# The current Argentine inflation. The need of an heterodox vision to analyse its causes and specificities.

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## 1. INTRODUCTION

After the 2001 crisis that caused the financial default, the Argentina Republic is going through a high growth phase, driven specially by the agricultural and combustibles exports and, in lesser extend, by the imports substitution considering the peso devaluation. Even though all analysts agree to point out the correlation between this economic prosperity and the increase of the international commodities prices, this situation doesn't seem to be changing for the moment. However, also according to national and international analysts, there are some threats for this growth path: the likelihood of an energetic crisis and the aggravation of an incipient inflation process.

In this paper we focus on the second problem, trying to specify the causes and the mechanisms underlying the prices increases. We start making a brief reference to the present situation, which most remarkable characteristic is the moderate inflation in a high growth context. We synthesize the orthodox criticism and the acknowledgement of the problem by the pro-government sectors. We revise the government measures concerning the inflation problem (price agreements, wages increases restrictions, the agricultural and oil exports withholdings, the transport subventions, the oil prices controls) and the criticized government manoeuvres to disguise the prices index.

Then, we make a schematic summary of the inflation theories. Continuously, we briefly recount the history of the Argentine economy inflation, comparing the present inflation with the inflation in different past stages. Finally, based on the previous developments, we establish the main features of the present inflation trying to point out the significant elements underlying the process from those who have only temporary effects or are not relevant in the present situation.

## 2. THE CURRENT INFLATION IN THE CONSIDERATION OF THE ORTODOX SECTORS AND THE GOVERNMENT ALIES

Even though with the 2001 crisis, the peso devaluation entailed a high inflation, it was quickly moderated and by the end of 2003 it was below the annual 5.5%. Yet, by the beginning of 2004, the inflation started to rise slowly because of the weakening of the implemented measures by the government to keep it under control (see attached chart 4).

The measures implemented in the recent past years in order to combat the inflation, generated the support from some sectors, which defended the economic growth model, as well as strong criticisms. Among these measures we could point out the prices agreements, the limitations to wage risings (with the government's influence upon the labour unions), the agricultural and oil exports' taxes, the transportation financial aid, and the control over the fuel's price. From the privatized companies (related with fuel and services sectors) and the governments from where this companies come from (bear in mind that privatized companies belong to international capitals, mainly French and Spanish) started to put pressure on the prices controls, threatening with international legal settlements, while the international organizations (IMF, WB, etc.) start to put an alert on the model risks, which essentially involved the energetic crisis and the inflation.

By the end of 2005, the upcoming government policy was visible when President Nestor Kischner asked his Economy Minister, Roberto Lavagna, to present his resignation, because, even though he was very prestigious for handling the debt trade, he was also in favour of slowing down the economy (mainly by obstructing the wage increments) in order to keep the inflation under control. Felisa Miceli took his place the 29th of November of 2005. She reinforced the policy involving the prices agreements and prices controls, which generated adverse reactions upon the liberal orientated economic consultants as well as the international organisms.

For instance, in August of 2006, even though the inflation was decreasing, the IMF warned about the risks of inflation in Argentina and asked to put an end to the prices agreements, in order to fight against the inflation based on surplus fiscal and the public expenditures reduction.

The IMF intervention encouraged the businessmen and the consultants who started to question the anti inflationary measures from the government. During the following months to the announcement, the President of the Argentine Industrial Union[1], former president of the Inter American Development Bank, Enrique Iglesias[2], and the liberal economist Roberto Cachanosky[3], among others, questioned the government's anti inflationary policy, and alerted on the inflation. Also, Roberto Cachanosky compared that moment' situation with the one that took place in July of 1975 known as "Rodrigazo", where an hyperinflation was the consequence of a 100% devaluation.

On the other hand, those economists that agreed with the government policy (Frenkel[4], Fracchia[5]) and some businessmen government friendly (Percarmona[6]) retorted to these critics with a strong model defence.

At the same time, the Government started an offensive plan in order to maintain the consumer price index (CPI) under control, arguing that their calculations didn't take into account the prices resulting of the agreements between the government and some traders. The CPI was calculated by the INDEC (National Institute for Statistics and Census) using a method based on international recommendations, and specialists with a wide experience on the field where in charge. By the middle of 2004, Minister Lavagna had his first confrontation with the INDEC when he questioned upon the poverty index.

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[1] "Méndez alertó sobre el control de precios (Méndez alerted about inflation control)". Published La Nación article in 03/11/2006.

[2] ""Recomiendan limitar los acuerdos de precios (economist recommend to limit prices agreements)" Published La Nación article in 01/11/2006

[3] Cachanosky, Roberto, "Inflación: tres teorías y un solo final (Inflation: three thoeries and one end)" Published La Nación article in 29/10/2006.

[4] Frenkel, Roberto, "Los antecedentes del rodrigazo (the Rodrigazo antecedents)", Published La Nación article in 05/11/2006.

[5] Fracchia, Eduardo "Todavía hay margen para maniobrar (there's still room for manouevre)" Published La Nación article in 29/10/2006.

[6] "Enrique Pescarmona, presidente del 42º Coloquio de IDEA. Confía en que este año el crecimiento será tan alto como en los tres anteriores y subraya: 'Tendremos póquer de nueve' (Enrique Pescarcomona, 42º IDEA discussion president. He trusts this year the growth rate will be as higher as the past three years)" Published La Nación article in 29/10/2006.

This offensiveness over the INDEC continued to grow and the official intervention came to the point of removing the Organism Director from her charge when she wouldn't accept changes in the methodology for calculating the consumer price index. The Secretary of Commerce, Guillermo Moreno, promoted this measure after which the Institution, during 2007, had to change three Directors in three months. [7]

During the year 2007, the INDEC suffered from a crisis that involved technical debates, union struggles and even Judicial Claims, all of which developed in a Government victory as he managed to control the index confection procedure. Yet again, in September of 2007 started growing the conflict with the Statistics Office from Mendoza province due to differences regarding the figures that the two indexes reflected. This province indexes almost duplicated the official one (which bases its measurements on data from the Province Buenos of Aires). By the beginning of 2008, the government managed to equalize both indexes by applying politics management and all kinds of pressure to the Mendoza Office.

The government struggle against inflation (precisely against its perception) didn't limit itself to retouches the consumer price index (CPI). It went much further by denying the existence of an inflation process. The Government Cabinet Chief, Alberto Fernandez, declared last September: "In Argentina there's not such thing as inflation". [8]

The Government's policy and manoeuvres managed to keep the price index below the annual 10% rate. As a result of this, in March of 2008 when most of the unions negotiated their wages in an uncertain context regarding the real inflation, the Government and its allies could present as a success a 20% increasing wage for the whole year. The real inflation index is possibly close to the ones determined by the provinces indexes, which were around an 18% annual average for the 2007. [9]

The current situation concerning the inflation rate measurement is unclear. The Government allied economists tried to minimize it at first, as it was officially announced the returning to a reliable index. These economists started to feel unsettle as the Government insisted on report not believable figures and they are now not reserving their concern regarding the inflation acceleration. Their belief is that the situation can still get under control, but in order to be able to do so, a reliable index that allows measuring the inflation's evolution is needed. [10]

At the same time, some Government Academic allies started asking for a slow down of the economy, as a mean to fight against the inflation[11], though this posture is not yet generalized among them. [12]

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[7] In January the director of the consumers price index area, Graciela Bevacqua, was removed of the organism and Beatriz Paglieri was appointed to take her place. In March the INDEC director, Lelio Mármora, resigned to his post and Mario Krieger took his place. In April, Alejandro Barrios replaced Mario Krieger and in May, Ana María Edwin replaced Alejandro Barrios.

[8] La Nación published article in 24/09/07.

[9] The Mendoza province's consumer price index determined a price variation of 17,8 %. See Salvatore (2007).

[10] "The inflation acceleration damages all the political economy" Roberto Frenkel in Clarín (the most popular newspaper in Argentine) of the 18/02/2008; "Argentine is in good position to overcome an adverse external context. Its weakness is the inflation risk." Guillermo Rozenwurcel in Clarín of the 08/03/2008.

[11] For example, last February, Frenkel stated "Yes… I want to cool down the demand. I want to bring the fever down of the patient" (Clarín, 18/02/2008). In March Rosenwurcel agreed on the importance of "slow down private consume, in particular the one of the middle and high income sectors, and confirm the reduction in the public expenditures growth" (Clarín, 8/3/08). Also, Heller declared in

As their advisement keeps falling in the government deaf ears, the pro government economists' uneasiness grows. This situation allowed the main opposite printed media (La Nación) to be able to get several of them to write in this journal a "constructive criticism" to the anti inflationary policy. [13]

To the orthodox economists and the international organisms such as the IMF and the World Bank, the inflation acceleration brought new ideas with it. Anoop Singh, IMF representative for Latin America, for instance, recommended to suspend the wage negotiations and to distribute food among those in need. [14] Despite these creative efforts (unviable in a democratic context) the IMF essential suggestion continues to be the fiscal surplus and the public expenditures reduction. [15] The IMF also expressed its doubts regarding the official method to calculate inflation, which led the local government to an angry rejection.

Some of the economists who belong to the opposition insist on proposing monetary remedies. This is the case of Broda[16] and the consultant FIEL. [17] The less orthodox ones, such as the former Minister Lavagna, make a mixture of orthodox measures with others, trying to uphold the model. [18]

## 3. A NECESSARY THEORETICAL CONTEXT TO STUDY THE INFLATIONARY FRAME

Even though it is necessary to analyse each case on a particular bases and there's not such thing as a universal reason that could explain the inflation, it is imperative to establish a theoretical frame, which will allow us to focus on each particular study.

There are three identified theories regarding the inflationary matter among the general economic literature: demand-pull inflation, cost-push inflation and structural

April "some people say that its necessary to cool down the economy; I think that its important to eliminate the not essential consumes" (La Nación, 20/04/08).

12 For example, in Schvarzer's opinion, "if they want to show down the economy with orthodox measures, reducing the growth rate from the actual 8 per cent to a 4 per cent, the economy will loose approximately US$ 12.000 millions, and that scenario doesn't guarantee that the inflation will be reduced after all" (La Nación, 20/04/08).

13 "Warning from economists close to the government. Inflation complicates the model continuity." La Nación, 20/04/08.

14 "The main priority is to avoid wage negotiations so not to promote higher prices" Singh then specified that he doesn't reject the wage negotiations, but they have to be very cautious. "There are other options to be analysed, like the food or money distribution to the people that are more in need" (La Nación, 12/04/2008).

15 "In the Argentina economy, the threats are the inflation and the excessive public expenditures" and "The monetary policy must be aimed to floating exchange rates, the fiscal policy must slow down the expenditures, the financial sector must be closely supervise and the social policies must be used to reduce the impact of the food price increases for the lower income sectors." (La Nación, 11/04/2008).

16 See "El riesgo de menospreciar la inflación (the risk to underestimate inflation)" published in La Nación (03/02/08). "Its essential for the Central Bank to control the private demand for money in order to manage inflation."

17 "To limit the expansion of public expenditures, to control the wages increases and not to change the exchange rate that is the only anchor for the prices of the economy" and also "More orthodox financial policies, a bigger fiscal surplus according to the high exchange rate and a more strong price policy are need."

18 A report of the consultant ECOLATINA (22/02/08) says "Its important to reduce the pressure over the demand. The fiscal policy must be the anchor of the aggregate demand. This means increasing the primary surplus to a 4% of the GPD" and, on the other hand, "Its important to incentive investments and production of some critics sectors (like the energetic or the livestock sectors)"

inflation. Each of these theories identifies a factor as the cause of the inflationary process. In the demand-pull inflation theory, the aggregate demand excess is what causes inflation. In the cost-push inflation theory, the reason is the increase in a productive cost. Finally, in the structural inflation theory, what causes inflation are the rigid aspects and the inefficiency of the economic structure.

