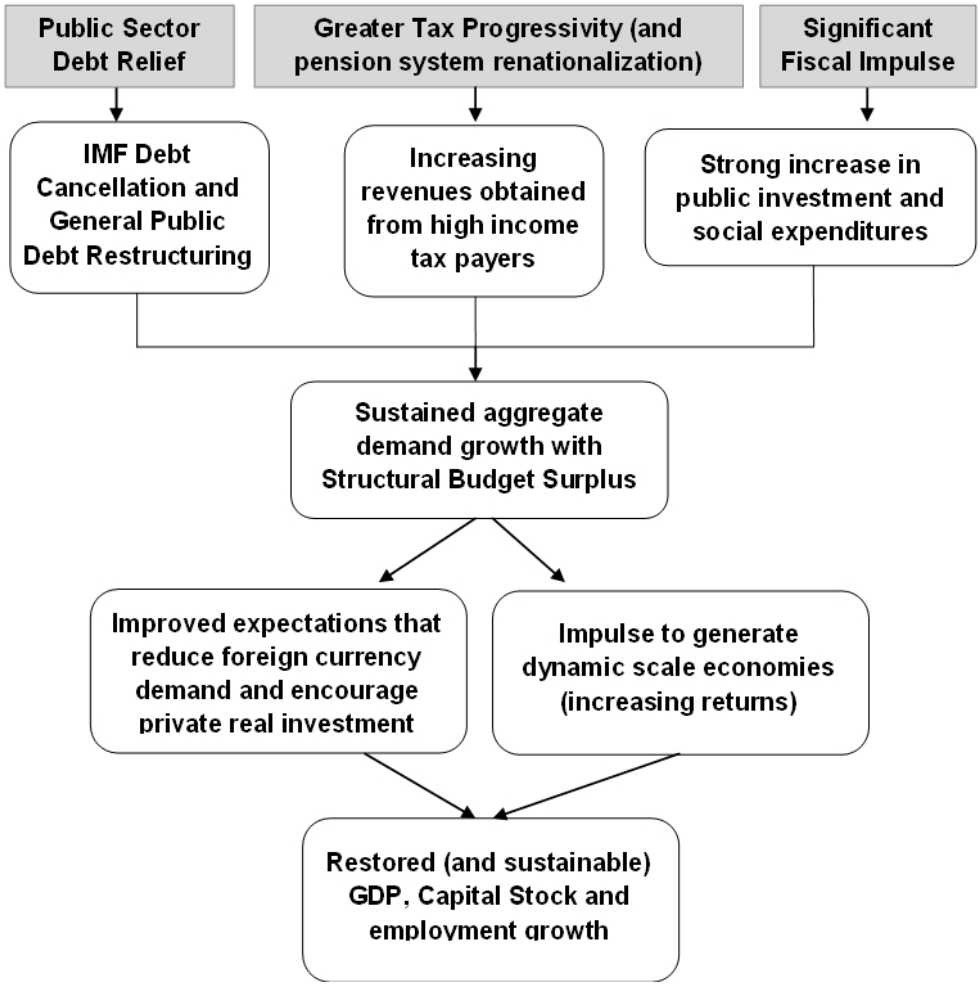


17 Notwithstanding, the first 4 pillars of economic measures did not ensure the required increase in the aggregate demand to encourage investment and the generation of new job positions. In fact, the significant increase of production and employment since 2003 is mainly related to pillars 4 (part of the first and second group of economic policies), 5 and 6, which have allowed the appropriate implementation of the necessary Keynesian policies (see Chart 2).

18 The recovery of the necessary political autonomy to promote GDP and employment growth, has been obtained through:

- A historical debt restructuring (Fenix Plan, 2003; Ceriotto, 2004), with a strong capital and interest relief and a significant deferral of maturity dates, releasing resources for a sustainable increase of social and infrastructure public investment
- A progressive reform (Gaggero, 2009) aimed at raising taxes paid by high income firms and families (e.g. export duties) and
- The autonomization of the adjustment policies recommended by the International Monetary Fund, thanks to a complete debt cancellation in 2005.

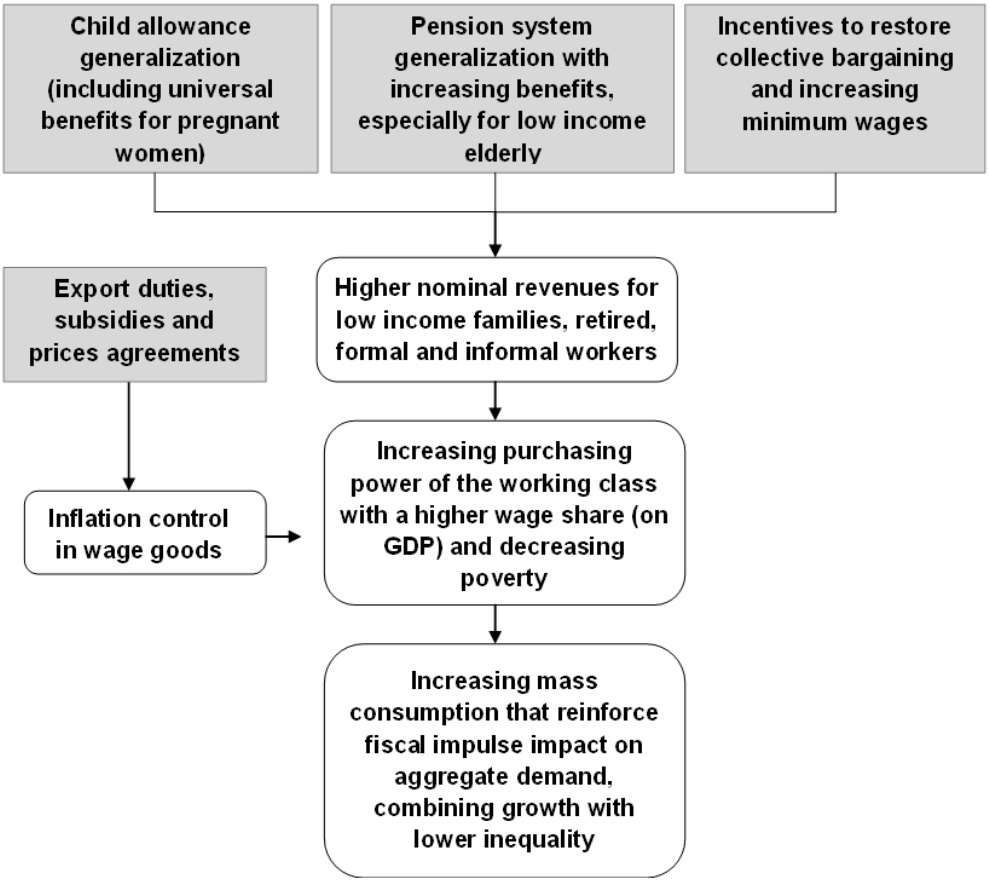
Chart 2. Policy Measures to Promote the Necessary Aggregate Demand Increase for Production and Employment Growth