It is important to point out that none of these theories are necessary related to a particular economic school, and also it could be said that diverse interpretations could be related to one or more than one of these theories. The monetarism, for instance, has an explanation compatible with the demand-pull inflation as well as the cost-push inflation, although to those who identify themselves with that school of thought the ultimate cause is always the same: the amount of money that is injected in the economy.

As well as the theories that identify the inflationary process trigger causes, there are mechanisms that propagate prices raisings once these started to express. These mechanisms are: the inflationary inertia, the expectations and the distributive struggles. Subsequently, here is a brief introduction to the theories followed by the propagation mechanisms.

### 3.1 Some inflation theories and causes

***Demand-pull Inflation***

An increase on the aggregate demand, in a full employment and a relatively rigid supply scenario, it gets generally translated into inflation. The demand-pull inflation is compatible with several theories and economic schools, which, though they identify the demand excess as the inflation generator, the explanation to this is quite different.

The Pre Keynesian economists rose to give an explanation to the prices movement with the money quantitative theory. This theory has a long tradition and it was defended and formulated by a lot of economists: Cantillon, Hume, Ricardo, Mill, Marchall, Fischer, Pigou, Hayek, etc. According to this approach, the theoretical frame of neoclassical economy comes from a dichotomy between the real economy side and the monetary one, in other words, between the real variables and the nominal ones. This dichotomy was based upon the notion of a real variables determination existence that didn't depend on the nominal or the monetary variables. The nominal determination was ruled by the quantitative theory, which made the price level dependable on the amount of money (presuming a constant money speed circulation and the full employment product level).

In a full employment situation, any money injection will be translated as an increase on any component of the demand despite the supply possibilities. This is the root of what later on was called monetarism: the prices' variation can be explained with the variation on the amount of money. [19]

In contrast to the neoclassical economy, in the Keynes' theory (1936) the product's level is not predetermined on the full employment level; therefore, the inflation can be as easily explained as well as the unemployment, because both

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[19] The quantitative theory doesn't explain completely the mechanism through which an increase in the money supply generates an increase in the expenditures that produces inflation. Wicksell rectified this mistake proposing that the money flows to the economy in the form of banks credits, allowing investments to exceed savings. Together with the quantitative theory supporters, Wicksell also considered that any increase in the money quantity generates inflation, unless there is an increase in the total factors productivity.

depend on the aggregate demand volume (precisely what Keynes called effective demand). As deficient demand generates unemployment, an excessive demand causes inflation.

According to this concept, a demand increment links itself to the cyclic growth process. When we find ourselves on the growing phase of the cycle, it could occur this kind of unbalance, due to an increasing demand and a supply that has a late readjustment. Unlike to the monetarism, to the Keynesian conception, an increase on the prices without an increase in the amount of money can occur as well as there could be an increase in the amount of money without this being translated in inflation.

During the Fifties and the Sixties, the orthodox monetarism started a slow path that would take it to domain the economic theory scenario during the Seventies. The debate between Keynesian (represented by the neo-classical synthesis) and the monetarism came to its most important point when Friedman published "Theoretical framework for monetary analysis" in 1970; publication that gave an explicit and formal frame to the monetarists ideas. [20]

Another important movement on the monetarism development came from the analysis made by Phelps (1967) and Friedman (1968) regarding the Phillips' curve. The *magnified due to expectations Phillips' curve* complemented the quantitative theory by giving a more accurate analysis on how the causal effects due to changes in the amount of money, distributed themselves in real and nominal magnitudes. The deduction of a vertical Phillips' curve for the long term implied that the aggregate demand policies only could affect the product and the employment level on a short-term, while on a long-term the only consequence is the inflation.

Even though to the monetarist conception, the real economy is intrinsically stable, it can loose stability due to the monetary variables evolution. Therefore, the monetary offer should be under control.

Although Friedman's monetarism loose field within the orthodox economy, it can't be said that the theories that took its mainstream place weren't monetarists. The New Classic Macroeconomic[21] was centred on the presumption of rational expectations[22] (opposite to Friedman's conjecture of adaptive expectations), which formation was based on all the information available and the use of the "correct" economic model; and the new theory thrust presumption was that of the *markets that are hollowed constantly*, according to the walrasian tradition. This implies rejecting the neoclassical synthesis presumption regarding the prices' rigidity and the market's imperfection. According to New Classics prices are flexible equilibrium prices. As a result of this, the economy is seen as if it is in a constant state of balance (on a short and long-term basis). Any economic policies that generate an increase on the aggregate demand would only be translated in a prices increment without this being reflected on the real variables.

In this scenario, the orthodox recommendations regarding economic policy are merely restrictive policies. Neither the monetary expansive policy has an effect on the

[20] The author developed these ideas from the fifties. Milton Friedman published in 1956 "The quantity theory of Money. A restatement", showing the Quantitative Theory as a money demand theory.

[21] The new approach came up from the core of the monetarism and it was call New Classic Macroeconomic. Although this "new monetarism", which consolidated at late seventies, incorporated some elements of the monetarism, it differentiated from that theory because of some starting hypothesis and the more extreme conclusions at which it arrived. According to the New Classics, the monetarism had a weakness, which was the existence of the Phillips curve for the short term. If the trade off between inflation and unemployment exists for the short term, then its possible to use economic policies in order to stabilize the economy, as established by Keynesianism.

[22] John Fraser Muth first formulated this behaviour hypothesis in 1961.

real variables, nor the constrictive policy has it. Therefore, inflation could be reduced without suffering any costs in terms of employment and product. By the credit reduction, the public deficit elimination, the wage reduction, the interest rates rising, etc. the demand components, which generate inflation, could be attacked, in an excessive aggregate demand situation, without affecting neither the employment rate nor the activity rate.

***Cost-Push Inflation***

The cost-push inflation can appear as a consequence of an increment in a basic production cost which affects all sectors. This occurs, for instance, when an essential raw material that is used to make most of consumer goods increases its price. An example of this would be fuels. The same thing happens when a general wage increasing takes place. As the salary is a production cost for every good, their production will have a higher cost and, therefore, prices will rise as well. In this case, an imbalance in a specific market occurs and the increase in one product's price then propagates to the prices general level coming to an inflationary process.

The ordinary historical example that comes at hand to refer to this inflationary type is the inflationary process that was unchained as a consequence of a strong increase in the oil price that took place in the Seventies. The rise in the oil price quickly spread to a great amount of productive raw materials and later on, to most of consumer goods.

Nevertheless, the cost-push inflation didn't come up because of this particular episode. Prior to this situation, the inflation caused by cost was understood as mainly evolved from the workers unions' pressure on the wages. This notion is related to the acknowledge that neither are the wages strictly fixed by the market nor are they quickly adjusted or free as to always reach the necessary level in order to clear the labour market. Therefore the salaries are administrated prices that not only climb when the demand overcome the supply, as well as not necessary do they lower in an unemployment situation.

This way of explaining the inflation process was defended by many authors, who sustained the chance of generating inflationary process from a distributive struggle between wage earners and capitalists. This interpretation is in tune with the Pos-Keynesian's way to explain prices changes as caused by the prices' components shifts, such as wages rate, the earnings level, etc. (Antonelli, 1985). [23]

This inflation type caused by offer unsettlements is useful to explain situations that the demand-pull inflation can't. The demand-pull inflation is associated with a direct relationship between the product level and the prices level. The price's level would be a pro cyclic variable: during expansion periods, prices tend to rise; while during contraction periods, deflation occurs.

Nevertheless, during the Seventies, the crisis came along with a stagflation period, which means the presence of recession and inflation. The Neoclassical synthesis instrument, along with the direct association between expansive phases and the rising prices, explained the inflation due to demand excess, but couldn't explain the prices' increasement in a contracted demand situation. As the cost-push inflation

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[23] In this part of the paper we consider expectations and distribution struggle over salaries, which provoke price increases and may generate inflation, are consider as particular cases of cost inflation. If expectations and distribution struggle over salaries appear in high inflation contexts fuelling the process, those factors are considered propagation mechanism and will be treated later.

found an explanation for inflation on the contracted offer, it fitted with the new situation.

To monetarists, this was the opportunity to discharge the whole neoclassical synthesis theoretical frame. Now, how does the monetarism explain this inflation kind? These inflationary processes could also be explained as consequence of increments in the amount of money. The increase in the amount of money can drive to some kind of imbalance in a strategic market which prices increasement will expand to every consumer goods. In a wage rise situation, the monetarist conception would link it to the wage rise generated from the public sector, financed with monetary issue. When the oil price increased, the cause would be found in the North American policies of injecting dollars in the world market after the dollars shortage during the early post war years. During the Seventies the world economy went through liquidity excess, which would have been the plausible condition for price increasements in a fundamental raw material such as oil.

These inflationary situations would be combated, again, by a monetary offer control. In any case, avoiding the emission and the budgets deficit can prevent getting into these kinds of situations. According to the monetarist vision, it wouldn't have a point to distinguish demand-pull inflation from cost-push inflation, as the monetary aggregate is the inflation cause in both cases. The excessive money and credit expansion translates into an inflationary process, and either can this imbalance expressed in an aggregated demand increasement or in a productive costs increasement.

***Structural inflation***

The structural inflation theory developed due to the contributions made by Latin American authors who, after the Second World War, studied the region's inflationary processes from an empirical point of view and criticized the monetarists' way to explain the inflation. Osvaldo Sunkel and Julio Olivera were the pioneer economists regarding these ideas' development by the end of the Fifties and the Sixties.[24] Olivera's work is widely known and aroused a lot of interest because of the method used to formalize the structural inflation.

As we seen, the monetarism detached any chance of finding the inflation causes in the real side of economy. On the contrary, in the models developed by Olivera, the inflation can be explained due to imperfections given in some markets, which translate themselves into price restrictions in a downward direction. These imperfections appeared themselves mostly in Latin American countries, in industrial sectors and in the labour market. The presence of an effect that states that prices are "sticky" or inflexible in a downward direction (ratchet effect) implies that when relative prices change, adjustments to the new structure will take place, creating prices' persistent increasements.

These adaptations in the price structure are much more persistent in presence of a much more imperfect markets (that express themselves with lower elasticises in the supply curves). Besides from the imperfections already mentioned, growth appeared in an uneven way, which generated constant alterations on the relative

[24] Osvaldo Sunkel published two papers in 1958 analyzing the Chilean case. These papers are pioneers for the structural inflation theory later developments. In 1960 Olivera published *"La teoría no monetaria de la inflación (a non-monetary inflation theory"*, in 1961 *"Inflación y estructura económica (inflation and economic structure)"* y in 1964 *"On structural inflation and Latin American structuralism"*. With these papers he created a formal analytical framework for the structural inflation theory.

prices. Therefore, the structural characteristics that caused inflation were: a tendency to generate changes on the relative prices because of growth own dynamic and the markets' imperfections that generated ratchet effect on some prices causing them to be rearranged by prices' increments.

Other structuralist authors developed schemes and analytic outlines that explained other structural inflation forms. The particular structure of Latin America's most important countries involved the link of its agricultural sector and its industrial one.

The industrial sector's growth generated, in countries such as Argentina, Brazil, etc., a productive structure which characteristics were the following: the primary sector possessed a fix offer and produced to supply with essential products the domestic market as well as, due to its high competitiveness in a world level standard, the external markets. The industrial sector needed imported inputs, machinery and technology and produced for the domestic market exclusively. Due to this diagram, exports growth was essential to the industrialization process' continuity. This structure had deficiencies that developed inflationary consequences in different ways. An example of this was the existence of a relatively fixed quantity of exportable goods, which combined with a increasing importing level scenario, translated into several domestic market's lack of the exportable goods. This scarcity brought along these products prices to rise; moreover, as these were remunerative goods, they affected the economy as a whole.