19 In order to ensure that sustainable GDP and employment growth are combined with progressive income redistribution, the new government of Argentina implemented since 2003 a third group of economic policies (pillars 7, 8, 9 and 10, see Chart 3). These measures aimed at increasing real wages and social benefits without eroding the manufacturing competitiveness (thus avoiding the traditional "stop and go" cycles of the Argentine economy; see Prebisch, 1952; and Díaz Alejandro, 1963).

20 Pillars 7, 8 and 9 were used to raise the nominal wages, pensions and social benefits. However, with no government intervention on price formation, nominal wage increase finally impacts on the inflation rate (in protected or monopolistic price-makers sectors; Kalecki, 1971) or on the profit margin of import-competing sectors (putting at stake the model's sustainability). Therefore, pillar 10 becomes crucial as, in practice, it has determined a de facto scheme of multiple effective real exchange rates (Diamand, 1972) which has reduced the inflationary impact of the "development promoting exchange rate" and, with it, the minimum necessary increase in nominal wages that raises real wages. This is what has allowed the coexistence of a progressive increase of the workers' purchasing power, without implying a significant competitive loss of tradable sectors. [3]

Chart 3. Price and Income Policies Aimed at Combining Growth with Progressive Income Redistribution



21 The above mentioned 10 pillars have led to a structural transformation of the Argentine economy, shifting from a rentier-type, intensive and extrovert accumulation regime, boosted by exports (from the demand side) and the dynamics of the financial sector, the primary goods and the privatized utilities (from the supply side, additionally articulated with a mode of regulation where the State and wage relations were subordinated to the monetary and the international regimes) to a productive, less intensive (initially) and more introverted accumulation regime, fostered by an income redistribution from rents to wages and profits, where growth is boosted by (initially public and then predominantly private) investment and the dynamics of tradable sectors, which has meant a significant recovery of manufacturing (a process encouraged by a deep reversion in the hierarchy of the institutional forms, which finally adapt themselves to the new goals of full employment and decreasing inequality).

22 The transformation of the accumulation regime and the mode of regulation in Argentina invalidates the use of formal schemes designed to represent the preceding development pattern, such as some of preexisting macroeconomic models in the national public sector, among which the following may be mentioned: the Central Bank's Small Macroeconomic Model (MMP-BCRA, see Elosegui *et al.*, 2007), the Small Consistency Macroeconomic Model of Argentina's National Ministry of Economy and Public Finance (MMPC-ME, see Panigo *et al.*, 2009) and the Computable General Equilibrium Model of Argentina's National Ministry of Economy and Public Finance (MEGCA-ME, see Serino, 2008; and Chisari and Romero, 2006).

23 In order to take into account the new macroeconomic context, the main weakness of the MMP-BCRA is that it does not consider that: i) income distribution is a key variable to explain aggregate demand dynamics; ii) long-term potential output is not exogenous, but dependent on actual output (because in an industrial development pattern there are significant dynamic economies of scale); iii) the interest rate depends on the evolution of the of the Public Debt/

GDP ratio, as well as on the dynamics of the Net Foreign Assets/GDP ratio; and iv) inflation also depends on income policies (export duties, subsidies, etc; see Curia, 2007a and 2007b).

24 Meanwhile, among the more relevant structural limitations of the MMPC-ME for the analysis of the Argentine new development pattern, it may be noted that in this model: i) the economic growth is entirely determined by the Sovereign Risk, as a proxy variable of foreign capital influx (a feasible hypothesis for the Currency Board period but inappropriate in contexts of strong international credit rationing) and, therefore, aggregate demand has no significant effect on output evolution; ii) this MMPC-ME key variable (sovereign risk) is completely exogenous, determined by an interest rate that, as in the case of the MMP-BCRA, does not depend on domestic fundamentals; iii) income distribution is exogenous and it is determined outside the model; and iv) most behavioral equations are simple autoregressive processes.

25 Finally, neither the MEGCA-ME resulted adequate to describe the macroeconomic dynamics of the new development pattern since: i) to ensure equilibrium existence and uniqueness, there is a need of output functions without increasing returns to scale, a distinctive feature of a reindustrialization processes; ii) there is a use of Cobb-Douglas type Added Value functions, which ad hoc imposes a constant wage share (empirical and theoretically rebuttable hypothesis); iii) demand is completely endogenous and constitutes the adjustment variable for the neo-classical closure of the model, where savings determine investment (causal relationship generally refuted by the empirical evidence available for Argentina, see Panigo *et al.*, 2007); and iv) from the financial perspective, it is assumed that the country has an unlimited access to external savings and, therefore, it does not need the nominal exchange rate for the adjustment of the balance of payments imbalances (see Serino, 2008).

26 To summarize, the motivation to develop a new analytical tool that may overcome the previously mentioned shortcomings stems from the incapacity of these models to account for the structural transformations recently undergone by the Argentine development pattern.