Therefore, this particularity's structure caused some kind of strangulation or restriction in a strategic market (such as the food market). The main problem regarding these kinds of situations were the import's prices and the agricultural product offer inelasticity. When the prices increased, the agricultural goods' offer didn't grow; at the same time, as imports didn't have a substitute in the domestic market, hardly could they downturn from prices incentives.

Many authors were inspired by several elements of these structural characteristics. In December of 1968, Oscar Braun and Leonard Joy (1968) published in *Economic Journal* a simple Argentinean macroeconomic scheme from which they tried to explain the links between the payment balance, the domestic prices and the economic level activity. Rosemary Thorp and Eprime Eshag (1965) examined as well, during those years, the paradox of an inflationary frame in an economic recession induced by a global demand drop. These situations were explained by a productive structure in which the boom phases drove to a crisis in the payment balance, currency devaluation, inflation and recession.

Diamand (1972), by incorporating in his analysis several of these elements that were emphasized during the prior decade, he developed an inflation explanation from the existence of an imbalance productive structure. The productivity gap between the agricultures, who produced for the domestic and the external market, and the industrial sector, who produced for the domestic market only and needed the foreign exchange, determined the payment balance crisis as a consequence of an foreign exchange scarcity, which provoked cyclic movements that were called the stop and go cycle.

These crises provoked inflation as exchange rate increased. Devaluations were the consequence due to external sectors' restrictions that were generated by the economics' own dynamics. Diamand referred to this problematic as inflation generated due to the exchange rate and he considered it as a particular kind of structural inflation. This inflationary type was recently analysed by Taylor (1991) and Vernengo (2003).

The Structuralism had a strong arraignment in Latin America from its way of trying to explain typical situations these countries went through. Regardless the diversity of structural inflation models and schemes, for all of the cases the inflation causes should be found in the economic inefficiency, deficiency or rigidity. The solution could be the transformation of the economy structure.

### 3.2 Propagation Mechanisms

***Distributive Struggle***

This mechanism takes place when, in an inflationary scenario, the economy different sectors struggle over wealth distribution. These situations usually involve a struggle over the public incomes: there are different sectors that make demands over the public sector, which consequence is the money emission in order to cover those demands.

Some employers seek for price increasements and tax exemptions that reduce public incomes; others look for subsidies and compensations. Meanwhile, the labour unions ask for wages increasements and the exporters put pressure on the government to obtain an exchange rate rise. Usually, it is in inflationary contexts when these demands take place creating different channels for the inflation to accelerate and persist.

The struggle over income-distribution between workers looking for higher wages and employers looking for higher profits was an important part of some of the structuralism models. As Fizsbein (2007) point out: "In the Loyola (1956), Félix (1960), Olivera (1960), Prebisch (1949, 1963) pioneer papers, the workers fight to sustain their wages purchasing power, while the employers refuse to reduce their profits, had an important role in an inflationary process." The prices and wages spirals act as propagation mechanisms increasing inflation and complicating prices stabilization.

Many economists analysed the distributive struggle between workers and employers. Some examples are Taylor (1991), Arestis y Sawyer (2003) and also Marxists authors like Rowthorn (1977).

Markos Mamalakis (1966) stated the existence of these struggles, but not as a conflict between workers and employers, but as "clashing sectors". In this case the struggle take place between the postponed sectors and the favoured ones. During industrialization, some manufacturing sectors are favoured by the economic policies while the employers and agricultural workers are postponed.

***Expectations***

It is common that in an inflationary context, producers' conducts may accelerate inflation. When producers establish the prices of their products they consider the costs they faced in order to produce. When the producer sales the production, he uses the money to pay wages, to obtain his profit, to ensure the amortizations of fix capital and to buy the inputs in order to start the production again. So, if the manufacturer expects the inputs' prices to growth, that expectation will induce him to increase his own products' prices.

Another way expectations act as a propagation mechanism is because in every economy there are agents with capacity to set prices: monopoly or oligopoly producers. When these producers expect a prices' growth for the future, they usually prefer to set higher prices today. As a consequence the inflation process move forward. The thing is that if producers expect inflation to occur they'll prefer to anticipate the general prices increments trying to obtain a relative income by charging higher prices while other prices don't increase yet. This procedure can be used successfully if inflation is control under certain parameters.

Also, it may occur that these agents with market power increase prices because they expect something to happen so that they prefer to increase prices today. An example is when there is going to be a change in the government authorities. Another example is when there is the expectation of a fixed prices policy in the future. In these situations the companies decide to increase prices before the expected event occur. It's always better to begin a fixed prices policy with higher prices.

***Inertial Inflation***

This mechanism appear because in economies with a long inflation tradition, is common the development of some instruments necessaries for the economy to work in an inflationary context. With high and persistent inflation rates some problems appear because the contracts are affected (for instance, rent or credit contracts). Then, as contracts can't be renegotiate constantly, indexation is used in order to sustain the relative prices structure. In these situations, contracts include clauses that specify how the value will be readjusted periodically.

As Gigliani (2007) points out, for situations of high and persistent inflation rates, some particular experiences (Latin-American countries during the eighties) showed indexation mechanism where the previous period inflation rate was taken into account to establish the new prices, provoking a feedback over inflation. Authors like Bresser Pereira and Nakano (1989) developed some models showing the effect of indexed wages contracts. However, the real effect is even stronger because not only the wages contracts have indexation clauses.

Often, this theory it's useful to explain particular situations in which the economic policies are applied to fight all the inflation causes, and yet high inflation rates persist for a considerable period of time.

## 4. A BRIEF ARGENTINE INFLATION HISTORY.

Inflation in Argentina has a long history. Though with variable magnitudes, it had a presence in most of the Twentieth Century second half, getting to a significant level in many years. Taking into account the inflation rates evolution and dynamic that reflected in the prices variation, it's possible to identify three big different periods, through five decades, from the Second World War's end. During these periods a succession of prices rising progressively occurs, followed by a drop in the increasements impetus (which are linked to anti inflationary diverged policies), yet followed by the increasing prices process restart after a few years. It can be visualized a semi cyclic sequence in the prices variation.

The first period begins in 1945 and finishes in 1975. The second extends between 1975 and 1991, while the third finishes in 2002. When the prices evolution is closely examined along those periods, it is observed that inflation characteristics are as diverse as the substantial economy aspects and the international context (see attached chart 1). The average inflation rates, some relative prices behaviour and the anti inflationary measures, differed substantially.

As for general economic characteristics, during the first period, the growth model based in imports substitution industrialization prevailed. During the second period's first part (sub period 1975-1983) economic and policies measures that anticipate the model that would replace the prior one, were taken; the second sub period (1983-89) can be seen as a transition to a new economic model full instauration, which will become fully validated during the last period (1989-2002). The last period's characterised by the commercial openness and financial release on privatization and economy deregulations that, in very important aspects, continues to be valid in the current economic model.

### 4.1 The imports substitution industrialization period (1945-1975)

This period groups several years in which, the average inflation rate was relatively low even though the figures reflected a great gap with those economies with stable prices[25] such as United States. At the same time, those "stable" years appeared separated by inflationary acceleration lapses which duration would vary (Vitelli, 1986). The detailed examination on the prices rising characteristics during these thirty years allows detecting a variety of prices growth patterns, exchange rate alterations, wages, essential food products and interest rate variation, which created a peculiar dynamic in the behaviour for some related prices.

The inflationary process analysis during these years requires taking into account the economy dynamic and its structure characteristics. Next, we'll present a tight synthesis of the macroeconomics characteristics, mentioning the most notorious inflation causes that are must be taken into account:

a) The relationship established between the Argentine economy and that of the rest of the world. This link was established by the Argentine structural characteristics (underdeveloped economy, in an industrialization process), by the commercial connection among them (primary goods exporter and input and capital goods importer) and by the particular influence of external conditions (effects on the domestic economy's industrial goods prices movements in central countries and the external demand of primary goods). This structure it's one of the main causes for the inflationary process (or at least, a key trigger for inflationary acceleration).

b) The growth, based on the importation substitution destined to the domestic market, and a low unemployment level, implied an increase in the incomes, due to a growing domestic wage sum, being a necessary condition for the productive expansion. Therefore, the real wage growth was a key element to concrete a sustained gross domestic product increasement.

c) The production growth, motivated by the industry and other urban activities, generated importing increasements, impossible to sustain in a continuous way due to the exports. The gross domestic product's import-elasticity progressively increased and the exports' insufficient dynamism caused a deficit in the balance of trade. Moreover, a growing wages rate not accompanied by an equal average productivity work growth, were translated in incremented costs that didn't favour or even damaged exports increasement due to the competitive lost that was implied.

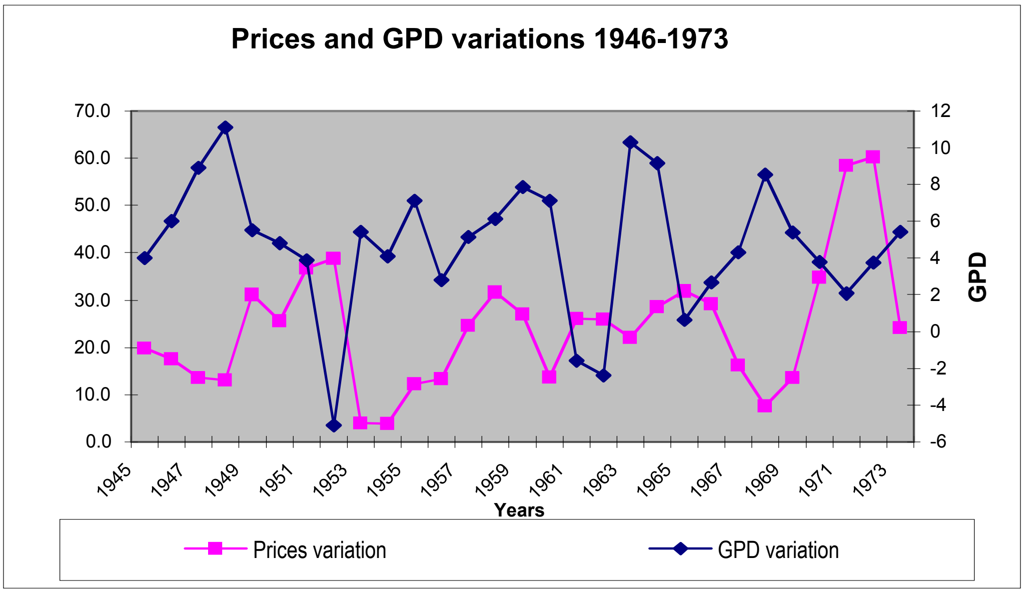
d) Facing this, the necessity to stabilized the external balance drove to adopt measures that increased the prices level, which altered the relative prices. In a general basis, devaluating the national currency was the measure to apply as well as restrictive policies in order to contract the imports demand.

This economy dynamic was expressed in cycles (which were called "stop and go" cycles) that consisted on economy growing stages that drew to an imbalance in the balance of payment, which drove to adopt measures that would rebalance the

[25] The price "stability" during the second half of 20th century is quite different from the price stability in United Kingdom during the gold standard period (1875-1914).

current account and implied a macroeconomic adjustment and therefore restart the production growth. The economy contraction implied an increase in the exchange rate, in wholesale and retail prices and in nominal wages (always lower than the prices, with its consequence real wage drop), and also, an aggregated demand reduction, imports contraction and the generation of a bigger surplus of exportable goods, since domestic consumption included these kinds of goods.

The recurrent characteristic of this dynamic implied a repetitive behaviour with cyclic characteristics. The annual variations of the gross domestic product captured this cyclic behaviour as is shown in the graph below. It's important to note, and as well it can be appreciated in the graph, the gross domestic product's behaviour compared to the prices variation, where the repetitive phases of falling production came along with prices rising.




The exportable goods offer showed a relatively low elasticity, which was frequently ascribed to an extraction of a part of the primary sector surplus to divert them to industrial activities. Nevertheless, it is necessary to pay attention to the reduced international demand dynamism towards primary goods (food) and the declining prices for these goods. At the same time, the industrial productivity advanced without achieving a quick integration in the international markets.

### 4.2 The deindustrialization of the Argentinean economy begins (1975-1991)

During this period, inflation took place with very high rates reaching in some years the *hyperinflation* characteristics: the annual average rate was 545% comparing with the 27% of the immediate prior period, as it is shown in the attached chart number 2.

During the first part of the second period (1976-83) took place a radical attempt to transform the Argentinean economic structure, ending the industrialization as an economy policy aim (Cantor, 1980). The new economic policy main goal was to destroy the economic structure that was valid in Argentine after the Thirties. In its place, it was intend to found full free market organization, therefore moving forward to opening trade and financial liberalization, together with the elimination of subsidies and taxation advantage given to industrial activities.

From that point to 1983, the new economic program was accompanied by deep alterations in the political institutional area, which operated as a fundamental limitation to unions and political actions, giving a bigger power to the Government. [26] The anti inflationary policy adopted raised the exchange rate, restricted the nominal wage adjustment, lowered tariffs, banished retentions and subsidies, increased tariffs and r interest ate. However, the result was an initial drop in the monthly prices but to regain impulse later (see attached chart number 2).

Devaluations previously announced mechanisms (crawling peg system) were adopted in order to act as domestic prices anchor and make them convergence with the external ones (of the advanced provider economies) in the open commercial context. However, convergence didn't take place.

As a consequence of the official policy the industrial productivity dropped, while the financial openness and the internal interest rates rising determined a strong capital entry. These entries were linked to a great liquidity external context, which translated into very low interest rates. This situation caused a strong external indebtedness from the private sector and the state companies.

The lack of domestic prices restraint combined with the change in the international financial conditions (risen interest rates) by the beginning of the Eighties generated growing devaluation expectations. Finally, the situation culminated in substantial and successive modifications in exchange rate, generating new impulses to the prices rising. The year 1983 ended with a CPI increasement of 343%, showing strong inflation acceleration.

During the second part of the period (1984-91) changes in the political-institutional context took place (the establishment of political institutions and constitutional freedom) with its repercussions in the labour union sector. All this period was conditioned by the problems generated due to the debt crisis that affected all Latin American countries and the most important international banks.

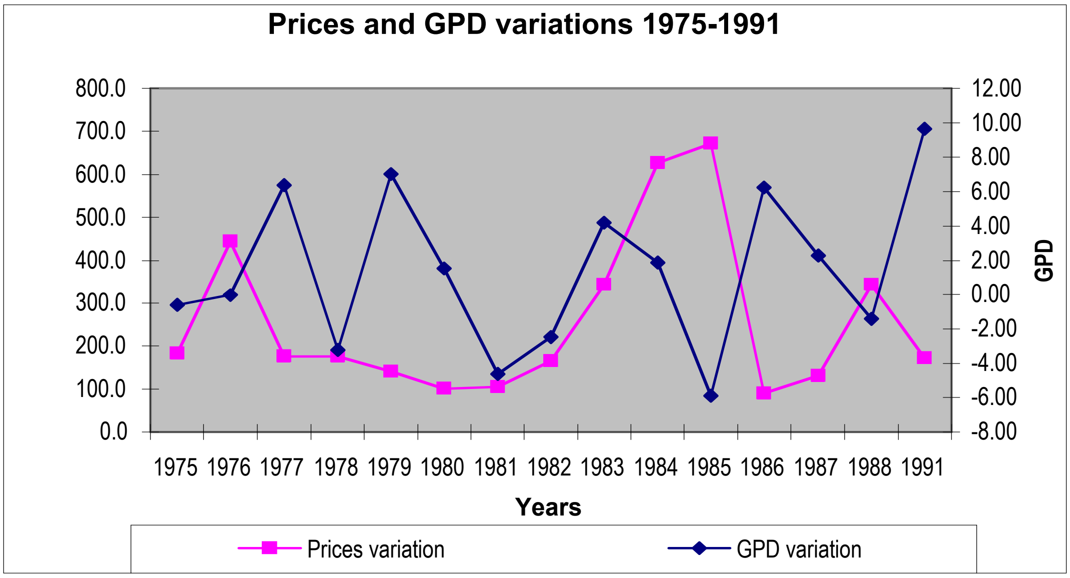
The basic politic and economic diagram was a transition one towards the next period. The State role was kept, there wasn't a move forward the privatization of states monopolies, the regulation policy didn't experiment any substantial change and it was established a certain level of protection towards the domestic market. The financial entities law wasn't substantially modified and the public debt wasn't subdued to discussion. The problem concerning the external debt was left subordinated to international banks negotiations and, above all, to the International Monetary Fund (IMF).

The nominal wage rose by the begging of 1983 and continued that way through 1984, locating above the CPI variation as well as the non-agricultural wholesale prices index and the exchange rate changes. This way, the relative prices modification and the consequent incomes redistribution, was different from the immediate prior years. The payment balance unbalances and the debt service, which from that point onwards would grow, demanded to turn to the traditional adjustments in order to face the prices increasement and the pressures on the exchange market. From 1985 to 1989 these tensions would reiterate implicating permanent conflicts between the private sector and the Government. The exchange rate increased, revealing the growing dollars shortage, while on the other hand, the agricultural sector achieved incomes that overall didn't drop. As it can be seen in the attached chart

[26] During this period a military dictatorship governed the country and committed very serious attacks against a lot of citizens freedom and lives.

number 3, the average annual inflation rates were, between 1984 and 1989 superior to the 100%, with the only exception in 1986.

Facing these variations, with alternative compensations and loses, the struggle already established for the second period intensified, promoted by the balance of payments crisis, the financial sector pressures and the capital outflows (from the country to abroad). The Government's political weakness (due to loosing the elections among the provinces as well as the legislative ones) added with the external pressure to a neoliberal model implementation, generated prices levels to raise an average monthly rate of 300%. In 1989, year in which the annual prices variation was above the 4000% (see attached chart number 3), a hyperinflationary episode that would repeat in 1990, took place.




### 4.3 <u>Economy liberalization and prices stabilization: the solution conducted to the worst Argentinean crisis (1991-2001)</u>

During the last years of the prior period, Argentina suffered from the 20th Century's most higher inflation rates, which happened simultaneously with a new Government assumption. This fact and the necessity of overcoming the inflationary process, made it easier to establish a neoliberal model that took place from 1973 to 1983. The measures taken by the new Administration implied a commercial and financial liberalization; the privatization of the state monopolies, companies and public entities (either by selling or franchising them), and the economic deregulation.

The social policy was slowly driven into the World Bank and the IMF's directions. The external debt (in a damaged accounts situation) was faced in a completely different international financial context from the prior decade (the financial crisis was overcame and the international interest rates were dropping) and the public companies' privatization was a key ingredient to contribute to the balance of payment restoring.

The new model was based on fixing the exchange rate to the dollar value on a level that implied the local currency's overvaluation. At the same time, there was a restriction to emit monetary base, being subordinated to the dollar reserves. The international frame made it easier for the initial functioning of the Dollar Pattern system, generating an abundance of the reserved money. So, domestic credit and money offer was favoured by the international context effect.

Due to this new structure, the annual inflation rate that in 1991 was 171,1%, dropped down to 24% in 1992 and to 10,4% in 1993 (see attached chart number 4). Price level went from a boom point to a much lower and established one.

The differences regarding the prior periods are synthesized in the attached chart number 1. The retail prices annual rate variation and non-agricultural wholesale index were the lower of the periods analysed (4.16% and 1.12% respectively). On the one hand, the exchange rate was kept almost invariable (0,22%), the GPD grew an annual 2,67%, and the nominal wages were increased up to an annual 4,15%. On the other hand, the unemployment rate reached 13,71% (for the economically active population) for the first time.

As prices increased while the nominal exchange rate remained fixed, there was a drop down of the real exchange rate. As the average investing rate didn't have a significant increase, it turned out that the drop of the real exchange rate affected the local production competitiveness. Only a few productive sectors were prepared to overcome this effect. The industry was damaged in many of its sectors: capital goods, diverse inputs, textile products, etc., most of those whose domestic production was reduced or simply eliminated. This was how the market liberalization took place along with the announced "depuration" of the productive sectors, evicting the less efficient ones. The problem was that for a whole decade, the replacement with a more efficient productivity companies on accordance to the Argentinean economic resources never took place.

Even though the agricultural sector expanded their production, it wasn't in the required magnitude in order to absorb the unemployment labour; neither it was enough to solve the Argentinean economy balance of payment problem. The applied measures to introduce the labour market's flexibilization as well as the abundance of available manpower along with its slump among the wages were ineffective to solve unemployment, despite of what was expected from the orthodox supporters.

The quick prices deceleration was followed by similar or even lower inflation rates than those of the advanced economies (Europe and USA). The commercial liberalization, in an international context of stable prices, accomplished to transfer this characteristic to the domestic economy. [27] At the same time, the prices evolution of the non-tradable goods reflected how the demand started to become progressively narrow due to the increasing number of unemployed and sub employed and the nominal wage deterioration, which caused the impoverish of a significant population sector.

In this context, the balance of trade and the balance of payment current account started to suffer a growing deficit. The exports diminished in comparison to the GPD and the imports grew. During the decade's second half, the capital and financial account didn't bring enough external investments that would be directed to the domestic production. Neither did the short-term financial investments had the required magnitude to solve, the current account deficit. Consequently, it was the foreign loans and the public papers collocation mainly, what allowed liquefy the external deficit and proportioned net dollar income. International reserves were preserved and increased mainly due to the external public indebtedness.

By the end of the Nineties, the external deficit required an adjustment. Devaluating wasn't an option, for it was considered a risk for the model stability by

[27] While the wholesale prices captured immediately the international conditions, the non-tradable goods prices rise affected the consumer prices.

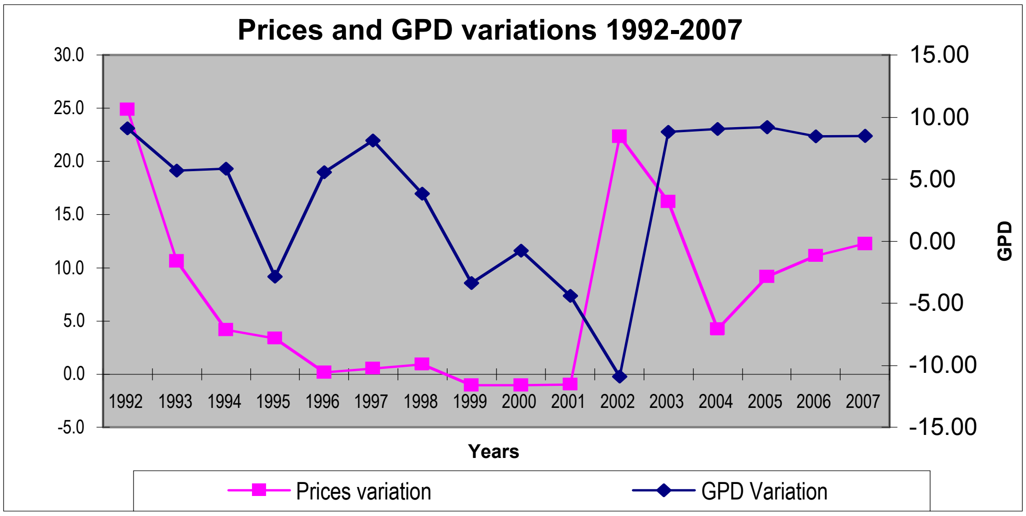
opening the door to a hyperinflationary menace due to the inflation memory. The other important reason was that as a consequence of the "tequila effect" in 1995, a bank ran that jeopardized the dollar pattern system occurred; therefore the possibility of making deposits in dollar currency was established together with a process of purchasing local banks by external banks. This way, banks clients felt secure on banks returning their money in dollars, as well as loans were given in dollar currency.