4. Application of Regulationist Hypotheses in a Structural Macroeconometric Model for Argentina

4. 1. A formal model of the economy

27 Economic theories, as the methodological decisions made when designing a model, organize the designer's will by explicitly stating certain social events and failing to recognize other (through some assumptions). In this sense, the decision of Argentina's Ministry of Economy to design a new regulationist structural macroeconometric model (RSMM) comes out of its need to have information on the true performance of key variables (as it is the case of income distribution, productive development, employment generation, etc.) and of the structural deficiencies of the previous models to adapt themselves to a new framework of institutional relationships. In this regard, the Regulation Theory has the double virtue of, on the one hand, being a place where the institutional forms that regulate the economic system are a key part of the discussion (and not an *ad hoc* assumption) and, on the other, of allowing that the main economic and social variables for this new development pattern may have a leading place in the assessment of the macroeconomic performance.

28 In fact, for the design of the RSMM, the transformations undergone by the mode of regulation and the accumulation regime of the Argentine economy since the mid 1970's were deeply analyzed as it can be noted from the summary included in Section 2. From this detailed analysis, the need to provide the model not only with the capacity to incorporate the constraints imposed by the different institutional forms, but also with the necessary flexibility to capture the above mentioned transformations has emerged (see Section 4. 2.).

29 In addition, the RSMM also incorporates certain elements of Latin American Structuralism and of the Neoclassical and Post-Keynesian theories, aimed at providing a flexible theoretical framework (reducing as much as possible *ad hoc* assumptions). In other words, an important difference between the RSMM and its predecessors in Argentina is that it is designed to be adapted in the best possible way to the empirical evidence (and not the other way around).

30 The general structure of the model with its accounting identities and initial behavioral theoretical equations (that by the criterion of statistical parsimony and significance will be

simplified in the subsequent empirical analysis) are schematically presented in the following Tables 2 and 3:

Table 2. RSMM Behavioral Equations

31 >> see Table 2

Table 3. RSMM Accounting Identities

32 >> see Table 3

The RSMM exogenous variable are, expressed in growth rates: Income tax rate ($\hat{t}_t^{income}$); VAT rate ($\hat{t}_t^{vat}$); Export duties rate ($\hat{t}_t^{duties}$); Import tariffs rate ($\hat{t}_t^{tariffs}$); Employer contributions rate ($\hat{t}_t^{empl\_contr}$); Personal contributions rate ($\hat{t}_t^{pers\_contr}$); Utility tariffs ($\hat{Utariff}_t$); Population (Pop_t); Public investment ($\hat{I}_t^{pub}$); Bilateral nominal exchange rate $/USD ($\hat{E}_t$), International nominal interest rate ($\hat{R}_t^{world}$); USA prices ($\hat{P}_t^{USA}$); International prices (excluding the USA) ($\hat{P}_t^{world}$); Exports price index

($\hat{P}_t^x$); Imports price index ($\hat{P}_t^m$); World product ($\hat{Q}_t^{world}$); and world average labor productivity ($\hat{Prod}_t^{world}$).

33 Among the most significant features of the RSMM, it must be emphasized the acknowledgement that the economic dynamics is the consequence of the interaction between labor productivity, its social distribution and its effects on the aggregate demand. In other words, economic growth is the consequence of a two-fold causality:

> On the one side, a given size of the market allows a configuration of the division of labor in line with a classical analysis which goes back to Adam Smith's Wealth of Nations. On the other side, for a given rate of productivity increase and a distribution of income between wage, profit and relative price, there is a level of effective demand. The core hypothesis of the regulationist approach is that these two functions do not coincide and that they jointly set the equilibrium growth rate (Boyer 2002: 187).

34 As regards the productivity regime[4]of the Argentine economy, the RSMM sets a process of dynamic cumulative causation (Bertrand, 1983; Boyer, 1988; Boyer and Petit, 1989). This characteristic gives aggregate demand a key role for economic development, not only because of its effects on capacity utilization, but also for the dynamic economies of scale it generates.

35 In order to state explicitly how the aggregate level of income is distributed, the model set an equation of wage formation that considers the unemployment rate (competitive wage formation) but also considers the possibility of institutional arrangements that may set some rules in order to link wage evolution with labor productivity and the general level of prices (monopolistic wage formation, see Boyer, 1983, 1988, 1993).

36 Besides, in order to define a demand regime[5], the RSMM incorporates 1) an investment function that includes among its fundamentals the profit share and the level of capacity utilization (Boyer, 1988); and, 2) a consumption function that considers the effects of income distribution through the different marginal propensities to consume between workers and capitalists (Kalecki, 1971; Boyer, 1988).

37 Finally, in order to adapt it to Argentina, the RSMM also incorporates elements of the Latin American Structuralism, as well as some features of Classical and post-Keynesian theories, absent in existing models, as for example:

- Formalization of the foreign exchange and fiscal gap (Braun and Joy, 1968; Díaz Alejandro, 1963; Bacha, 1986).
- Incorporation of potential complementarities between public and private investment (Taylor, 1981).
- The disaggregation of marginal propensities to import of intermediate and consumption goods aimed at reflecting the relative scarcity of the domestic manufacturing sectors (Chenery and Strout, 1966; Taylor, 1994).
- Modification of the traditional export functions in order to consider that the main country export item is food (Cortés and Marshall, 1986; Chena 2008).
- Inclusion of the capital-labor relative price among the determinants of employment dynamics (Shapiro, 1986).
- Incorporation of a possible negative relation between consumption and the deposit interest rate (Fisher, 1930).

- Assertion of the negative effects of macroeconomic volatility on employment, aggregate demand and inflation.[6]
- Formalization of the Public sector financial restriction, making current expenditures depend on tax revenues. This characteristic, typical in underdeveloped countries is translated into a procyclical behavior of public sector expenditures.
- Incorporation of the effects of the macroeconomic policy on financial risk, a variable supposed to be exogenous in the previous models.
- Inclusion of world prices as inflation determinants.
- Integration, in the equation of the domestic deposit nominal interest rate, of a constant in order to capture the deviation from the uncovered interest parity.
- Inclusion of a large number of tax variables which may be used as policy variables affecting inflation, external trade and income distribution (Ferrer, 1969; Diamand 1972, Canitrot 1975).
- Incorporation of a "wealth effect" in consumption (Pigou 1943) and a "balance sheet effect" in investment (Kalecki, 1971; Fazzari, Hubbard and Petersen, 1988).

4. 2. Empirical Outcomes for Argentina: 1970-2007

38 With the purpose of estimating the RSMM, a quarterly database was created, covering the 1970-2007 period of the Argentine economic history. Most series are expressed at 1993 constant prices. The database also contains different dummy variables (incorporated to the estimations as additive and/or multiplicative, as appropriate) so as to take into account atypical events or switching regime, such as: the fixed exchange rate regimes for the 1970-1971 and the 1972-1974 periods; the "Rodrigazo" (1975-1976); the foreign debt crisis (1982-1985); the 1989 and 1990 hyperinflations; the Currency Board regime (1991-2001); its crisis (2001-2002); and, finally, a dummy variable associated to the post-Convertibility period (2003 onwards).

39 The parameters of the structural form were obtained in four stages: 1) series were seasonally adjusted (with the X12-ARIMA method); 2) variables were estimated in single equation forms (by ordinary least squares, with a method to determine the relevant explanatory variables called "Brute-Force"[7]); 3) the parameters for those variables with endogeneity and/or simultaneity[8]problems (investment, consumption, public sector current expenditures, imports, nominal wages and domestic prices) were re-estimated with the method of three-stage least squares; and 4) additional regressors were included (extending the "Brute-Force" principle) in the equations which generated residuals and dynamic processes that complicate equilibrium convergence in GAMS numerical solution.

40 Likewise, after estimating more than nine million different models, they were assessed in terms of theoretical consistency, goodness of fit and mean squared error (MSE, hereafter) of the in-sample and out-of-sample forecast. Briefly, those estimations presenting a combination of high Adjusted R^2, together with an acceptable forecast error (see Chart 1) and with estimated coefficients whose statistical signs (and significance) are adjusted to theoretical intuitions (for further information, see Appendix 1) were selected. This detailed econometric and selection procedure has the advantage, relative to the "General to Specific" method (made popular by Hendry, 2000), to reach specifications that, at equal level of parsimony, allow to significantly reduce the in-sample and out-of-sample forecast error of the best model. [9]

41 Table 4 summarizes relevant information on the criteria of model selection, both for single equation (OLS) and simultaneous estimates (3SLS).

Table 4. Main indicators derived from the estimation of the RSMM Behavioral Equations

42 >> see Table 4

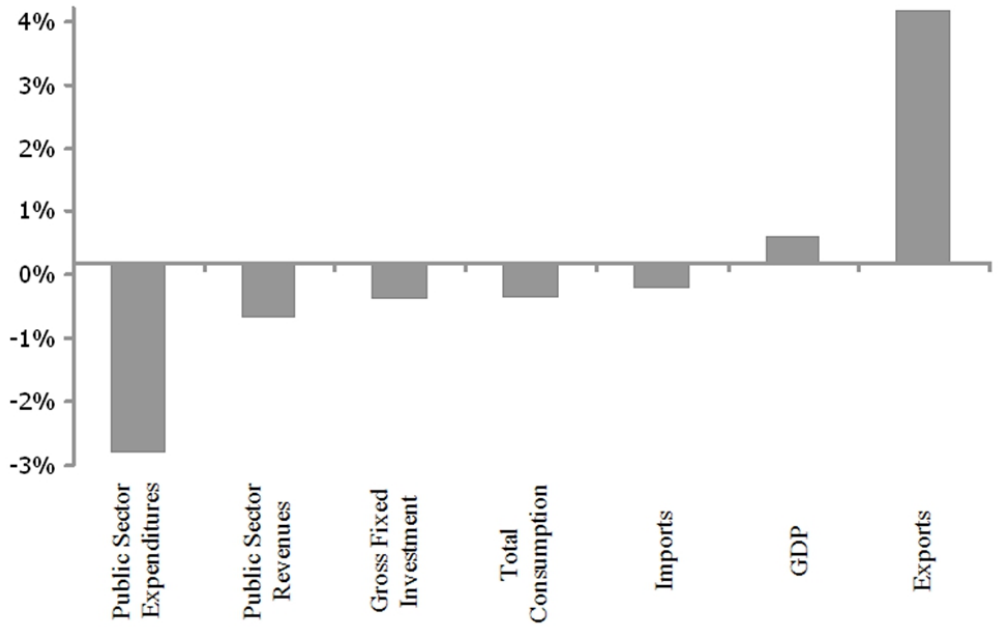
Source: Panigo *et al.* (2009) * In the original edition (Panigo *et al.*, 2009), it was erroneously published that the number of estimated models for this equation was 640.

43 Once the coefficients of the different equations were estimated, the model was numerically solved in GAMS. As this is a non-linear model, nothing guarantees equilibrium existence and uniqueness. Therefore, a vector of initial search values close around their recent past was

determined to the endogenous variables, so as to maximize the probability of finding the closest solution to the actual situation (Panigo *et al.*, 2009).

44 In Chart 4, an assessment of the 2007 model's goodness of fit is presented, focusing on key variables as GDP, total consumption, total investment, imports, public (Fiscal) revenues, total public expenditures and exports. It is observed that, except for the last two variables, the differences between predicted and actual values are lower than 1%.