The possibility of a peso devaluation and a bank ran was highly complicated putting all banks at risk, as the local Central Bank wasn't going to be able to act as the last resource moneylender because of the dollarization of the system. At the same time, devaluating could evolve a strong impact upon debtors. Therefore, the adjustment should transit the path of the domestic prices reduction in order to allow the export increasing and the imports diminishing. Its viability, though, could be strongly questioned above all because of the magnitude of the required deflation. The prices and the wages experimented drops weren't enough.

Argentinean economy entered recession in 1998's last trimester and the situation prolonged for more than four years. The factors that determined the second half-decade reality evolved the economy's incapacity to sustain the products' growth and to generate a basic equitable income distributive (which was necessary to keep a domestic dynamic market) and to solve the insufficient net exporting matter. This last fact reveals that the increase in domestic productivity and competitiveness achieved weren't strong enough to achieve the necessary international resources for the product to grow. [28]

The international organizations financial support, the external debt rearranged (the called "blindaje (armour)" and the expensive reconverted debt to evade the default) and the promise to achieve a zero deficit in the cyclic public budget didn't have any positive effect. In 2001, the exchange crisis was unleashed, dragging along the bank system, which forced the application of certain policies in order to limit bank deposit extractions (that were called "corralito" –little farmyard- and "corralón" –big farmyard-). In December of that year, a social outbreak took place. That was the culmination to the long prices stability and the Nineties deflation in a macroeconomic slump frame. The economic and financial crisis of 2001 and 2002 was one of the bigger ones (if not the biggest one) in Argentina during the second half of the Twentieth Century.

[28] An argument often used is that the main reason was the change in the international situation: the consecutive financial crises experienced from 1995 erode the possibilities for sustaining the model (Damill, Frenkel, Mauricio, 2002).




## 5. FROM THE CONVERTIBILITY FINAL PHASE TO THE CURRENT SITUATION

By the beginning of 2002, Convertibility was left behind and a new phase started for Argentina and its competitiveness. However, during the months that followed devaluation, the conditions that drove to the collapse remained. The economy kept going through a severe external problem, which provoked a continuous foreign exchange demand. This pushed the exchange rate to rise, while continuing in a deep domestic recession. The economic activity was still shrinking, while unemployment rate rose along with the poverty and the marginality rates. The expectations regarding the exchange rate were discouraging, and most of the annalists omens implied parity risings that could flow in an out of control inflationary process.

Nevertheless, even though the exchange rates shown significant climbing, several factors made it possible for it to descend and get stable. Financial restrictions over the bank system prevented the demand of foreign exchange to keep growing, while the increasement of the exchange rate gave an incentive to exports and restricted imports (already diminished by the deep recession effect). Therefore, during the second trimester of 2002, the exchange rate was stabilized and from that moment, the monetary and financial operations started to regularize.

By the end of 2002, the economic activity dropped more than a 10%, in addition to the annual drop registered in the economy since 1999. The exchange rate, on the other hand, after reaching important peaks during the first half of the year, showed a stable behaviour in the second semester. When 2002 was over, the exchange rate, that reached 4 pesos per dollar, was around 3,4 pesos a dollar with a dropping tendency.

From that moment on, the Argentinean economy began to show a major recovery. From 2003, the GPD registered growing rates over the annual 8%, tendency still sustained today. At the same time, the unemployment rate that reached values above the 20%, showed a strong drop down until reaching the current rate below 10%.

Many factors contributed the economy to enter a high growing phase after the devaluation in January of 2002. A favourable element was the international context, the high prices of the export goods and the low interest rates. The growth in the exchange rate implied a restriction to imports besides from the effect that the recessive context had upon them. At the same time, with the new exchange rate exports recovery took place, which coincided with the improvement regarding exchange terms for the Country, generating a surplus in the trade balance. The balance of trade growth was an important element to the economy recovery, while the foreign exchange entrance due to commerce was vital to stabilize the exchange rate.

Facing devaluation, an import substitution process began and local sectors started to produce domestic goods where before there was a foreign one that now couldn't be imported. The increasing goods production to supply the domestic market was a key element to explain the activity rate recovery, the employment rate increasement and the incipient reindustrialization process.

It can't be disdained when explaining Argentina's strong growth in the last five years the politic and economic factors. The official action, yet showing some ambiguities and limitations, contributed to the recovery process. On the other hand, the public expenditures control, the tax system management and specially, the public debt restructuring (concluded by the begging of 2005), were the keys to achieve the fiscal account solvency (Frenkel and Rapetti, 2006).

At the same time, when the balance of payments began to show a surplus, the bearish tendency on the exchange rate was restrained with an intervention policy in the exchange market by the local Central Bank. These interventions were part of the exchange official policy, which consisted on preserve a competitive and stable exchange rate. This politic measure was vital, first to revert and then to sustain the balance of trade and to make the most of the favourable international conditions.

Sustaining a real competitive exchange rate was a key element in order to develop a quick GPD growth, by stimulating the tradable sectors' activities. Its influence by different vies gave place to a labour intensive production increasement, accelerating a drop in the unemployment rate.

Despite the achievements of the official Administration, the policies had also shown a great deal of limitations. As pointed by Costa, Kicillof and Nahón (2006), these policies that aim to grow are basically identified with a currency board policy. The State's action is, therefore, reduced to a plain intervention in the foreign exchange market to sustain the reduced peso value (as long as the international flows and the national exchange allow it). In this sense, there didn't seem to be policies orientated to intensify the industrialization nor to change the composition or diversify the exports. Therefore, exports are compounded mainly of commodities, which production uses a scarce manpower and its constantly fluctuating prices are subject to World Economic conditions.

As indicated by a CENDA (Economic Studies Centre for the Argentinean Development) report in December of 2007, even if there are several incentives directed to the industrial sector, in a regional level as well as in a sectorial one, a global analysis shows that the policies are not entirely coordinated between them, and several times, with insufficient resources. It is a policy that intends to defend already existent sectors and not an industrialization strategy that looks forward to stimulate dynamic sectors and generate a chain effects.

Since devaluation in January of 2002, along with all the macroeconomic indexes recovery (see attached chart number 6), it started to develop a pass through process. In other words, the transfer of the increasing exchange rate to the prices level. This process, however, started slowly and reflected mainly in the wholesale sectors due to the recession in which the economy was immersed. Even when in 2002 and 2003 the consumer prices index showed a significant increasement (25,9% and 13,4% respectively), these had been way below to those recorded by the wholesale indexes and the exchange rate increasement. The wholesale prices increasement through all 2002, reached a 118%. The exchange rate varied that same year to a

213%. All in all, the profound recession acted, especially in 2002, restraining the prices risings, which were significant anyway (see attached chart number 5).

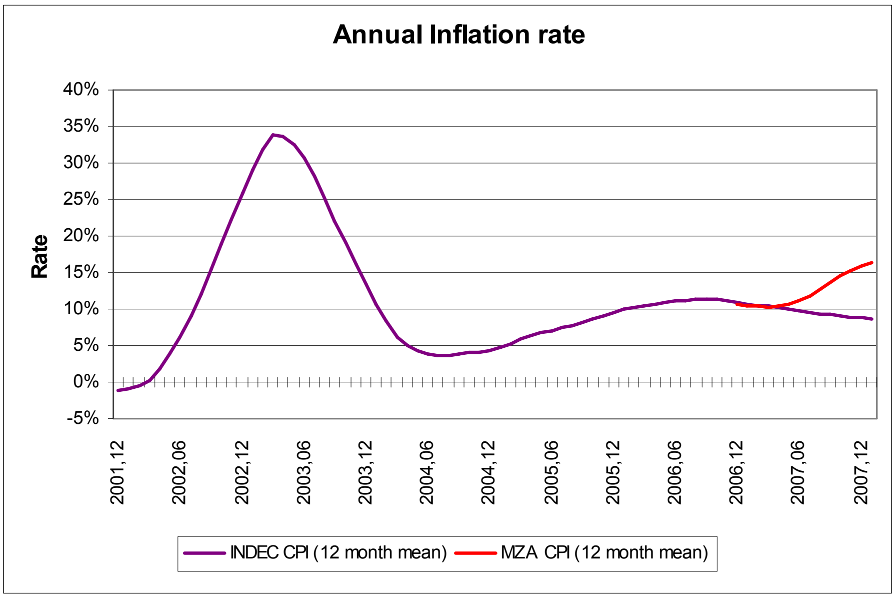
After the first prices increasements (which had been said to have been restrained by the economy recession), inflation started to moderate and by the end of 2003, was below an annual 5,5% (see graph number 2).

After a certain stability, in 2004 GPD sowed a 4,4% increase, inflation started to be perceived again as a major problem by some sectors from 2005 onwards, along with the perception of weakening in the official measures orientated to restrain the prices rising.

However, as economy grew on accelerated rates and the prices rising were perceived as light, inflation wasn't consider as a problem that required an immediate solution. The official policy, therefore, kept being orientated to maintain a competitive exchange rate and to defend economy's strong growth.

In 2006 and, even more, in 2007, the official intervention started to become stronger in order to keep prices retrained, even though the Government's vision was that the prices were rising in a focus group of food products and not in a generalized way. The raw materials prices boom in the international markets pushed those goods domestic prices. In order to thwart that effect, exports taxes were raised and maximum retail prices were fixed for some food products. At the same time, the Government started a controversial intervention of the National Institute for Statistics and Census (INDEC). This organization is in charge of the inflation measuring. From this intervention onwards, the CPI data published stopped being reliable, which led to the general idea that inflation is being underestimated.

As shown by Salvatore (2008), while the CPI indexed by the intervened INDEC pointed an 8,8% inflation for the year 2007, the real inflation was around a 17,8%. In this context, the official policy keeps focusing in the economy's growth, while the measures to restrain inflation are still the price controls, the export taxes and the prices index manipulation.




The graph shows the evolution of the INDEC CPI. The red line shows the CPI of the Mendoza province, which moved apart from the INDEC CPI after the official intervention in that institution.

## 6. CURRENT INFLATION CAUSES

### 6.1 <u>The most significant inflationary mechanisms in the present situation</u>

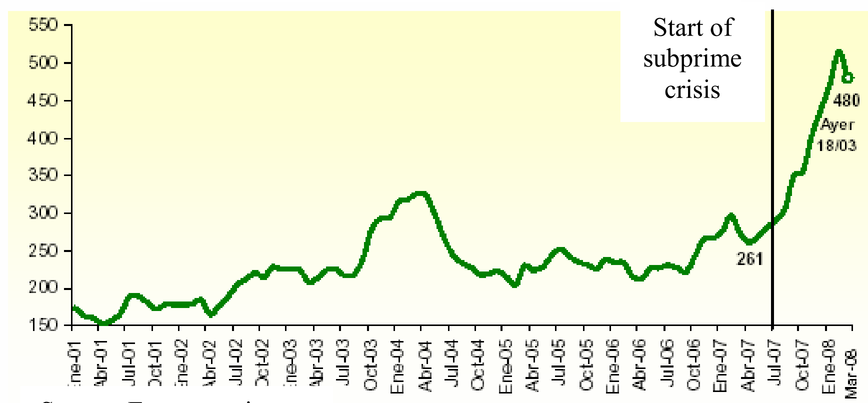
***International food and oil prices increments***

The international food goods price (that Argentina exports) rising pushes a consequent rising for these goods price in the domestic market. The present Administration tried to put an end to these increasing with export taxes that would lower the effective price that the producer receives. This lowers the exports incentives for these goods and forces to place them in the domestic market. On the other hand, the price rising for other goods such as soy, which is not consumed in a considerable amount by the domestic market, was seen by the Government as a way of raising funds that would allow it to maintain a fiscal surplus and finance several manoeuvres that guarantee a high exchange rate (subsidies, exchange market's intervention, etc.).