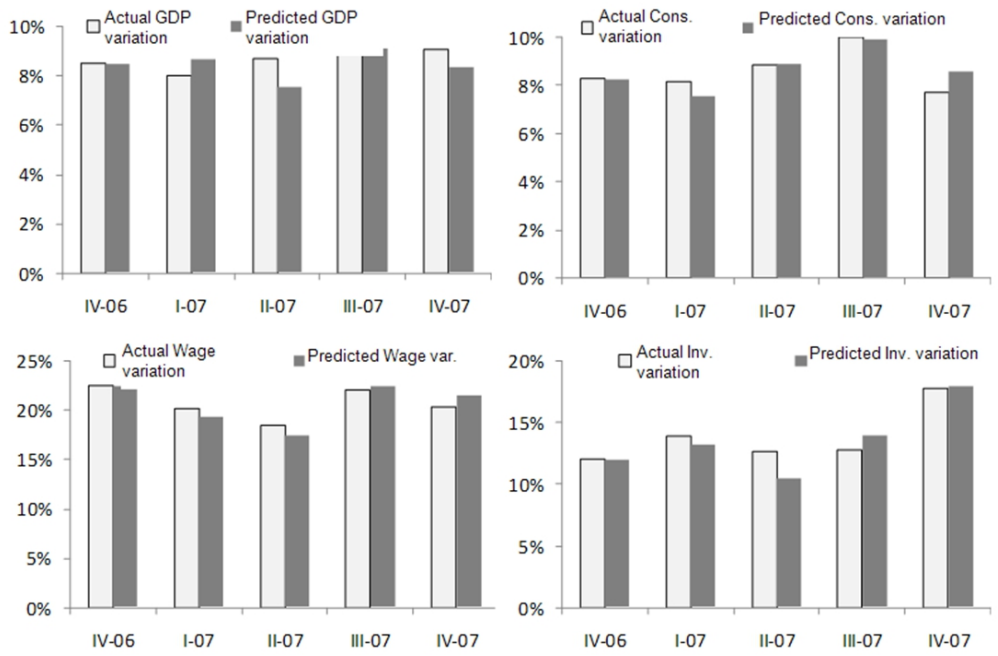
Chart 4. Differences between predicted and actual (seasonally adjusted) values in selected variables (2007)



Source: Own elaboration from RSMM numerical solution results.

45 Complementarily, Chart 5 compares actual and *in-sample* predicted variation rates of GDP, total consumption, gross fixed investment and average nominal wages for the 2005-2007 period, reporting no significant deviation.

Chart 5. Comparison between actual (seasonally adjusted) and predicted values of some of key macroeconomic variables (YoY growth rate, 2005-2007)



Source: Own elaboration from RSMM numerical solution results.

46 In Tables 5, 6 and 7, coefficient signs (and their statistical significance) obtained for each behavioral function are examined. Where econometric relations present structural breaks, coefficient signs are presented as the result of a simple average of different period coefficients.

47 Information is presented in three sets. The first is related to national accounts and employment dynamics, the second is associated to tax behavior, and the third focused on monetary and nominal variables. Due to confidentiality restrictions imposed by Argentina's Ministry of Economy and Public Finance, the specific values of the estimated coefficients are not presented, only their signs.

Table 5. Set of National Accounts and Employment

48 >> see Table 5

Note: (+) and (-) indicate, respectively, each coefficient's estimated sign. Besides, C denotes that the relation between dependent and explanatory variables is contemporary, while A indicates that the explanatory variable anticipates the dependent variable. Source: Panigo *et al.* (2009).

Table 6. Fiscal Set

variables	$\hat{Q}_t$	$\hat{R}_t^{lend}$	$\hat{B}_t$	$\hat{P}_t$	$\hat{t}_t^{vat}$	$\hat{t}_t^{duties}$	$\hat{t}_t^{tariffs}$	$\hat{T}_t$	$\hat{PD}_{t-1}$
$\hat{T}_t$	(+) A		(-) C		(+) A	(+) C	(+) A		
$\hat{Int}_t$		(+) A		(-) A					(+) A
$\hat{G}_t^{prim\_curr}$	(+) C		(-) A	(-) A				(+) C	

Note: (+) and (-) indicate, respectively, each coefficient's estimated sign. Besides, C denotes that the relation between dependent and explanatory variables is contemporary, while A indicates that the explanatory variable anticipates the dependent variable. Source: Panigo *et al.* (2009).

Table 7. Monetary and Nominal Set

49 >> see Table 7

Note: (+) and (-) indicate, respectively, each coefficient's estimated sign. Besides, C denotes that the relation between dependent and explanatory variables is contemporary, while A indicates that the explanatory variable anticipates the dependent variable. Source: Panigo *et al.* (2009).

50 Before starting to describe the outcomes, it is important to explain that, due to the large number of observations required by the RSMM econometric estimation, it has been used a large quarterly database covering the period 1970-I / 2007-IV. This is the reason why coefficients may be biased towards a better representation of the 1976-2001 rentier-type development pattern, than towards the 2003-2007 new development pattern (even after having considered the above mentioned structural break with additive and multiplicative dummy variables). This explanation will allow a better interpretation of the signs and the significance of some structural relationships.

4. 2. 1. On the Dynamics of the Labor Market

51 From the econometric analysis, it can be observed that demand for labor in Argentina, expressed in variation rates, increases with GDP growth, though at a lower rate (which determines the existence of dynamic increasing returns to scale)[1011]and decreases with raises in: a) capital stock (as a consequence of labor-capital substitution), b) real wages[12]and c) macroeconomic volatility. In turn, labor supply growth appeared negatively related to real wage increases (e.g. income effect predominating over substitution effect) and positively related to raises in the unemployment rate (as a result of a possible additional worker effect) (Lundberg, 1985; Stephens, 2002).

52 In this context, the dynamics of nominal wages was determined by labor market conditions (unemployment rate) and by institutional rules that positively associate this variable to the evolution of domestic prices (nominal wage indexation). Changes in other theoretical determinants were not significant.

4. 2. 2. On the Components of Aggregate Demand:

Econometric results show that the Argentine fixed investment growth raises with 1) total profit increases, because of changes in the profit share or the capacity utilization; 2) a drop in the opportunity cost of firm (represented by the real domestic deposit rate); 3) a reduction in the cost of imported input (reflected by $RERB_t^{ef\_m}$)[13] and 4) public investment growth (reflecting complementarities with private investment or limited crowding-out effects).

In turn, significant determinants of total consumption variation were: 1) changes in current GDP, validating the Keynesian hypothesis on the relevance that current income has as consumption determinant in contexts of credit rationing; 2) domestic inflation, as a stimulus to consumption intertemporal substitution; 3) variation in the real domestic deposit rate, which is positively related to increasing savings; and 4) current public expenditures (which by design are part of total consumption). Unexpectedly, the profit share does not appear to be significant to explain consumption dynamics. This latter outcome should be cautiously considered. On the one hand, the existence of multicollinearity between entre $\hat{B}_t$ and both $\hat{P}_t$ and $\hat{G}_t^{prim\_curr}$ reduces the explanatory power of the first variable. On the other, the database has a bias in detriment of the functional relations that emerged with the new development pattern in 2003, because it starts in 1970 and ends in 2007. As the positive effects of the wage share recovery on aggregate demand does not appear until the end of 2004, it is not surprising the outcome obtained from this equation as regards the relation between consumption and profit share (for a deeper discussion about the existence of a wage-led or profit-led demand in Argentina, see updated estimations in Panigo and Chena, 2011).