However, due to a considerable increase of soy prices in comparison to other food goods (soy price increased more than wheat and meat), soy started to displace other cultivars territory as well as the cattle rising and the dairy farms. This growing production substitution putted even more pressure on food goods prices and therefore, wages.

On the other hand, export taxes, although increasing constantly increments, are insufficient when compared to the constant international soy price rising. The Government created a mobile export taxes system, which would allow, from a theoretical point of view, to keep the domestic price restraining equation for food goods and to discourage more producers to change to soy cultivation. Nevertheless, an unfortunate political handling of this measure drove agricultures to join into a three weeks strike in order to defend their profitability. The agricultures strike involved national routes blockings and mobilizations that grouped every entity involved with the rural areas, from the Rural Society (which represents big landowners) to the Agrarian Federation (which groups small and middle producers).

**Soy Prices (U$S/ton)**




Source: Econometrica

On the other hand, the export taxes magnitude (which were around the 35% and with the mobile system raised around a 44% for the soy) is difficult to handle politically.

In this case, a probably effective measure would be a state-owned foreign trade monopoly, which has a previous record in the Country. The Argentinean Institute to Promote Exchange (IAPI) was a public entity developed under the Central Bank's control in 1946, during Peron's first period, with aim of centralizing foreign trade and to transfer resources among the economy's different sectors.

***Offer Insufficiency***

One of the main reasons of the prices increments in Argentina is the significant offer restriction that exists in numerous productive branches. These restrictions that convert themselves in major offer insufficiencies, are caused by several factors:

a) *The lack of capitalist spirit among the Argentinean business class or the lack of reliance in the economy.*

   It isn't under discussion the existence of surpluses available to be invested, but the lack of confidence in the economy future or in legal safety doesn't induce investments. However, several purchases of local companies by foreign capitals that took place would prove this argument wrong.

   The lack of capitalist spirit seems to be a way sociological hypothesis as to take it into account, and even if it was true, it could be solve by promoting the incorporation of new enterprising productions with soft credits, financial aids, etc. or even more, with the Governments intervening in the production either through public companies or through biddings, concessions, etc.

   Once again, the solution seems to be in the hands of policies actions that have a previous record in the history of Argentinean's economy, which are, at the same time, contrary to the present's spirit.

b) *The existence of monopoly or oligopoly markets that inhibit new players to emerge in the market.*

   In this case, the Government could intervene through the Competition Defence Commission or even entering the markets with public companies. Of course, a market concentration, would also favour a negotiation with producers.

   A successful case in this matter is the oil case, which prices didn't raise along with the international prices due to a lending negotiation regarding the oil exports (there were some conflicts with the company Shell –one of the major three- that could quickly be solved). In this case, the Government came to set up an energy state company (Enarsa) that finally, once the sector was putted on the right track, focused on international investments, particularly in other Latin American country ones, with geopolitical goals.

   On the other hand, a failure case would be the negotiations with the main Supermarkets (five or six companies with several subsidiaries along the Country). In this case, the Government looked forward to establish an alliance with some small food markets, which have smaller earning profits, as they don't increase prices as much as the major Supermarkets, but, alternatively, they are based on labour informality.

c) *The lack of a financial policy*

It's significant the scarce investments that take place with the agricultural surpluses. Once the agricultural sector retrieves the invested costs and replaces the worn-out machinery, directs their profits to sumptuary consumption or to real state speculation. It is obvious that there isn't a mechanism that would allow the canalization of the surpluses towards productive investments that could alleviate the offer insufficiency. The underdevelopment of the capital markets is a crucial factor to explain this situation.

d) *The particularities of the domestic manufactures production and other urban items increasement*

The exchange rate increment brought along an effective protection to domestic producers; protection that was absent since the policies applied during the nineties. The industrial productive diminished that took place during the neoliberal years, was originated by many productive sector contractions that were replaced by imported goods. The higher price of the foreign currency after the 2001's crisis had an impact on the imports, re-establishing many productivity sectors that were frozen or even almost banished.

In addition, the relative prices modification in 2002 increased the industrial production profits. This re-activation reached many manufacturer sectors that frequently restarted with a middle or small structure. In many cases, this implied that either the capital resources per worker as well as the available technology generated low labour productivity. This fact along with a high labour intensity drove to a situation in which a production increasement implied significant workers incorporation. Not only did the small and middle companies have this characteristic, but also bigger ones that employ a bigger amount of workers. This is caused by backwardness of investments and the insufficient advanced technology incorporation from abroad.

The low number (in relative terms) of manufacture industries that are able to export shows that the size of most of the productive companies, as well as the capital per worker resources, are related to the domestic market size. As the domestic market didn't experiment a considerable expansion (due to the wages and employment contraction and the excessive concentration of profits for more than a decade), neither did the industries nor the introduction of advanced technology. This vicious circle restrained the increment of the productivity level for many industrial branches.[29]

These characteristics mean that the productive increase, as soon as the domestic demand grows, tends to be achieved with rising marginal cost. That is to say, as a consequence of the reduce size of the industrial plants, it don't take place a decrease in unit costs, damaging the competitiveness and affecting prices.

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[29] In contrast, the agricultural production incorporated the best technology, has high capital resources and high productivity that explain the increasement of this sector offer. This behaviour is consequence of a favourable international demand expansion.

Another argument to explain this behaviour is that the investments required to increases the production scale must be self-finance increasing the exploitation margins because of the low development of financial and capital markets. All these elements provoke increasing pressures over prices as the production grows and the installed capacity reaches its limit.

e) *Basic infrastructure and the transport model.*

Most part of the infrastructure investments had been abandoned by the State when the neoliberal model was developed. By the public services contracts part of the investments were left to the private sector, while the State had to deal with the rest of it.

After the 2001/02 crises some problems occurred because the tariff policies of the nineties needed to be changed. In several cases, the privatization contract ensured that the tariffs could be adjusted, in dollars, related to the prices evolution in the United States. After devaluation, this regimen was impracticable, and the tariffs were frozen at first. Then the State regulation over those prices restrained the increases and subsidies were introduced in compensation. The companies affected with these policies turned to international courts against the Argentinean State. This resort was contemplated in the privatization contract. In this context there has been an important delay in oil, gas, electricity, and water and plumbing investments.

Also, the railway transport suffered an important destruction during the nineties (several branches had disappeared) and a decapitalization of was left during the last years. As a result of all these infrastructure and transport damage, significant offer restrictions appeared. As the economy grew strongly during the last five years, critical restrictions took place in the production of energy, fuels, transport services, etc. The official response was increasing the energy imports and the rationing of several products and services (gas, diesel oil, electricity and others oil derive).

On the other hand, the road transport suffered a price increasement due to the raise in the oil price. This fact implied greater public expenditures in order to pay increasing subsidies to the transport companies where the tariffs stood frozen.

Therefore, these offers restrictions and the increasing costs have an impact on the price level, which today is not very important because of the public subsidies. But the continuity of the situation implies increasing subsidies and the potential inflationary impact is significant. A tariff increasement would affect the costs of almost every production sector.

***Certain sectors demand increases***

*a) Increasements in sumptuary consumption.*

As most of the agricultural and other sectors' surpluses are not channelled to other productive sectors, these incomes had been used in real state and sumptuary consumption. Therefore the real state market had suffered prices increases that have impacts over other prices through rents.

Also, middle and high-income sectors had increased their consumption of import goods. Together with the economic growth, the most favoured population sectors had started, again, to travel around the world and consume luxury import goods. This raise in imports helps the convergence of domestic prices with international prices, and force increasements as the dollar prices increase as a consequence of the depreciation of that currency.

b) *Increase in the import inputs and capital goods needs.*

The Argentine production is strongly dependant of import inputs and capital goods. These needs increases when the economy is growing. Nowadays the country has a great amount of foreign exchange, but the import increase (for example, the agricultural sector uses import inputs), together with the rise of the sectors that use those imports, elevate costs as a consequence of the international dollar depreciation. As the local currency is relatively fixed to the US currency, the peso is depreciating related to the real or the euro, and though, the country is importing inflation. Is very difficult to state a palliative to this situation, but the intensification of the imports substitution may be a step in the correct direction. In this context, some institutions, like the INTA (National Agricultural Technology Institute), are going to have a very important role.

***Incomplete pass through from exchange rate to retail prices***

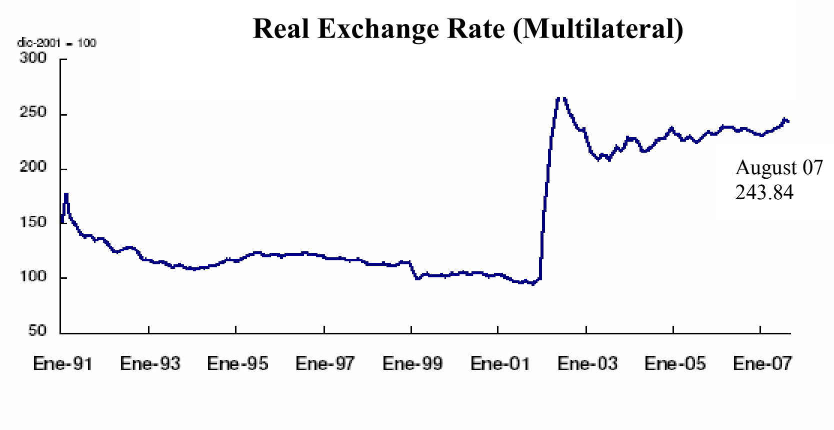
One explanation often used to explain the present inflation is the incomplete pass through from the exchange rate to retail prices. If this pass through was not complete after the 2002 devaluation then the prices may still be suffering increases because of that exchange rate climb. Of course, the pass through cannot be complete because the non-tradable goods prices are more influenced by wages than by the exchange rate and the increasement of the wages had been smaller than the exchange rate increasement. However, the exchange rate increasement had effects on prices through import inputs, capital goods and sumptuary products as we had explained before.

As we already pointed out, the devaluation took place in a recession context reducing the effect on retail prices. In fact, the wholesale prices increased during 2002 much more than consumer prices and, as wages didn't increased significantly, the domestic products producers obtained a considerable rise in their benefits.

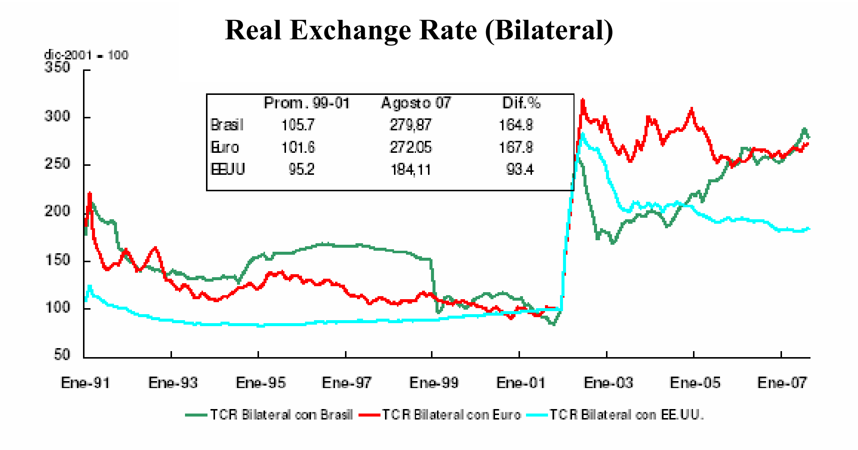
During 2003, the wholesale prices index experienced a rise of only 1.96%. The consumer price index increased 13.4%, more than the wholesale index, but much less than the CPI during the previous year. This behaviour proved certain price stability and, consequently, the real exchange rate remain in a high level. Since the middle of 2006 the drop in the real exchange rate accelerated. Despite the explanation of the slow pass through, the truth is that the retail traders absorbed a part of the wholesale prices increases. However, the lasts years increase in the consumer price index may imply an improvement in some retailers benefits margins.