53 Besides, export growth presented classical determinants, as variations in the real effective exchange rate of exports, world income and international prices (Harrod, 1933) and, noticeably, it showed a negative relation with domestic consumption (typical feature of food exporting countries; see Chena 2008).

54 Concerning import growth, nothing much unexpected appeared in connection with its classical specifications (Harrod, 1933). Variations in: 1) domestic demand (consumption and investment); 2) real exchange rates; and 3) international prices resulted statistically significant. It should also be noted that investment import requirements were significantly higher than consumption import requirements. The irrelevance of marginal changes in relative labor productivities in this equation is a consequence of the existing technological gap, for this type of products, between Argentina and developed countries (Cimoli, 2005). In turn, the fact that changes in profit share, controlled by total consumption, appear as non significant makes us reject the theoretical hypothesis about income class differences in the marginal propensity to import.

4. 2. 3. On the Public Sector's Behavior:

55 In the analyzed period, tax revenues grew when: 1) the economic activity increased; 2) VAT rate, export duties and import tariffs raised; and/or 3) income distribution improved. This latter aspect reflects the historical inequality of the Argentine tax system (significantly reverted in recent years), that proportionally collects less when society becomes more unequal (or, in other

words, the higher is the profit share). Changes in the nominal exchange rate, domestic and/or world prices and employer contributions rates were empirically not significant.

On the other hand, current expenditures had a procyclical correlation with GDP and tax revenues, because of credit constraints faced by the public sector in the eighties and again since 1998. Moreover, $\hat{G}_t^{prim\_curr}$ growth is negatively related with profit share increases and, as it may be expected, inflation generates a negative impact on current expenditures in constant terms.

56 Finally, the public sector interest payments grew (measured at variation rates) when nominal domestic lending rates and/or Public Sector Total Debt Stock increases or domestic inflation falls (because all but nominal variables are expressed at constant prices). Finally, changes in the nominal exchange rate were not significant for this equation dependent variable.

4. 2. 4. On the Evolution of Prices and Interest Rates:

57 Among the macroeconomic factors that affected inflation rates, the following may be highlighted:

1. International prices (imported inflation).
2. Capacity utilization (demand-pull inflation in non-tradable sectors presenting decreasing returns to scale)
3. Increase in utilities' tariffs and nominal wages (cost-push inflation).
4. Nominal exchange rate depreciations (exchange rate inflation).
5. Reductions in export duties, which proved to be an effective instrument to fight imported inflation (mainly agflation).

58 On the other hand, the equation for the extended uncovered interest-rate parity allows to observe that nominal deposit rates increase 1) together with the government's risk of default (which is proxied by the Public Debt/GDP ratio); 2) when there is a deterioration of the economy's intertemporal solvency indicators (e.g. a drop in the Net Foreign Assets/GDP ratio); 3) when the international interest rate is raised; and/or 4) with any increase in both inflation and devaluation rates. In turn, it has been observed a high and positive correlation between the domestic nominal deposit and lending rates.

59 In general, the outcomes derived from the econometric estimations of different RSMM equations emphasize that, for the examined period:

1. The Verdoorn (1949) law is validated for Argentina. Aggregate demand growth endogenously increases aggregate supply growth by means of a raising average labor productivity, due to the existence of dynamic economies of scale, especially in the manufacturing sector (as a result of the "learning by doing", product differentiation or specialization in production processes);
2. There is a confirmation of Regulationist (Boyer, 1988) and Post-Keynesian (Marglin and Bhaduri, 1990) intuitions about the fact that productivity gains distribution is a key determinant for aggregate demand (directly on investment decisions and indirectly on consumption decisions through public consumption), with the additional finding that, for the Argentine economy, income distribution is also significant for tax collection (more equality, more resources);
3. There is a significant negative influence of macroeconomic (GDP) volatility on employment generation, which may probably be explained by the existence of hiring and firing costs (see Lindbeck and Snower, 1986); and
4. A structural problem is observed concerning the foreign exchange gap, associated to a high investment elasticity of imports (as a result of the absence of a domestic capital goods industry; see Prebisch, 1952) and to the strong negative export sensitivity to domestic consumption dynamics (see Chena, 2008).

Conclusions

60 In order to revert the context of socio-economic and institutional emergency resulting from the "Convertibility-Washington Consensus crisis", the government of Argentina implements since 2003 a series of policy measures devoted to replace the rentier-type, financial accumulation regime for a new development pattern aimed at promoting sustained GDP growth with social inclusion and decreasing inequality. These measures were grouped around 3 main goals:

1. Recovery of the necessary supply conditions for growth and relaxation of the foreign exchange gap;
2. Sustainable fiscal impulse to increase aggregate demand; and
3. Restoration of a high level of purchasing power for wages, pensions and social plans without deteriorating the labor intensive sector competitiveness.

61 Taken all together, these policies allowed the transition to a productive, less intensive and more introverted accumulation regime, boosted by an income redistribution from rents to wages and profits, where growth is fostered by (initially public and then predominantly private) investment, with a significant development of manufacturing sectors (an experience explained by a noticeably reversion of the institutional hierarchy that determines a preponderance of the wage relation and the State over the monetary and the international regimes) and a strong improvement of social indicators (see Agis *et al.*, 2010).

62 These changes generated the need of new analytical tools to examine the new development pattern outcomes in terms of growth, income distribution, poverty, inflation, etc. This was the main motivation to develop a Regulationist Structural Macroeconometric Model (RSMM) for the Ministry of Economy and Public Finance of Argentina.

63 The distinctive feature in the RSMM genesis consists in reintroducing, from the Regulation Theory and the *Annales* School, the relevance of the country's political, economic and institutional history so as to develop an extension of the Boyer's model (1988) that may be adapted to the Argentine case. This led to a dynamic cumulative causation model, where income distribution, macroeconomic volatility, credit rationing and productive heterogeneity, among other relevant innovative factors, are a central part of the structural relations.

64 The available empirical evidence confirmed a good explanatory power of the model for the main components of aggregate demand, GDP growth, average wages and tax variables. In line with RSMM theoretical intuitions, its econometric estimation validates: 1) the existence of dynamic increasing returns to scale (allowing potential output to be dependent on aggregate demand); 2) the relevance of income distribution for investment, tax collection and public expenditures; 3) the significant influence of macroeconomic volatility on employment generation; 4) the strong effect of investment (positive) on imports and domestic consumption (negative) on exports; and 5) that consumer price inflation not only depends on wage dynamics and demand factors but also (and predominantly) on external and policy related variables (e.g. world inflation, export duties and exchange rates).

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Annexe

Appendix 1: Description of the Selection Program of Alternative Estimation Models Called “Brute Force”

Unlike paradigmatic selection models, made popular by David Hendry (“General to Specific”, see Hendry, 2000), the empirical methodology we have used in this paper allows a deep search of the best set of model specifications, among all possible defined alternatives.This procedure, that we have called *“Brute Force*” and it has been inspired in the MATLAB optimization routine known as “*fmincon*”, allows to assess the empirical relevance of all the possible combinations of independent variables analyzed at the theoretical level.

Considering the restriction imposed by the available degrees of freedom over the maximum number of initial regressors to incorporate in each equation, the number of models to be estimated for each endogenous variable (initially by ordinary least squares) responds to the calculation of a combinatorial number derived from the different steps described in Table 8 (taking the case of the Total Consumption equation as an example).

Table 8 – Derivation of the Number of Alternative Models to be Estimated for the Case of the Total Consumption Equation

Type of Variables		**Number of Models to Be Estimated**
Potential initial regressors		8
Lags included by each independent regressor (0, 1, 2, 3, 4)	x 5	40
Alternative specifications (without replacement), taking 3 independent regressors for each case at most (3-combinations from a set of 40)	x 247	9880
Dependent variable alternative lag structures (with 1, 2, 3 or 4 lags).	x 4	39520
Multiplicative dummies indicating structural changes in the slopes (bivariate relations) of the (at most) three independent variables included as regressors (8 break possibilities: 2^3=combinatorial(3/0)+combinatorial(3/1)+ combinatorial(3/2)+combinatorial(3/3))	x 8	316.160
Additive dummy (along with the regression constant) to examine the significance of the dependent variable-level structural break.	x 2	632.320

After having estimated the initial sample of alternative specifications, for each of them the Brute Force procedure saves regression coefficients, their significance and outcomes obtained for the following indicators: R^2, Adjusted R^2,Joint significance Test (Prob>F), Akaike Information Criterion, *in-sample* estimation error and *out-of-sample* forecast error.

With this information, the selection of each equation appropriate specification (to be included in the RSMM) consisted in a 3-stage process:

- First, a selection was made of a sub-sample with the best specifications for each of the following indicators: Adjusted R2, *in-sample* estimation error and *out-of-sample* forecast error;
- Second, a general ranking was determined, equiponderating different goodness of fit criteria; and
- Third, the final chosen specification of this general ranking was the one that presented the best statistical properties and that, at the same time, fulfilled previous theoretical intuitions regarding the expected signs for the regression coefficients (at least for those over which there was no theoretical controversy).

Once the “Brute Force” procedure concluded, the next step was to improve the outcomes of single equation estimations, re-estimating some of the chosen specifications (investment, consumption, public sector current expenditures, imports, nominal wages and domestic prices) by the 3-stage least squares (3SLS; see Zellner and Theil, 1962), so as to correct potential estimation bias (see Granger, 1969; and Hausman, 1978).

Finally, as it was mentioned in Section 4.2, some equations had to incorporate additional regressors (extending the process of "Brute Force" up to 6 independent variables in some cases, as the price equation), so as to ensure the model's convergence towards equilibrium in the GAMS numerical solution of the RSMM simultaneous equation model.

Notes

1 For further information about the concepts on mode of development, accumulation regime and regulation mode, see Section 2.

2 Institutional forms may be defined as any "*codification of one or more fundamental social relationships*" (Boyer and Saillard, 1996, page 207). Among the most relevant, regulationist authors have focused their interest in: a) the currency or monetary regime; b) the State; c) the competition forms of economic units in the market; d) the modalities of insertion of the national production system into the international division of labor, or "International Regime"; and e) the wage relation (Boyer, 2007).

3 It has also been crucial to reduce productivity gaps between different sectors, leading to a more stable and sustained growth path (see Panigo, Chena and Garriz, 2010).

4 The productivity regime is defined through the relative importance of the different sources that explain the evolution of the average labor productivity. Depending on the historical context, the mode of regulation and the associated accumulation regime, this evolution will be chiefly governed by the effects of dynamic scale economies (Fordist case), technological change or the intensity of capital accumulation (Classical case, see Boyer, 1988).

5 The demand regime is an intermediate notion that describes how the distribution of productivity gains affects the dynamics of Consumption, Investment and Exports. The combination of different modes of regulation and accumulation regimes may lead to alternative demand regimes where the redistribution of productivity gains from profits to wages may generate the expansion (Keynesian case) or the stagnation (Classical case) of the aggregate demand (see Boyer, 1988).

6 Among the effects of macroeconomic volatility, the following may be noted: i) decrease in the generation of new job positions because companies facing expansions increase overtime instead of hiring new workers (Lindbeck and Snower, 1986 & 1989; Newbery and Stiglitz, 1987); ii) decrease in average nominal wages as long as volatility increases hiring and firing costs in the formal sector, leading to an increase of informal employment with low average wages (Panigo *et al.*, 2009); iii) increase of the interest rate, as a result of an increasing risk of default; iv) increase of inflation due to the asymmetric flexibility of prices; v) decrease of consumption as a consequence of a greater precautionary demand of money (Obstfeld and Rogoff, 1996; Parker and Preston, 2005); and vi) decrease in investment due to risk aversion (Aizenman and Marion, 1999).