***Exchange rate stability in a dollar depreciation context.***

The international dollar depreciation relative to other currencies like yen, the euro or the real implied a depreciation of the Argentinean domestic currency. This fact, together with the world inflation due to the increased in food products prices affected the Argentine domestic economy in different ways. On the one hand, world inflation put up the internal prices through imports goods. This impact is stronger because of the depreciation of the local currency in relation to others currencies from countries that Argentine commerce with (like Brazil or Europe). On the other hand, the stable nominal exchange rate in an inflationary context implies a drop in the real exchange rate. However, as it can be seen in the graphs, the fluctuations are not significant enough to be considered inflation causes.




*Source: Argentine Central Bank*




*Source: Argentine Central Bank*

***Other pressures and unbalances that are inflation potential causes.***

The dynamic pointed out (that includes the real inflation causes) can be aggravate by other factors besides the ones considered above.

Among them it's important to consider the possible resolution of some services tariffs' control (like the energy prices, the public transport, etc.) as well as the intervention in other key products prices. As this kind of intervention imply increasing subsidies expenditures, the liberalization is possible creating additional prices pressures.

Also, a change in the international situation is probable as a consequence of the recessive context that the United States and some European economies are suffering. If this situation provokes a fall dawn in commodities prices and a credit constrain the effect over Argentine economy would be notorious. Also, an international inflationary process as a consequence of the dollar devaluation it's likely to happen as well.

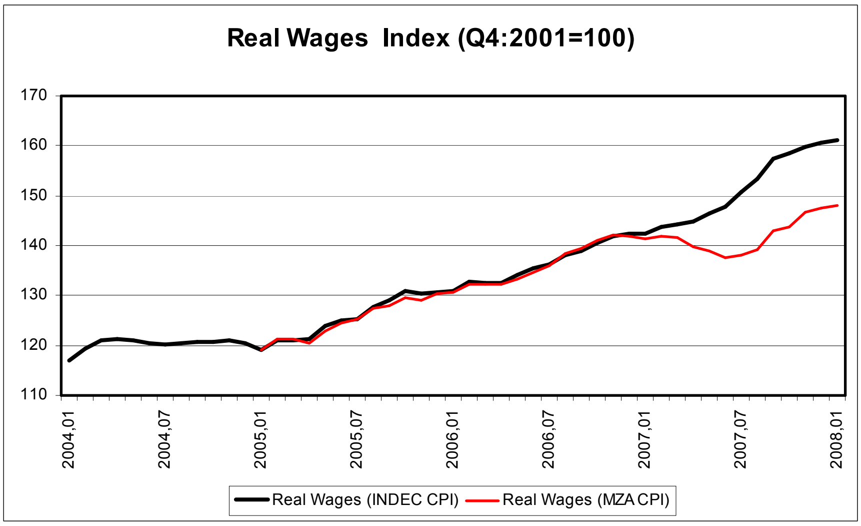
Internally the risk of a continuing reduction in the fiscal surplus it's possible because of the necessity of refinancing the external debt. If this process takes place in an unfavourable context, the fiscal situation might get worse (the external debt is about u$s 144 billons).

### 6.2 Inflation past causes that don't operate nowadays

It's important to point out that the present inflation situation has significant differences from past Argentine inflation episodes. In this part of the paper we identify the particularities of the actual context in some important aspects of the Argentine economy. At the same time, these are essential aspects in order to decide the economic policies to be applied.

***Real wages increase and distributive struggle***

In March of 2008 the government managed to restrict the nominal wages increases, allowing augments around the 20 or 25 per cent for the whole year. Those figures are consistent with the real inflation registered during 2007 so it's not plausible that wages increases are causing inflation.




As is seen in the graph above the real wage has been growing since 2005. However, the real wages at the starting point were very low as a consequence of the high unemployment rates. So, despite the real wages recovery, there were high benefits margins in order to absorb increased in wages without provoking inflation.

It's important to point out that during the first stage of Kirchner's government, there were policies directed to achieve wages increases. These policies have been important for the production recovery, by increasing the wage sum unexpectedly fast, stimulating global demand.

The nominal wage recovery was partially offset with the price increases (see attached chart nº 6). Oligopoly production and commercialization sectors developed a policy of keeping and increasing benefits margins by rising prices in response to every nominal wage rise. In turn, government intervention, through export taxes, in order to avoid that increased export prices affected domestic prices provoked a struggle over income-distribution. Nowadays, the struggle between the agricultural sectors and the government (which, in a sense, appears as defending consumers and industrial sectors interests) is clear. As the export goods are essential food products, their prices affect consumers and wages.

However, at the moment, it's absent the employers-workers struggle over the wages. This element played an important role determining the economic dynamic during previous crises. At present, the principal labour union supports the official policies so the wages rises are limited. Nevertheless, an important struggle over the exporting incomes with uncertain end, is taking place.

***Public expenditures***

Since 2003 together with the production augment, tax collection increased ruthlessly. Since public wages increase less than the increase of public incomes, there was a margin for public expenditures to increased. Then, the public expenditures growth was related to public income increases, but leaving a positive balance in the public accounts. The growing public surplus allowed the payment of the external debt services, once the debt was restructure[30].

This fiscal surplus, together with a commercial surplus, configured a twin surpluses situation, very different from most of the past periods. In the past, commercial surpluses appeared as a consequence of a contraction in production and employment. Nowadays, both surpluses are achieved in a growth context. Despite of these, many opponents to the government policies think that the increasing public expenditures stimulate the global demand and provoke prices increases. According to this vision, inflation is induced by the excessive public expenditures even in a fiscal surplus context.

However, it's a matter of opinion that the economic recovery since 2003 was strong enough to create demand excess, being inflation main cause. Moreover, it's not at all evident that there is a general situation of production capacity exhaustion as a consequence of the increasing public expenditures[31].

On another note, important budget items are the subsidies given to some sectors in order to control their prices. Increasing subsidies are needed with the purpose of intervening in the prices system. These expenditures are increasing as a consequence of the inflation acceleration. If inflation is controlled these expenditures shouldn't increase, but as long as this doesn't occur subsidies continue growing creating changes in the relative prices structure with impact on the general prices level[32]. This is the only mechanism through which the fiscal policy may provoke prices increases.

However, there are certain budget items that are postponed, like the State managed pensions. The pensions mean level is below the level necessary to guarantee decent life conditions. Moreover, the surplus created by the pension system is used to buy public bonds with low interest rates, compared to other public debt.

Another important (and very criticized) budget items are the social benefits (called "planes sociales"). These financial assistances (with laboral compensation) provoke immediately demand increases. During the electoral year 2007, those expenditures duplicated. However, since the fiscal surplus persists and the tax collection is increasing greatly, the subsidies don't seem to be problem.

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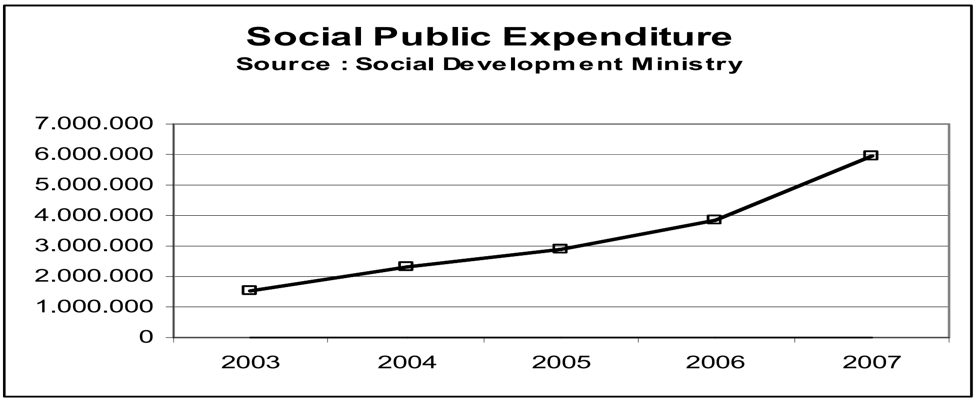
[30] The evolution of the fiscal surplus as a GPD percentage was: 3.9% (2004), 3.7% (2005), 3.5% (2006) and 2.4% (2007).

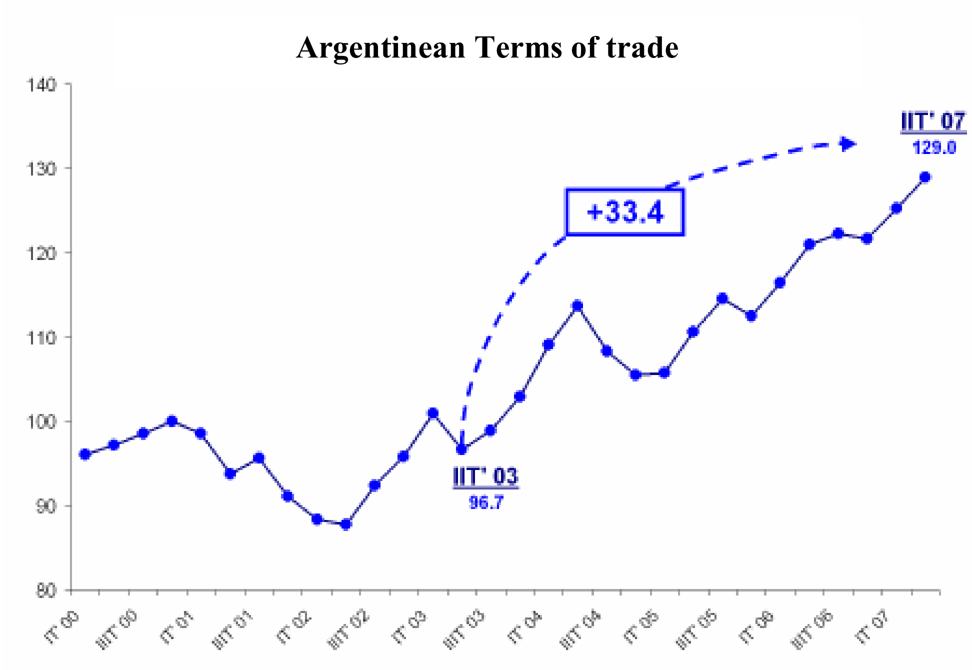
[31] In order to confirm the existence of demand excess, it should be verified the existence of an offer insufficiency in the labour market. At the moment the unemployment rate is nearly the 9% so there is no labour offer shortage.

[32] It's important to note the subsidies are directed to goods (energy, fuels, some food products) with great impact on another goods prices.




***The balance of payments behaviour***

The 2001 crisis, related with the high level of external indebtedness and the international context, provoked the debt default in the beginning of 2002. This event affected positively the public budget and the current account because the interest payments reduction. Also, imports reduced drastically creating a surplus in the commercial balance and in the current account. The negative correlation between the commercial balance and the domestic production is not new for the Argentine economy (1995 crisis provoked a surplus in the current account as well as the end of the eighties crisis).