7 See Appendix 1.

8 The variables included in the set three-stage least squares estimations were those for which the Granger (1969) and Hausman (1978) tests showed a greater probability of endogeneity bias. However, other variables which could also have been incorporated in this set were neglected by parsimony criteria, as long as the three-stage least squares estimation of the whole system is impossible with the available degrees of freedom.

9 In comparison with the "Brute-Force" method, the "General to Specific" selection model has the disadvantage that, in case of multicollinearity, it may generate the erroneous removal of relevant explanatory variables in the first stages of the selection process (see Pesaran and Timmermann, 2000). In contrast, the major weakness of our method lies in the intensive use of computer requirements, an aspect that, however, is continuously minimized with new technological developments (for further information, see Appendix 1).

10 "After considering the positive association between GDP growth and labor demand dynamics, it is impossible to reject the existence of dynamic economies of scale in the short and medium term." (Panigo *et al.*, 2009: 47).

11 For the estimation of returns to scale, the RSMM uses a Kaldor's suggestion (1975) about the fact that an appropriate estimation of the Verdoorn equation would be: $g_e = c + dg_y$(where $g_e$is the employment growth rate). In this case, if $0 < d < 1$ economies of scale exist. The advantage of this type of estimations is that they considerably limit coefficient bias driven by spurious correlation.

12 It is important to highlight that the joint incorporation of GDP and real wage into the employment equation determines that the last variable coefficient may only capture the effect of wages on costs and not on aggregate demand.

13 "The

$$RERB_t^{ef-m}$$

variable reflects the relative price between labor and imported capital goods. The latter raise their price when the real effective exchange rate of imports is depreciated, generating a fall in the process of capital accumulation (because the potential positive effect of $RERB_t^{ef\_m}$ on investment through increasing markups has already been controlled for in the equation by $\hat{B}_t$. (see Panigo *et al.*, 2009).

Pour citer cet article

Référence électronique

Demian Tupac Panigo et Pablo Ignacio Chena, « Regulationist Macro-Models for Developing Countries. An Application to the Argentine New Development Pattern », *Revue de la régulation* [En ligne], 11 | 1er semestre 2012, mis en ligne le 03 mai 2012, consulté le 11 mai 2012. URL : http://regulation.revues.org/9705

À propos des auteurs

Demian Tupac Panigo
National University of Moreno, National University of La Plata and CEIL- CONICET
Pablo Ignacio Chena
National University of Lomas de Zamora and National University of La Plata

Abstract / Résumé / Resumen

In this paper we present a regulationst structural macroeconometric model (RSMM) to develop economic forecasts and examine different policy outcomes in Argentina. RSMM main characteristics involve cumulative causation dynamics where income distribution, macroeconomic volatility, credit rationing and productive heterogeneity conjugates to obtain a new instrument to precisely examine key macroeconomic and social variables.
Available empirical results indicates: 1) the existence of dynamic increasing returns to scale; 2) the relevance of income distribution for investment, tax collection and public expenditures; 3) the significant influence of macroeconomic volatility on employment generation; 4) the strong effect of investment (positive) on imports and domestic consumption (negative) on exports; and 5) that price dynamics depends on wages and demand factors but also (and predominantly) on external variables and income policies.
Keywords : Argentina, regulation theory, macroeconometric structural model, new development pattern

Modèles macroéconomiques régulationistes pour des pays émergeant. Une application au nouveau mode du développement argentin

Dans ce papier, nous présentons un modèle macroéconomique structurel régulationiste pour développer des projections et examiner l'impact des différentes mesures de politique économique en Argentine. Les caractéristiques les plus importantes du modèle déterminent une dynamique de causalité cumulative où la répartition de revenue, la volatilité macroéconomique, le rationnement du crédit et l'hétérogénéité productive s'amalgament afin

d'obtenir un nouveau instrument analytique pour examiner l'évolution des variables macro-sociales clés.
L'évidence empirique utilisée avec le modèle montrent : 1) l'existence des économies d'échelle dynamiques ; 2) l'importance de la répartition de revenue pour l'investissement et les variables fiscales ; 3) la relevance de la volatilité macroéconomique pour l'évolution de l'emploi ; 4) l'effet significatif (et positif) de l'investissement sur les importations et de la consommation (négatif) sur les éxportations ; et 5) que la dynamique interne des à la consommation dépend non seulement des salaires et de la demande ajoutée, mais aussi bien, et principalement, des variables externes et des politiques de prix et salaires.
Mots clés : Argentine, théorie de la régulation, C32 - Time-Series Models, E27 - Forecasting and Simulation, O11 - Macroeconomic Analyses of Economic Development, modèle macroéconomique structurel, nouveau mode du développement

Modelos macroeconómicos regulacionistas para países en desarrollo. Una aplicación al nuevo modelo de desarrollo argentino

El presente trabajo presenta un modelo macroeconométrico estructural de raigambre regulacionista para el desarrollo de proyecciones y evaluaciones de impacto de diferentes políticas económicas en Argentina. Entre las características más relevantes del mismo se destaca una dinámica de causación acumulativa en la cual la distribución del ingreso, la volatilidad macroeconómica, el racionamiento de crédito y la heterogeneidad productiva se conjugan en una herramienta analítica que permite examinar con precisión la evolución de las variables macro-sociales clave.
Los resultados empíricos estimados indican: 1) la existencia de rendimientos crecientes a escala; 2) la significatividad de la distribución funcional del ingreso como determinantes de la inversión, la recaudación y el gasto público; 3) la relevancia de la volatilidad macroeconómica sobre la generación de puestos de trabajo; 4) los fuerte impacto (positivo) de la inversión sobre las importaciones y del consumo doméstico (negativo) sobre las exportaciones; y 5) que la dinámica de precios depende conjuntamente de la evolución salarial, la demanda agregada y, predominantemente, de variables externas y políticas de ingreso.
Palabras claves : Argentina, teoría de la regulación, modelo macroeconométrico estructural, nuevo modelo de desarrollo
Code JEL : C32 - Time-Series Models, E27 - Forecasting and Simulation, O11 - Macroeconomic Analyses of Economic Development