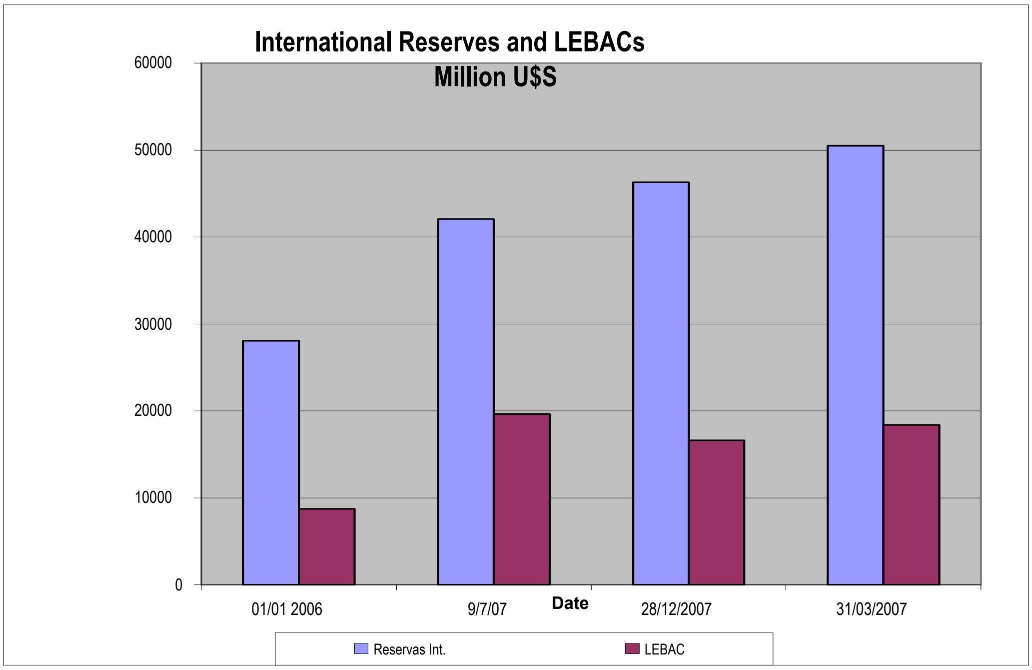



During the period 2003-2005 exports increase considerable following the raise in real exchange rate and the improvement in the terms of trade (see the graph above). Although imports started to increase as a consequence of the production raise, the current account surplus continued so that the old external problem, which appeared every time the economy grew, is not present this time. The international reserves are large and there is no devaluation risk.

***Monetary aspects related with the exchange rate policy.***

After the 2001 crisis the economic policy main instrument has been the Central Bank intervention to sustain the nominal exchange rate. In the presence of a pressure over the exchange rate, the Central Bank intervenes in the exchange market baying international reserves and issuing money in the economy. The permanent current and capital account surplus could have made go down the exchange rate. To prevent this, in order to protect the productive sectors, the Central Bank bought dollars (and even today he continue doing it).

So, as the Central Bank purchase international reserves, there is an increase in the economy's monetary offer. Nevertheless, the monetary programs included partial sterilization of the monetary base increases by issuing bonds (the bonds used by the Central Bank for these operations are the NOBACs and LEBACs, see graph below). These actions has been criticized because: a) the intervention in the exchange market implies the money injection creating an inflationary effect; b) the sterilization implies higher interest rates that sooner or later will affect the Central Bank financial balance and the economy interest rates structure.




According to the supporters of those critics, the banks loans to the Central Bank reduce the loans for the rest of the economy. So, letting the national currency to appreciate avoids the monetary injection and absorb the raw materials international prices increases. But, we consider that is not true that buying international reserves issuing national money always has inflationary effects. Also, the appreciation of the national currency has negative effects over the manufacturing sectors. Finally we can't assure that the interest rate will go down if the Central Bank stops issuing bonds.

Today, the high exchange rate implies a protection for the manufacturing sectors, so the question is for how long must this protection should be kept. In the meanwhile economic policies should be apply in order to induce productivity increases. We consider that this protection is currently needed, but the producers have to take full advantage of it in order to be able in the future to compete with international producers.

## 7. FINAL COMMENTS

Inflation is a complex phenomenon that not always response to the same causes. Therefore, there isn't a unique recipe that can be applied in every country to fight prices increases. It's necessary to analyse and identify the specific causes in each case in order to decide the best way to follow.

What's more, there isn't a certain level of (monthly or annually) inflation above which we can always say that it become a problem. An inflation process must be analysed according to its particularities and considering the cycle's phase the economy is on, in order to establish the seriousness of the problem, as well as the necessity and urgency to fight it.

Considering these statements, in this paper we approached the study of the Argentinean present inflation. Argentina is a country with a long inflation tradition, where the average rates of prices increases in the last sixty years were higher than those of the developed countries. During those years the dynamic of the argentine economy was determined by the "stop and go" cycles, where product and prices growth phases that led to balance of payments crisis, were followed by devaluations, recessions and more inflation.

This dynamic seemed to be over in the nineties, when some transformations were induced in the economy and the prices stabilized for several years. However, the counterbalance was the unemployment rate and the external debt severely increasements, leading, within other factors, to the intense crisis of 2001. The present Argentine situation suggest the question about the possibility of a return to the "stop and go" dynamic. This question is important because the answer have implicit the analysis of the sustainability of the current growth phase. Our point of view is that the present economic model is based on a favourable international situation that allows the country to maintain commercial and fiscal surpluses. None the less, it no seems that Argentine is taking full advantage of this context.

During the last years, high growth rates were achieved but the structural changes required to consolidate the productive sectors and revert the destruction of the manufacturing sector of the nineties were not promoted. The high growth was driven by the import substitution because of the peso devaluation, while the official measures were very weak and without a global strategy in order to enlarge and coordinate the manufacturing sector. In this way, we believe that the actual virtuous functioning is strongly based on an accidental international situation but the mechanisms needed to continue growing if those conditions revert were not created.

Also, regardless international conditions, the Argentine current growth model need some changes because its fundamentals don't seem to be sustainable in a medium term. The increasing export taxes, in order to sustain the fiscal surplus and to avoid the local impact of international price increases, seemed to have found a limit. At the same time, the currently suspended external payments problem will have to be attended because the total external debt is still very large and it was not rejected. Then, it's a heavy load for the country economy.

Besides, the labour efficiency requires specific policies in order to increase. Also, a tax reform that increase the importance of progressive taxes is still pending. In addition, the inflation problem needs to be recognized although considering the economic growth context.

As we point out, an important part of the inflation process is explained by the argentine economy offer structure. In a high growth context, the productive structure deficiencies provoke significant offer restrictions. Then, the inflationary problem must be discussed considering the economic model and the present growth phase bases.

Setting a productive profile that creates employment and improves the income distribution is still pending in Argentina. A growth model based completely on primary exports creates unemployment, poverty and social exclusion. So, we think the choices are to promote the integration to the world market based on selected competitive advantages (like Portugal or Ireland with the software development) or to induce a self-sufficient and exporting development like the model that Brazil is promoting since many years ago. A different and very interesting alternative it would be to promote the productive complementariness with other Latin America countries, based on political affinities.

Whatever it is the chosen alternative, the strategy must include public investments and a financial policy in order to stimulate private investments, prerequisites for overcoming the present model restrictions and continuing with the growth path.

The present conflict between the agricultural producers and the government because of the increments in the exports' taxes created some problems that may provoke a political crisis. Those who support the idea of slowing down the economy are growing in quantity day by day. In general, those who hold up this idea, ask for the peso appreciation and restrictive monetary policies. On the contrary, we think the government insistence in sustaining the growth rates is correct, but it's necessary to define policies to induce the structure productive integration and diversification.

## 8. STADISTIC ATTACHMENT

CHART 1
Periods 1945-74, 1975-91, 1992-01 y 2002-2007
Selected variables
Annual Averages

| **Annual Average** | **CPI** percentage change | **GPD** percentage change | **Exchange Rate** percentage change | **IPMNA** percentage change | **Wages** percentage change | **Unemployment rate** percentage change |
|---|---|---|---|---|---|---|
| Period 1945-74 | **27,32** | **4,34** | **24,48** | **25,70** | **29,55** | **5,88** |
| Period 1975-91 | **544,73** | **0,74** | **534,03** | **520,19** | **497,26** | **4,98** |
| Period 1992-07 | **7,30** | **3,74** | **13,4** | **8,0** | **9,9** | **14,7** |
| 1992-2001 | **4,16** | **2,67** | **0,22** | **1,12** | **4,15** | **13,71** |
| 2002-2007 | **14,65** | **5,35** | **33,76** | **20,39** | **20,84** | **14,76** |

*Source: Prepared based on information of the INDEC, BCAR and MEyP.*

CHART 2
Periods 1975-1983
GPD and prices evolution *(Annual Averages)*.

| Year | GPD percentage change | Inflation |
|---|---|---|
| 1975 | -0.9 | 182.6 |
| 1976 | -0.2 | 444 |
| 1977 | 6 | 176 |
| 1978 | -3.9 | 175.5 |
| 1979 | 6.8 | 159.5 |
| 1980 | 0.7 | 100.8 |
| 1981 | -6.2 | 104.6 |
| 1982 | -5.2 | 164.7 |
| 1983 | 3.1 | 343.3 |

*Source: CEPAL and INDEC*

CHART 3
Period 1984-1989
GPD and prices evolution *(Annual Averages)*

| Year | GPD percentage change | Inflation |
|---|---|---|
| 1984 | 2.2 | 686.8 |
| 1985 | -4.6 | 385.4 |
| 1986 | 5.8 | 81.9 |
| 1987 | 1.8 | 174.8 |
| 1988 | -3 | 387.7 |
| 1989 | -4.4 | 4923.3 |

*Source: INDEC and BCRA*

CHART 4
Period 1991-1997
GPD and prices evolution *(Annual Averages).*

| Year | Inflation | GPD percentage change |
|---|---|---|
| 1991 | 171.7 | 9.66 |
| 1992 | 24.9 | 9.08 |
| 1993 | 10.6 | 5.70 |
| 1994 | 4.2 | 5.84 |
| 1995 | 3.4 | -2.85 |
| 1996 | 0.156 | 5.54 |
| 1997 | 0.53 | 8.11 |

*Source: INDEC and BCRA*

CHART 5
Period 1998-2007
GPD and prices evolution *(Annual Averages).*

| Year | GPD percentage change | Inflation |
|---|---|---|
| 1998 | 3.9 | 0,9% |
| 1999 | -3.4 | -1,2% |
| 2000 | -0.8 | -0,9% |
| 2001 | -4.4 | -1,1% |
| 2002 | -10.4 | 25,9% |
| 2003 | 8.8 | 13,4% |
| 2004 | 9.0 | 4,4% |
| 2005 | 9.2 | 9,7% |
| 2006 | 8.5 | 10,9% |
| 2007 | 8.7 | 8,8% |

*Source: INDEC*

CHART 6
Evolution of: Consumer Price Index (ICP) and Non Agricultural Wholesale Price Index (WPI), GPD, Exchange Rate, Nominal and Real Wages, and Annual Unemployment Rate.
Accumulate Variations.
Base year, 2002 = 100.

| Year | CPI | GPD | Exchange Rate | WPI | Nominal Wages | Real Wages (1) | Unemployment |
|---|---|---|---|---|---|---|---|
| 2001 | | | | 62,39 | 98.1 | | |
| 2002 | 100,00 | 100,00 | 100,00 | 100,0 | 100 | 100,0 | 24,3 |
| 2003 | 116,22 | 108,84 | 93,35 | 119,10 | 121,42 | 104,47 | 22,4 |
| 2004 | 121,10 | 118,67 | 93,35 | 127,91 | 136,67 | 112,86 | 18,10 |
| 2005 | 132,17 | 129,56 | 92,70 | 139,30 | 161,15 | 121,92 | 11,58 |
| 2006 | 146,58 | 140,52 | 97,28 | 151,00 | 194,57 | 132,74 | 10,18 |
| 2007 | 159,48 | 152,47 | 98,60 | 167,31 | 231,07 | 144,89 (130.8) | 8,5 |

*Source: Prepared based on information from INDEC and BCRA. (1) For the year 2007, the between brackets figure for the real wage was calculated using private estimation of the CPI.*

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